TECHNOCRATS

Lab Work Book of

Computer Application in Pharmacy

(BP - 210P)

Department of Pharmacy

Lab Manual of

Computer Application in Pharmacy

(BP - 210P)

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TECHNOCRATS
PUBLICATIONS

Lab Work Book
of

Computer Application in Pharmacy

(BP-210P)

(Strictly According to RGPV Syllabus)

Name : .....

Enrollment No. : .....

Institute : .....

Academic Session : .....

Department of Pharmacy

TECHNOCRATS
PUBLICATIONS

Vision of the Institute

To grow as an institute of Excellence for Pharmacy Education and Research and to serve the humanity by sowing the seeds of intellectual, cultural, ethical, and humane sensitivities in the students to develop a scientific temper, and to promote professional and technological expertise.

Mission of the Institute

M 1: To inculcate ethical, moral, cultural and professional values in students

M 2: To provide state of art infrastructure facilities to the staff and students so as to enable them to learn latest technological advancements

M 3: State of art learning of professionalism by the faculty and students

M 4: To produce well learned, devoted and proficient pharmacists

M 5: To make the students competent to meet the professional challenges of future

M 6: To develop entrepreneurship qualities and abilities in the students

PROGRAM OUTCOMES (POs)

1. **Pharmacy Knowledge:** Possess knowledge and comprehension of the core and basic knowledge associated with the profession of pharmacy, including biomedical sciences; pharmaceutical sciences; behavioral, social, and administrative pharmacy sciences; and manufacturing practices.
2. **Planning Abilities:** Demonstrate effective planning abilities including time management, resource management, delegation skills and organizational skills. Develop and implement plans and organize work to meet deadlines.
3. **Problem analysis:** Utilize the principles of scientific enquiry, thinking analytically, clearly and critically, while solving problems and making decisions during daily practice. Find, analyze, evaluate and apply information systematically and shall make defensible decisions.
4. **Modern tool usage:** Learn, select, and apply appropriate methods and procedures, resources, and modern pharmacy-related computing tools with an understanding of thelimitations.
5. **Leadership skills:** Understand and consider the human reaction to change, motivationissues, leadership and team-building when planning changes required for fulfillment of practice, professional and societal responsibilities. Assume participatory roles as responsible citizens or leadership roles when appropriate to facilitate improvement in health and well- being.
6. **Professional Identity:** Understand, analyze and communicate the value of their professional roles in society (e.g. health care professionals, promoters of health, educators, managers, employers, employees).
7. **Pharmaceutical Ethics:** Honour personal values and apply ethical principles in professional and social contexts. Demonstrate behavior that recognizes cultural and personal variability in values, communication and lifestyles. Use ethical frameworks; apply ethical principles while making decisions and take responsibility for the outcomes associated with the decisions.
8. **Communication:** Communicate effectively with the pharmacy community and with society at large, such as, being able to comprehend and write effective reports, make effective presentations and documentation, and give and receive clear instructions.
9. **The Pharmacist and society:** Apply reasoning informed by the contextual knowledge to assess societal, health, safety and legal issues and the consequent responsibilities relevant to the professional pharmacy practice.
10. **Environment and sustainability:** Understand the impact of the professional pharmacy solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.
11. **Life-long learning:** Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change. Self-assess and use feedback effectively from others to identify learning needs and to satisfy these needs on an ongoing basis.

PEOs

PEO 1: To inculcate quality pharmacy education and training through innovative Teaching Learning Process.

PEO 2: To promote professionalism, team spirit, social and ethical commitment with effective interpersonal communication skills to boost leadership role assisting improvement in healthcare sector.

PEO 3: To enhance Industry-Institute-Interaction for industry oriented education and research, which will overcome healthcare problems of the society.

PEO 4: To adapt and implement best practices in the profession by enrichment of knowledge and skills in research and critical thinking

PEO 5: To generate potential knowledge pools with interpersonal and collaborative skills to identify, assess and formulate problems and execute the solution in closely related pharmaceutical industries and to nurture striving desire in students for higher education and career growth.

Course Outcomes (COs):

Student will be able to:

- CO1: Apply the concept of data collection and treatment.
- CO2: Apply the knowledge of data collection to find statistical information.
- CO3: Apply the concept CRD, RBD and LSD and evaluate to the Design concept.
- CO4: Demonstrate the basic concepts of MS Excel and MS Power Point.
- CO5: Analyze benefits of Data base Management systems and Structured Query Languages.

Index

Experiment No. : 1

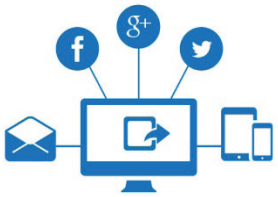
AIM:

Design a questionnaire using a word processing package to gather information about a particular disease

What is a "questionnaire?" **A questionnaire** is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents. The responses can then be analyzed, reviewed for trends, and used to make better, more informed decisions. Market research and customer satisfaction measurements are common applications of questionnaires.

The QuestionPro Survey Creation Process

Create. With QuestionPro, you've got over 50 survey templates to customize. Pick any one, modify the color and theme, in addition to adding your own questions.



Distribute. When you're finished, choose a variety of ways to send your survey out, which includes social media, email, and printing your own signs and flyers.

Analyze. By using QuestionPro, you can start to analyze your survey results with the built in real-time summary. If you're looking for advanced analysis, simply export your results to SPSS or Excel.

Questionnaire about awareness and treatment of hypertension

Four questions are recommended for capture of awareness and treatment of hypertension. The purpose of the questions is to provide information on the prevalence of blood pressure measurements, the awareness of elevated blood pressure, and the treatment of hypertension in the population.

The increasingly important non-pharmacological treatment of hypertension is captured by HBP4, without attempting to establish the details of intervention.

HBP1	When was your blood pressure last measured by a health professional? 1 = Within the past 12 months 2 = 1-5 years ago 3 = Not within the past 5 years
HBP2	Have you been told by a health professional in the past year (12 months) that you have elevated blood pressure or hypertension? 1 = Yes 2 = No 3 = Uncertain
HBP3	Are you currently taking medication prescribed by a doctor to lower your blood pressure? 1 = Yes 2 = No 3 = Uncertain
HBP4	Has a doctor in the past year ordered you to change your way of life, in order to lower your blood pressure? 1 = Yes 2 = No 3 = Uncertain

Local versions of the questionnaire should replace in HBP1 and HBP2 the term "health professional" with the name of professions that are qualified to medically assess blood pressure level and that are in a position to initiate a link to further investigation and treatment. In most situations such a list will include doctors and nurses but may not be limited to these two professions.

Note: Casual blood pressure measurements in shopping centres, drug stores, etc. do not qualify under HBP1.

Questionnaire about awareness and treatment of high cholesterol

Three questions are recommended for assessing the awareness and treatment of high cholesterol. The purpose of the questions is to provide information about the coverage of blood cholesterol measurements in the populations, the awareness of the high cholesterol in the populations and the prevalence of treatment of elevated cholesterol in the population.

HCL1	When was your blood cholesterol last measured? 1 = Within the past 12 months 2 = 1-5 years ago 3 = Not within the past 5 years
HCL2	Have you been told by a health professional in the past year (12 months) that you have raised (elevated) blood cholesterol? 1 = Yes 2 = No 3 = Uncertain

HCL3	Are you currently taking medication prescribed by a doctor to lower your blood cholesterol level? 1 = Yes 2 = No 3 = Uncertain
HCL4	Has a doctor in the past year ordered you to change your way of life, in order to lower your total blood cholesterol? 1 = Yes 2 = No 3 = Uncertain

Local versions of the questionnaire should replace the term "health professional" in HCL2 with the name of professions that are qualified to medically assess cholesterol level and that are in a position t0 initiate a link to further investigation and treatment. In most situations such a list will include doctors and nurses but may not be limited to these two professions.

Questionnaire about awareness and treatment of diabetes mellitus

Diabetes mellitus is a major chronic disease in its own right, but it is also an important confounder of cardiovascular risk factors. Although the problem of diabetes mellitus is addressed by the ongoing project of the Health Monitoring Programme on Establishment of Indicators Monitoring Diabetes Mellitus and its Morbidity, we propose here a set of two questions that might be used by risk factor surveys that do not incorporate the full slate of questions of the Establishment of Indicators Monitoring Diabetes Mellitus and its Morbidity project.

DIAB1	Have you ever been told by a doctor that you have diabetes? 1 = Yes 2 = No 3 = Uncertain
DIAB2	Are you currently taking insulin or pills to control diabetes? 1 = Yes 2 = No 3 = Uncertain

Local adaptations of these two questions might expand the term "diabetes" by adding more colloquial terms for the disease (e.g. sugar diabetes, sugar disease, etc.)

ASSIGNMENT QUESTIONS

1. Design a questionnaire about typhoid disease.

VIVA QUESTIONS

Q.1 What are the guidelines for administration of questionnaires?

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Q.2 Explain format of responses.

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Q.3 Explain qualities of a good questionnaire.

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Q.4 State the methods of reaching target respondents.

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Experiment No. : 2

AIM:

Create a HTML web page to show personal information

What is HTML:

HTML (Hypertext Markup Language) is the set of markup symbols or codes inserted in a file intended for display on a World Wide Web browser page. The markup tells the Web browser how to display a Web page's words and images for the user. Each individual markup code is referred to as an element (but many people also refer to it as a tag). Some elements come in pairs that indicate when some display effect is to begin and when it is to end.

Steps to Design HTML page

1. Create a folder on your desktop called HTML.
2. With your text editor, save a file called webpage.html to the HTML folder.
   i. HINT: Be sure the file extension is .html
3. In your file, Type "My First Web Page" and save again.
   - Double click your file. It should, by default, open in a web browser. If not, select a web browser from the list of programs.
   - When viewing your page in the browser, you should see the content that you typed in step 3 above.

Sample Code :

```
<!DOCTYPE html>
<html>
<head>
<!-- your webpage info goes here -->
    <title>My First Website</title>
        <meta name="author" content="your name" />
        <meta name="description" content="" />
<!-- you should always add your stylesheet (css) in the head tag so that it starts loading before the page html is being displayed -->
  <link rel="stylesheet" href="style.css" type="text/css" />
</head>
<body>
<!-- webpage content goes here in the body -->
  <div id="page">
      <div id="logo">
          <h1><a href="/" id="logoLink">My First Website</a></h1>
      </div>
```

```
<div id=”nav”>
    <ul>
        <li><a href=”#/home.html”>Home</a></li>
        <li><a href=”#/about.html”>About</a></li>
        <li><a href=”#/contact.html”>Contact</a></li>
    </ul>
</div>
<div id=”content”>
    <h2>Home</h2>
    <p>
```

This is my first webpage! I was able to code all the HTML and CSS in order to make it. Watch out world of web design here I come!

```
    </p>
    <p>
```

I can use my skills here to create websites for my business, my friends and family, my C.V, blog or articles. As well as any games or more experiment stuff (which is what the web is really all about).

```
    </p></div>
<div id=”footer”>
    <p>
```

Webpage made by [your name]

```
    </p>
</div> </div>
</body>
</html>
```

OUTPUT:

ASSIGNMENT QUESTIONS

Q.1 How to control the line breaks and spaces with the <pre> tag

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Q.2 How do you change the number type in the middle of a list?

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Q.3 Write a HTML table tag sequence that outputs the following:

50 pcs 100 500

10 pcs 5 50

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VIVA QUESTIONS

Q.1 What are some of the common lists that can be used when designing a page?

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Q.2 What is HTML?

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Q.3 What are tags?

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Q.4 Do all HTML tags come in pair?

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Experiment No. : 3

AIM:

Creating mailing labels Using Label Wizard, generating label in MS WORD

MS-Word:

Microsoft Word or MS-WORD (often called Word) is a graphical word processing program that users can type with. It is made by the computer company Microsoft. The purpose of the MS Word is to allow the users to type and save documents.

Procedure demonstrates how to perform a mail merge to create labels.

Step 1: Create the mailing label document

Start a new document to create a new label, or open an existing document that you used previously to merge labels.

1. Open the document in Word, and then start the mail merge. To start a mail merge, follow these steps, as appropriate for the version of Word that you are running:

- Microsoft Word 2002

On the Tools menu, click Letters and Mailings, and then click Mail Merge Wizard.

- Microsoft Office Word 2003

On the Tools menu, click Letters and Mailings, and then click Mail Merge.

- Microsoft Office Word 2007 or later versions of Word

On the Mailings tab, click Start Mail Merge, and then click Step by Step Mail Merge Wizard.

2. Under Select document type, click Labels, and then click Next: Starting Document.

3. Under Select starting document, click Change document layout or Start from existing document.

With the Change document layout option, you can use one of the mail-merge templates to set your label options to create a new label document. When you click Label options or Next: Select recipients, the Label Options dialog box appears. Select the type of printer, the type of label product, and the product number. If you are using a custom label, click Details, and then type the size of the label. Click OK after completing.

With the Start from existing document option, you can open an existing mail-merge document and use that as your main document.

4. Click Next: Select Recipients.

Step 2: Select the data source

The data source contains the information that can vary in each label, such as a destination address. You can open an existing data source created in Word, or you can create a new data source and fill in the addressee information.

Note : Additionally, you can use a data source that was created in another program, such as Microsoft Excel or Microsoft Access, or you can use a personal address book created in Microsoft Exchange Server or Microsoft Schedule+, or you can use an ASCII text file or another delimited file.

1. Under the Select Recipients heading in the Mail Merge task pane, select the appropriate data source option.

The options are to use an existing list, select from Outlook contacts, or type a new list.

2. Use the appropriate method for the type of data source that you want to use to complete Select recipients step.

Method 1: Open an existing data source

To open an existing data source, follow these steps:

a. In the Mail Merge task pane, click Use an existing list, and then click Browse under the Use an existing list heading.

The Select Data Source dialog box appears.

b. In the list of files in the Select Data Source dialog box, select the data source that you want to use, and then click Open.

Note: If the data source that you want is not in the list of files, click the appropriate drive and folder, and then select the appropriate option in the List files of type box.

If the data source that you want is not in the list of files, click the appropriate drive and folder, and then select the appropriate option in the List files of type box.

Word displays the Mail Merge Recipients dialog box for you to edit your data more. When you finish your editing changes, click OK.

Your labels are displayed.

c. Click Next: Arrange your labels.

d. Proceed to the Step 3: Edit the label document section later in this article.

ASSIGNMENT QUESTIONS

Q.1 How to use mail merge to create form letters in Word

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Q.2 How to create a custom label or modify an existing label in Word

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Q.3 How to use mail merge to create a directory in Word 2002 and in later versions of Word

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VIVA QUESTIONS

Q.1 How to add foot-node & end note in word?

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Q.2 What is the shortcut keys for creating hyperlink?

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Q.3 In MS word 2013 how you can create a user entry forms ?

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Q.4 How you can take a screen shot in word 2013?

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Experiment No. : 4

AIM:

Create a database in MS Access to store the patient information with the required fields using access.

The purpose is to create a database that will track patients' diagnosis and treatment. Providers will put in information about patients diagnosis and treatment after each encounter.

Entities & Attributes

Assume that you need to prepare a database called EMR that contains three entities: Patients, Providers and Encounters.

For each of these three entities we need to create separate tables. Each table will describe the attributes of each of the three entities. The patient attributes are assumed to be first name, last name, date of birth, address (street name, street number, city, State and zip code) and email. First name is a string of maximum size 20. Last name is a string of maximum size 50. Street number and zip code are integer numbers with no decimals. Date of birth is a date put in the format DD MMM YY (e.g. 19 Jan 04). The possible values for the State are Maryland, Virginia, District of Columbia and other. Patient's telephone number could be text or number. A patient ID (auto-number) should be used as the primary key for the table.

The provider attributes are assumed to be first name (text of size 20), last name (text of size 50), whether they are board certified (a yes/no value), date of hire (in format DD MMM YY), telephone (text or number) and email (text of size 75). Employer's ID number should be the primary key for the table.

The encounter entity is assumed to have the following attributes: patient ID, provider ID, diagnosis (text of size 50), treatment (text of size 50) and date of encounter (date entered in the format DD MMM YY). Each encounter should have its own ID number. The Figure below shows the relationship between encounter entity and patient and provider entities:

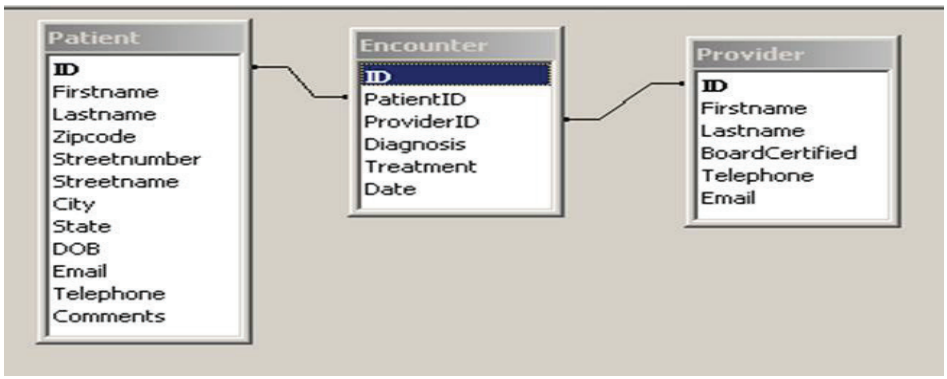


Figure 1: Relationship Among Access Tables

Patient Table

To make this simple electronic medical record, we start by opening a new databases and naming it EMR. Next we create the three tables. We begin with the table for the patients.

We create the patients table in the design view. Note that we do not put any spaces in field names. Our first field name is Firstname. We select for data type "Text." In the description we type "Legal first name

of the patient." In the field's property menu we set the size of this field to 20. We set for caption "First name".

Our second field name is Lastname. We select for data type "Text." In the description we type "Legal last name of the patient." In the field's property menu we set the size of this field to 50. We set for caption "Last name".

Our next field is zipcode. The data type is number. The description is the "Minimum 5 digits numerical postal zip code." In the field properties we set the size to 10.

Our next field is City, set as text type. In the field properties we set the size to 20.

Our next field is State. This field has fixed menu items. To set this up we use a look up wizard. We can look up the values from a different table or type them in. We will type in the possible values.

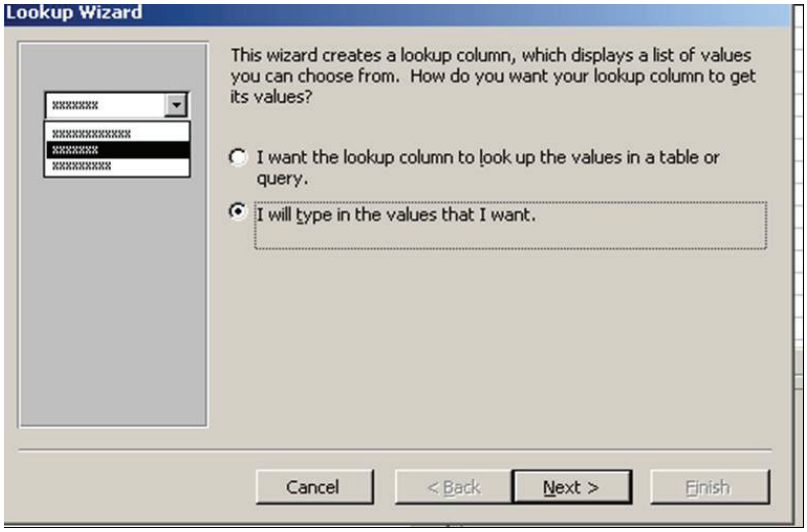


Figure 2: Start of Look Up Wizard

The possible values are Maryland, Virginia, DC, and Other.

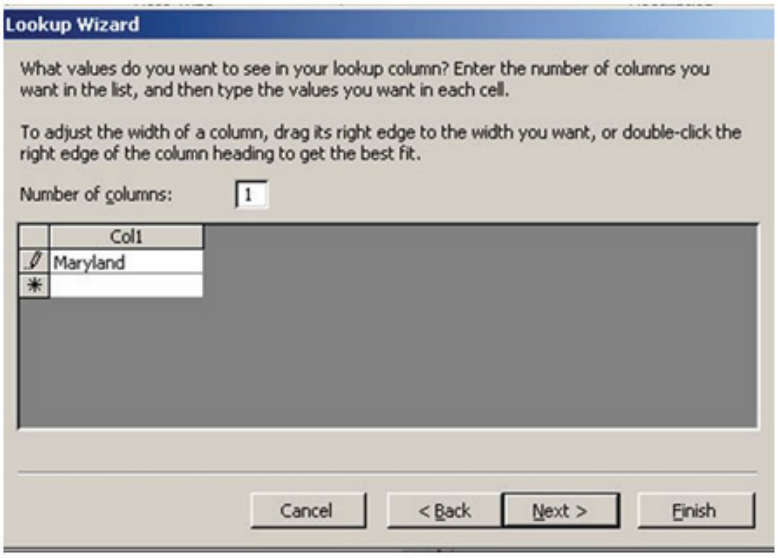


Figure 3: Entering Fixed Menu Items in Lookup Wizard

Our next field is DOB. The data type is set as Date. The description is typed in as "Date of birth of patient." IN the field property we set the format to Medium Date length. We set the input mask, i.e. the additional guides for the database users to input the date, to Medium Date. We need to save the database before the input mask is accepted.

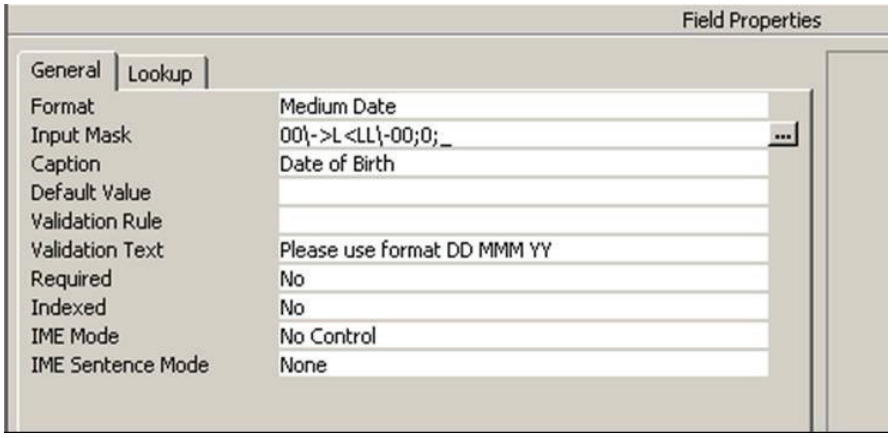


Figure 4: Field Properties for Date

Email field is set to text type. Description includes "Current email of patient."

Our next field is Telephone. This is a number type. Because telephones are large numbers, we set the size in the field property to double digit precision.

Our last field is a comment field set to text of size 200 and description of "Free form comment about the patient characteristics."

We now add a field called ID as an auto-number. This field is selected to be the primary key. A primary key as you know is a unique number that identifies all contents of a table. We could have used the combination of first and last name as the primary key, but people's first and last name may not be unique. Auto-number solves the problem because now every entry will automatically receive a unique number.

This completes the creation of Patients table. We save the table and name it Patients. Before we proceed, we look at the data entry mode of the table and enter 3 rows of data for our table.

First Name	Last Name	Zip Code	City	State	Date Of Birth	Email.	Telephone of the patient
Farrokh	Alemi	22101	Mclean	Virginia	08-Jan-54	hsci709@gmu.du	7039934226
George	Smith	22102	McLean	Virginia	09-Sep-60	t@tes.com	7038884545
Jill	Smith	22103	McLean	District of Columbia	01-Aug-89	test@test.com	7039934226

Table 1: Three Rows of Data for Patient Table

Provider Table

The creation of the Provider table follows a similar procedure. Everything in the table is about providers. Thus a patient's name does not show here. Only facts about the provider show here. We start with

creating Firstname as a text of size 20, with the description of "Legal first name of provider."

Our second field name is Lastname. We select for data type "Text." In the description we type "Legal last name of the provider." In the field's property menu we set the size of this field to 50. We set for caption "Last name". Note as before that captions can have space but field names cannot.

Our next field is BoardCertified. This field is entered as a Yes/No type. The description is "Whether the provider has passed State boards."

Our next field is Telephone. This is a number type. Because telephones are large numbers, we set the size in the field property to double digit precision. The description includes "Telephone number of provider."

Email field is set to text type. Description includes "Current email of Provider."

We now add a field called ID. It contains the employee's unique ID number. This field is selected to be the primary key.

This completes the creation of Provider table. We save the table and name it Providers. Before we proceed, we look at the data entry mode of the table and enter 3 rows of data for our provider table.

Providers

Firstname	Lastname	Boardcertified	Email	Telephone	Employee ID
Jim	Leggit	Yes	jl@w.com	3456714545	452310
Jill	Smith	No	js@w.com	3454561234	454545
George	John	Yes	g@w.com	3104561234	456734

Table 2: Three Rows of Data for Providers Table

Encounter Table

The last table we would like to create is called Encounters. This table keeps the data from each patient visit. We enter as our first field an ID, as an auto-number. This is described as "Unique ID for the encounter."

Next field is the PatientID, entered as a number of size 20. This is described as "Unique patient ID number."

Next field is ProviderID, entered as number of size 20 and described as "Unique provider employee number."

Next field is Date, entered as a date and described as "Date of encounter." The field property is set to Medium Date and the input mask is set to Medium Date.

Next field is Diagnosis, set to text type and described as "Main reason for the visit." The size of this field is set to 75 in the field's property window.

Next field is Treatment, set to text and described as "Main treatment provided in the visit." The size of this field is set to 200.

We save the design of the encounters table and enter following data.

Encounters

ID	PatientID	ProviderID	Date of ncounter	Diagnosis	Treatment
1	1	452310	10-Jan-04	Hypertension	Assessment
2	1	452310	17-Jan-04	Followup	Monitoring
3	2	452310	10-Jan-04	Unknown	Assessment
4	3	452310	10-Jan-04	Hypertension	Assessment
5	1	454545	10-Jan-04	Asthma	Education

Table 3: Five Records for Encounters Table

Table Relationships

We are now ready to set the relationship among the tables. The purpose of relationships is to let the database know how the tables are related to each other so that we can trace information pertaining to one record in a table to another table. To set the relationship among tables, we select from the database menu, tools and then relationships.

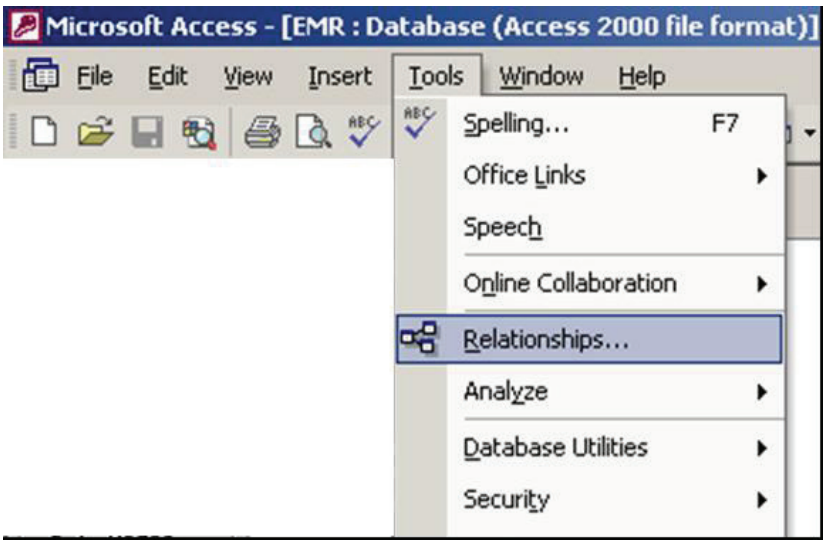


Figure 5: Setting Relationships

In the relationships window, if the window for adding tables is not showing, we right click to show tables.

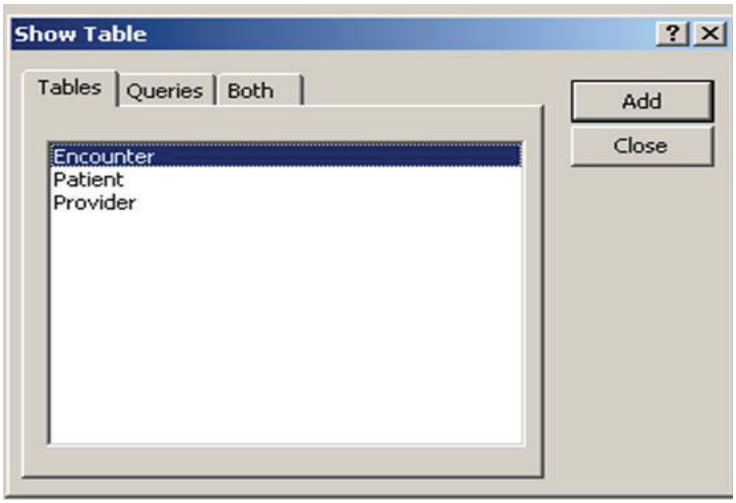


Figure 6: Adding tables to relationships

We add the three tables Patients, Providers and Encounters. We then drag the patient ID in the encounter table to the ID field in the Patient table. We also drag the field Provider ID to the field ID in the provider table.You should see something that looks like the very first figure on this page, Figure 1.

In a normal join of two tables, the values of the field must be present in both tables. It is possible to join two tables and require that only one field should always be present and if the value of the field has no matching value in the other table, then it will have a null value. If you carefully click on the join line so that it becomes bold, you can right click and see the option to edit the join properties. In here you can select join type and set the different types of joins.

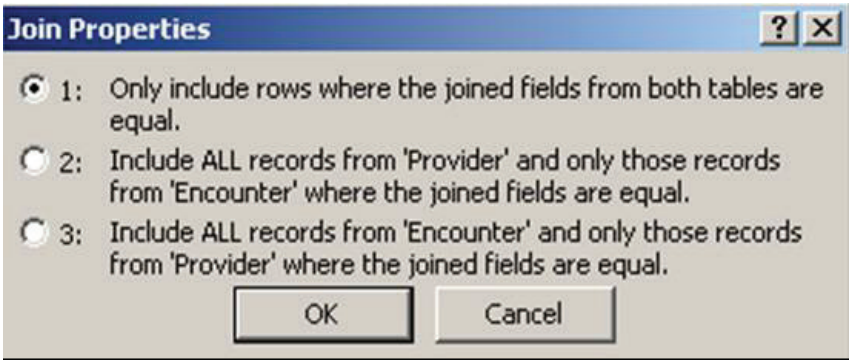


Figure 7: Three types of Joins

For the time being we select to join the encounter and patient table so that the value of patient ID is exactly the same in the two tables. One consequences of this join is if there is an encounter with a patient whose ID has not been entered, it will not show in the joined tables. We will review more of this later when we talk about queries.

What do you know?

A. Make progress on your paper using the following steps:

Read the data provided by the instructor into several separate files. Please note that to fit the file into the limitations of Access you need to read the patient's ID, diagnoses codes, discharge status, and length of stay. All other information can be ignored for the time being.

Using the rule you have come up with, select the cases that correspond to your diagnosis.

B. Create an EMR.

To create the EMR follow these steps:

In the database EMR, Create the tables and relationships described in this lecture.

Revise the database EMR to EMR1 so that diagnosis is no longer a free text field but a field where the values of it are looked up from a table called "Diagnosis." Enter three rows of data in the table Diagnosis with attributes Diagnosis code, Diagnosis text.

Revise the database EMR2 into EMR3 so that a patient could have multiple addresses. To do so, drop the address fields from Patient table. Add an AddressID to the patient table. Create a table called address, where the attributes are Date, ID (set to primary key), Street name, Street number and zip code. Make sure the primary key in the table is set as the combination of patient ID and date. Enter following three rows of data in table Address.

Address

PatientID	Date	StreetName	StreetNumber	Zipcode
1	15-Aug-04	Main St	1312	22102
1	12-Jan-05	Ozkan St	1309	22101
2	12-Jan-04	State St	1402	22103

Revise the database EMR3 so that zip codes are used to identify the city and state. Create a table called zip codes with attributes zip code (set to be primary key), City, and State. Enter three rows of data.

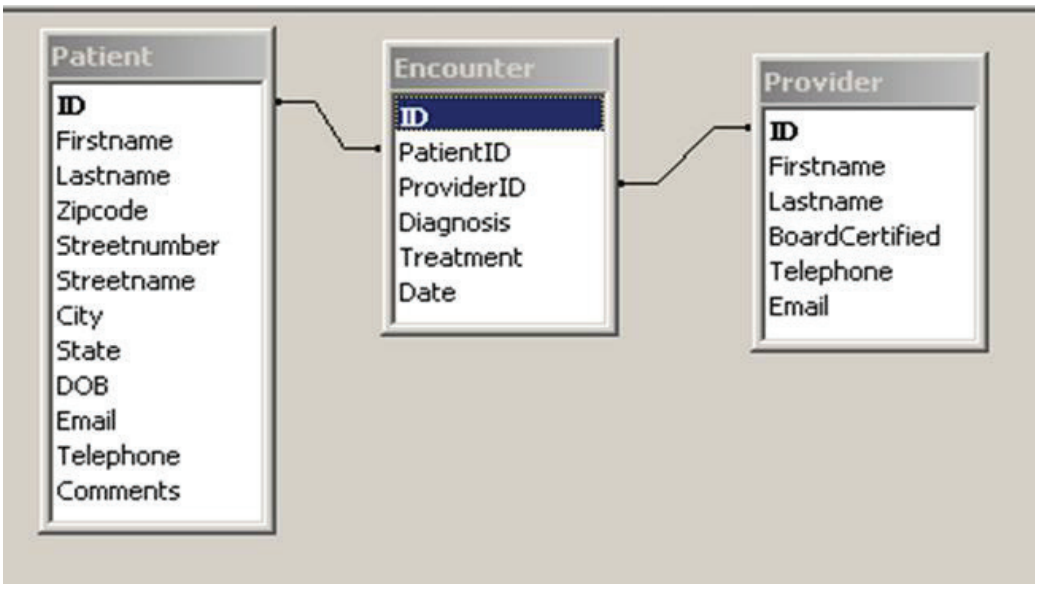
Zip Code

Zipcode	City	State
22101	McLean	Virginia
22102	Fairfax	Virginia
22103	McLean	District of Columbia

Please do not send your databases to the instructor. Some email programs will automatically delete an email in which a database is attached. Instead, please submit by email a screen image of the database relationships. Make sure that you copy the question into the word document and follow each question with an image of the relationships among the tables. Capture the image of the screen by clicking on control and Print screen key on your keypad. Then paste it into your word document and trim it using the toolbar for pictures (crop option). Make sure your response is not only correct but also looks good. Send your email to the instructor or bring your work to class.

ASSIGNMENT QUESTIONS

Implement EMR for patient.



VIVA QUESTIONS

Q.1 Explain how many data types used in MS Access.

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Q.2 State types of relationships used in database.

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Q.3 Explain normalization and its process.

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Experiment No. : 5

AIM:

Design a form in MS Access to view, add, delete and modify the patient record in the database.

Methods of Create a form from an existing table or query in Access

To create a form from a table or query in your database, in the Navigation Pane, click the table or query that contains the data for your form, and on the **Create** tab, click Form.

Access creates a form and displays it in Layout view. You can make design changes like adjusting the size of the text boxes to fit the data, if necessary.

Create a blank form in Access

1. To create a form with no controls or preformatted elements: On the Create tab, click Blank Form. Access opens a blank form in Layout view, and displays the Field List pane.
2. In the **Field List** pane, click the plus sign (+) next to the table or tables that contain the fields that you want to see on the form.
3. To add a field to the form, double-click it or drag it onto the form. To add several fields at once, hold down CTRL and click several fields, and then drag them onto the form at the same time.

Build the query

Step 1: Open an existing database.

Step 2: Click on Forms Tab.

Step 3: Click on the new button.

Step 4: Use the Form Wizard.

Step 5: Select data source and fields for the form.

Step 6: Select a form Layout.

Step 7: Select a form Style.

Step 8: Name your Form.

Steps for add, delete and modify the patient record in the database:

Add a new record

You add a record to your database when you have a new item to track. For example, you might want to add a new contact to the Contacts table when you have a new friend or colleague whose information you

want to record. When you add a new record, Office Access 2007 appends the record to the end of the table.

To add a record, you first open a table or form. Sometimes, a form is automatically opened for you when you open the database. For example, when you open a database that was created from the Contacts template, the Contact List form opens automatically. The Contact List form is the startup form for the Contacts database.

Add a record by using the New button

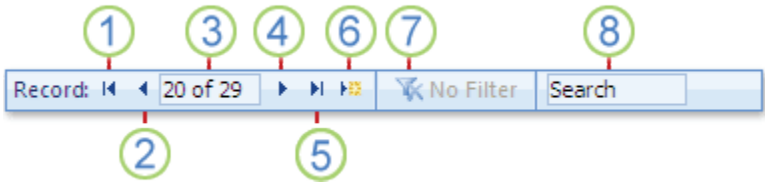
1. Click the **Microsoft Office Button** , and then click **Open**.
2. In the **Open** dialog box, select and open the database.
3. When the startup form appears, click the button provided for adding a new record.For example, in the Contact List form, click **New Contact**. The Contact Details form opens.
4. Fill in the form. Enter your information in each field, pressing TAB to move to the next field, or pressing SHIFT+TAB to move to the previous field.
5. When you finish entering records, click **OK** to save the information or, if you want to add additional records, click **Save and New**, if it is available.

Find a record to edit or delete

You must first find a record before you can edit or delete it. In a table that contains only a small number of records, you can use the record navigation buttons to navigate through the records until you find the one you want.

Using the record navigation buttons

You can navigate between records by using the navigation buttons. You can click these arrow buttons to navigate to the first, previous, next, or last record, or to add a new record.



1. First record
2. Previous record
3. Current Record
4. Next record
5. Last record
6. New (blank) record
7. Filter indicator
8. Search box

When you click in the Current Record box, you can type a record number and then press ENTER to navigate to that record. The record number is counted sequentially, from the beginning of the form or datasheet — it does not correspond to any field value.

The filter indicator button shows whether a filter has been applied. To remove the filter, you can click this button when it displays **Filtered**. Similarly, when it displays **Unfiltered**, you can click this button to apply the last filter that you used.

When you enter text in the **Search** box, the first matching value is highlighted in real time as you enter each character. You can use this feature to quickly search for a record with a value that matches what you enter in the **Search** box.

Using the Find feature in the Find and Replace dialog box

You can use the Find feature in the **Find and Replace** dialog box to locate a matching record. When you find a matching record, that record becomes the current record, and you can then edit or delete it.

Find a matching record

Click the field that you want to search.

On the Home tab, in the **Find** group, click Find, or press CTRL+F.

Keyboard shortcut Press CTRL+F.

The Find and Replace dialog box appears.

Click the **Find** tab.

In the Find What box, type the value that you want to match.

Optionally, use the Look In list to change the field that you want to search, or to search the entire underlying table instead.

Optionally, in the Match list, select Any Part of Field. Selecting this option provides the broadest possible search.

In the **Search** list, select All, and then click Find Next.

Delete a record

When you delete a record, the information is permanently deleted from your table. Therefore you should be certain that you want to delete a record before you delete it. If you need to delete only some information but not the entire record, select only the data that you want to delete and then press DELETE.

Delete a record

1. Select the record or records that you want to delete.

   To select a record, click the record selector next to the record, if the record selector is available.

   To extend or reduce the selection, drag the record selector (if it is available), or press SHIFT+DOWN ARROW or SHIFT+UP ARROW.

2. Press DELETE.

ASSIGNMENT QUESTIONS

1. Design a form based on patient information like patient name, address, phone number disease and date of first meeting.

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2. Perform action on existing created form like add, delete and modify patient information as per required.

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VIVA QUESTIONS

Q.1 Name methods of creating forms in MS Access?

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Q.2 Explain how to create multiple forms in MS Access?

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Q.3 How to perform addition and deletion in forms.

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Experiment No. : 6

AIM:

Generating report and printing the report from patient database

Method of create a simple report

You can create a variety of different reports in Microsoft Office Access 2007, ranging from the simple to the complex. Begin by thinking about your report's record source. Whether your report is a simple listing of records or a grouped summary of sales by region, you must first determine which fields contain the data you want to see in your report, and in which tables or queries they reside.

After you choose your record source, you will usually find it is easiest to create your report by using the Report Wizard. The Report Wizard is a feature in Access that guides you through a series of questions and then generates a report based on your answers.

Choose a record source

A report consists of information that is pulled from tables or queries, as well as information that is stored with the report design, such as labels, headings, and graphics. The tables or queries that provide the underlying data are also known as the report's record source. If the fields that you want to include all exist in a single table, use that table as the record source. If the fields are contained in more than one table, you need to use one or more queries as the record source. Those queries may already exist in your database, or you may need to create new queries specifically to fit the needs of your report.

Create a report by using the Report tool

The Report tool provides the fastest way for you to create a report, because it generates a report immediately without prompting you for information. The report displays all the fields from the underlying table or query. The Report tool may not create the final, polished product that you ultimately want, but it is quite useful as a means to quickly look at the underlying data. You can then save the report and modify it in Layout view or Design view so that it better serves your purposes.

1. In the Navigation Pane, click the table or query on which you want to base the report.
2. On the **Create** tab, in the **Reports** group, click **Report**. 

Access builds the report and displays it in Layout view.

After viewing the report, you can save it and then close both the report and the underlying table or query that you used as a record source. The next time that you open the report, Access will display the most recent data from your record source.

Understand the report sections

In Access, the design of a report is divided into sections. You can view your report in Design view to see its sections. To create useful reports, you need to understand how each section works. For example, the section in which you choose to place a calculated control determines how Access calculates the results. The following list is a summary of the section types and their uses:

- Report Header : This section is printed just once, at the beginning of the report. Use the report header for information that might normally appear on a cover page, such as a logo, a title, or a date. When you place a calculated control that uses the Sum aggregate function in the report header, the sum calculated is for the entire report. The report header is printed before the page header.
- Page Header: This section is printed at the top of every page. For example, use a page header to repeat the report title on every page.
- Group Header : This section is printed at the beginning of each new group of records. Use the group header to print the group name. For example, in a report that is grouped by product, use the group header to print the product name. When you place a calculated control that uses the Sum aggregate function in the group header, the sum is for the current group.
- Detail : This section is printed once for every row in the record source. This is where you place the controls that make up the main body of the report.
- Group Footer : This section is printed at the end of each group of records. Use a group footer to print summary information for a group.
- Page Footer : This section is printed at the end of every page. Use a page footer to print page numbers or per-page information.
- Report Footer : This section is printed just once, at the end of the report. Use the report footer to print report totals or other summary information for the entire report.

ASSIGNMENT QUESTIONS

1. How many controls are used in report generation to that enhances the user interface.

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2. How to customizing color and fonts in report.

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3. How to add a logo or background image to a report.

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VIVA QUESTIONS

Q.1 What can you do with a report?

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Q.2 How many types of report tools are there?

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Q.3 How many several options are available to you in Print Preview?

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Experiment No. : 7

AIM:

Creating invoice table using – MS Access

Simple Invoicing Desktop Database with MS Access 2013

A Database Management System (DBMS) is a set of procedures and tools to store and retrieve information. The database itself is the stored information. The types of information stored in the database are defined by the corresponding data structures. The database structure overall consists of the tables, their constituent fields, and the relations between them. All information in the database is stored in these tables. A DBMS consists of more than just the data. The DBMS also includes forms, queries and reports. The forms are the displays for screen and print that allow entering new information into the database tables and displaying the existing information. The queries are searches of the database that extract specified information. The reports are formatted displays of the extracted information, for screen and for print. These four database constructs are available from the Create tab in Access.

Sample Steps for Invoice Table in MS Access

Step 1

Download the Desktop Time and Billing template for Access 2003 and 2007 or the Desktop Services template for Access 2010. Both are available from the Microsoft Office website under the "Templates" tab at the top of the page (see link in Resources).

Step 2

Launch Access. In 2003 or 2007 go to "File | Templates | Time & Billing | Project List | Reports | Invoice." In Access 2010, a "Quotes & Invoices" tab automatically appears on the dashboard.

Step 3

Select the invoice template you want to use in Access 2003 or 2007, or click the "Add New Invoice" button on the Access 2010 dashboard. From here the invoicing steps are the same regardless of version.

Step 4

Enter the status, employee name, customer name and amounts into the appropriate fields. You're prompted to create a new customer record if the name isn't already found in Access.

Step 5

Click "Save & Close" and then "Next" to exit. The invoice appears in the "Report Center" tab of Access 2003 and 2007 and the "Invoices" tab in Access 2010. Choose to sort by "Unpaid," "Past Due" or "Paid."

Step 6

Click the invoice number to edit, print or change the status of an invoice. Choose "Save & Close" to save changes.

ASSIGNMENT QUESTIONS

1. How to create the invoice query in MS-Access

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2. How to create the invoice form in MS-Access

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3. How to attach the details subform to the invoice form in MS-Access

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VIVA QUESTIONS

Q.1 Explain how you can import data from other sources into Access database?

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Q.2 Explain how you can export data in Excel format?

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Q.3 What is the size limitation in MS-Access Database?

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Experiment No. : 8

AIM:

Creating and working with queries in MS Access

Methods of Select Query

A select query is a type of database object that shows information in Datasheet view. A query can get its data from one or more tables, from existing queries, or from a combination of the two.

The tables or queries from which a query gets its data are referred to as its record source.

Whether you create simple select queries by using a wizard or by working in Design view, the steps are essentially the same. You choose the record source that you want to use and the fields that you want to include in the query — and, optionally, you specify criteria to refine the results.

After you have created a select query, you run it to see the results. Running a select query is simple — you just open it in Datasheet view. You can then reuse it whenever you need, for example, as a record source for a form, report, or another query.

Build the query

First, you will use a wizard to create the query, based on the sample table that you just created. Then, you will enhance the query in Design view. At each step, you can review the SQL statement that is automatically generated by the steps that you take.

On the Create tab, in the Other group, click Query Wizard.

In the New Query dialog box, click Simple Query Wizard, and then click OK.

Under Tables/Queries, click the table that has the data that you want to use. In this case, click Table: Customers. Note that a query can also use another query as a record source.

Under Available Fields, double-click the Contact, Address, Phone, and City fields. This adds them to the Selected Fields list. When you have added all four fields, click Next.

Name the query London Contacts, and then click Finish.

Access displays all of the contact records in Datasheet view. The results show all of the records, but show only the four fields that you specified in the query wizard.

Steps for creating action Query for Microsoft Access

Step1. Start Microsoft Access and open your database

Step2. Click on the Queries tab of your database.

Step3. Click on the New button and then select Design View to start creating a query in Design view.

Step4. Choose the tables or other queries you wish to query

Step5. Choose the fields from the table/query you want.

Just like normal queries, you will often have to specify a criterion in your query to get the results you want.

Step6. Run the query to make sure your query contains the results are you are looking for.

Step7. Now, you need to change the type of query this is. In the middle of the screen, click the Query type button.

Step8. Change to Make-Table.

Step9. Specify the name of the new table and if it is going to be created in the database you are currently working from, or another database.

If you are creating the table for a separate database, you will have to specify the location of it.

Step10. Run the query.

Because you running an action query that makes changes to your overall database structure, Microsoft Access will ask if you want to cancel the operation.

Click Yes to close the dialog box, create the new table and return to Query Design View.

Step11. Save your query, and you're done.

ASSIGNMENT QUESTIONS

1. List all customer names and occupations in alphabetical order (ascending) by customer name.

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2. List all female customers with their name and their age. List customer name in alphabetical order (ascending).

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3. List each customer's name and occupation if their occupation is Housewife. List in alphabetical order by name (ascending) and hide the occupation from the results.

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VIVA QUESTIONS

Q.1 Name some of the file extension for MS Access?

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Q.2 Explain what do you mean by queries?

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Q.3 Mention how you can create a simple query in Access 2013?

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Q.4 In MS Access 2013 what are the different ways you can enter data?

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Experiment No. : 9

AIM:

Exporting data and objects to other Access databases

Access provides a number of ways to copy an object such as a table or form from one database to another. Copying and pasting an object is easiest, but exporting an object offers you more options. For example, you can export the table definition and the data in the table, or export just the table definition (a blank copy of the table). You can also save the details of the operation as an export specification for future use.

Understand exporting data and objects to other Access databases

You can export a table, query, form, report, macro, or module from one Access database to another. When you export an object, Access creates a copy of the object in the destination database.

Note: You cannot export partial objects. For example, you cannot export only the records or fields selected in a view. To copy a portion of an object, copy and paste the data instead of exporting it.

You export database objects when you need to do any of the following tasks:

- Copy the structure of a table to another database as a shortcut to creating a new table.
- Copy the design and layout of a form or report to another database as a quick way to create a new form or report.

Copy the latest version of a table or form to another database at regular intervals. To do this, you can create an export specification the first time you export the object, and then use the specification to repeat the operation later.

Note that exporting an object to another database differs very little from opening a second database and then importing the object from the first. The two main differences between importing and exporting objects between Access databases are:

- You can import multiple objects in a single operation, but you cannot export multiple objects in a single operation. If you want to export multiple objects to another database, it is easier to open the destination database and then perform an import operation from within that database.
- In addition to database objects, you can import relationships between tables, plus any import and export specifications, and menu bars and toolbars. You can also import a query as a table. Exporting does not offer you these options.

Export a database object to another Access database

The steps in this section explain how to prepare for an export operation, run the export wizard, and then save and run the export specification.

Prepare for the export

1. Open the source database, if it is not already open. The file format can be either MDB or ACCDB. If the file is in MDE or ACCDE format, the source object must be a table, a query, or a macro. You cannot export forms, reports, and modules from an MDE or ACCDE file.

Note: If the database is read-only, or you don't have permissions to make changes to the database, you can complete the export operation, but cannot save the export specification.

2. Identify the object that you want to export. If this is the first time you are exporting data to an Access database, remember the following:

Element	Description
Single object per operation	You can export only one object at a time. To export multiple objects, repeat the export operation for each object, or do an import operation from within the destination database.
New table	Each export operation creates a new object in the destination database. If an object with the same name already exists, you can choose to overwrite the existing object or specify a different name for the new object.
Exporting a linked table	If the table that you want to export is a linked table, the export operation creates a linked table in the destination database. The new linked table links to the original source table.
Partial export	You cannot export a portion of an object or just a few selected records.
Relationships	Since you can only export one table at a time, the export operation does not copy relationships. If you want to import multiple tables and their relationship, open the destination database and import the objects.
Table definition	You can choose to export
Table definition	You can choose to export an entire table or just the table definition. Exporting the definition creates a blank copy of the table in the destination database.
Record source	Exporting a query, form, or report does not automatically export the underlying record sources. You must export the underlying record sources — otherwise, the query, form, or report will not work.

Element	Description
Lookup fields	If a field in the source table looks up values in another table or query, you must export the related table or query if you want the destination field to display lookup values. If you do not export the related table or query, the destination field displays only the lookup IDs.
Sub forms and sub reports	When you export a form or report, sub forms and sub reports included in the form or report are not automatically exported. You need to export each sub form or sub report and its underlying record source separately.

Open the destination database. The file format can be either MDB or ACCDB. It can also be an MDE or ACCDE file. Ensure that it is not read-only and that you have permissions to modify it.

Notes:

If you cannot open the database, another user may have the database open in exclusive mode. You typically need to find that user and request that they close and reopen the database in normal (multi-user) mode.

If the database is password-protected, you will be asked to enter the password each time you run the Export Wizard or the saved specification.

If you want to export the object to a new database, you must create a blank database (that does not contain any tables, forms, or reports) before starting the export operation. Click the **Microsoft Office Button**  , and then click **New**.

If an object with the same name as the source object already exists in the destination database, you must decide whether you want to overwrite the existing version or specify a different name for the new object.

You are now ready to start the export operation. Go to the next set of steps.

Note: If you want to append the records in the source table to a table in the destination database, you must use an append query instead of running an export operation. **Run the export wizard**

On the **External Data** tab, in the **Export** group, click **More**, and then click **Access Database**. 

Note: The **Export** commands are available only when a database is open.

In the **File name** box, specify the name of the destination database and then click **OK**.

In the **Export** dialog box, change the name of the new object if you do not want to overwrite an existing object with the same name in the destination database.

If the selected object is a table, specify whether you want to export the table's definition and data, or only the definition.

Click OK to finish the operation.

If an object with the same name exists in the destination database, you will be prompted to either overwrite or specify a different name. Click **Yes** to overwrite, or click **No** to return to the **Export** dialog box. Specify a name that is not in use in the destination database, and then click **OK**.

Access exports the objects. If an error occurred, Access displays an error message. Otherwise, the final screen of the wizard appears, and you use that screen to create a specification that saves the details of the export operation.

Save the export specification

Click **Save export steps** to save the details of the operation for future use. You save the details when you need to repeat the operation at a later time without having to walk through the steps in the wizard each time.

In the **Save as** box, type a name for the export specification. Optionally, type a description in the **Description** box.

If you want to perform the operation at fixed intervals, such as weekly or monthly, select the **Create Outlook Task** check box. This will create an Outlook task that will let you run the specification with a click of a button.

Click **Save Export**.

Do one of the following:

If you selected the **Create Outlook Task** check box, Access will start Microsoft Office Outlook 2007. Follow the remaining steps in this procedure to configure the Outlook task.

If you did not select the **Create Outlook Task** check box, the operation is now complete. Open the destination database and review the exported object to ensure that the operation was successful.

In the Task window in Outlook, review and modify the task settings, such as **Due date** and **Reminder**.

To make the task recur, click **Recurrence**. For more information about task settings, see Outlook Help.

Click **Save and Close**.

In Access, open the destination database and review the exported object to ensure that the operation was successful.

Run the export specification

Use the following steps to run the export specification from the Outlook task. Access does not need to be running.

Do one of the following, depending on when you want to run the export:

At the scheduled time When Outlook displays the **Reminder** dialog box for the task, click **Open Item**.

At any time Open the task in Outlook by clicking **Tasks** in the Outlook Navigation Pane, and then clicking the task that you want to run.

On the **Task** tab, in the **Microsoft Office Access** group, click **Run Export**  .

Click **OK** to perform the operation.

ASSIGNMENT QUESTIONS

1. Explain how to export forms, table and query into web pages.

VIVA QUESTIONS

Q.1 Why exporting of data or table are needed.

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Q.2 What are the primary functions of export are necessary while do it.

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Q.3 List some important functions of exporting query into web page.

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Experiment No. : 10

AIM:

Exporting Tables, Queries, Forms and Reports to XML pages

XMLports are used to export data from a Microsoft Dynamics NAV database to XML format or import data from an XML file to Microsoft Dynamics NAV database. Exporting data from your Microsoft Dynamics NAV database into XML format enables seamless exchange of information between different computer systems. You only need a basic knowledge of XML to design and work with XMLports.

XMLports are called and run from codeunits or run from Object Designer. In this walkthrough, you will call the XMLport from a codeunit. You define the output stream that will export the data and location where the XML document should be saved in the codeunit.

About This Walkthrough

This walkthrough shows you how to export data from a Microsoft Dynamics NAV table into an XML document. This walkthrough illustrates the following tasks:

- Creating an XMLport.
- Compiling and saving the XMLport.
- Creating the codeunit that will run the XMLport.
- Running the XMLport.

Prerequisites

To complete this walkthrough, you will need:

- Microsoft Dynamics NAV 2016 installed with a developer license.
- The CRONUS International Ltd. demonstration database.

Story

Simon is a Microsoft Certified Partner working for CRONUS International Ltd. He has been asked to export records from the **Customer** table to an XML document. The records will include only the **No.**, **Name**, **Address**, **City**, and **Contacts** fields. The information will be shared with another colleague who works on a different computer system. Simon knows that he can use XMLports to convert the records in the table to XML format that can easily be shared with the colleague.

Creating the XMLport

You create the XMLport by designing it in XMLport Designer and setting the properties for the XMLport. You define the table and fields that you want to export in XMLport Designer. You then compile and save the XMLport.

To create the XMLport

In the Microsoft Dynamics NAV Development Environment, on the **Tools** menu, choose **Object Designer**.

In Object Designer, choose **XMLport**, and then choose **New** to open XMLport Designer.

Select an empty row in the designer. On the **View** menu, choose **Properties** to open the **XMLport-Properties** window.

In the **XMLport-Properties** window, locate the Direction Property, choose the drop-down arrow in the **Value** column and then set it to **Export**.

In the **XMLport-Properties** window, locate the Format Property (XMLports), verify that the **Value** column is set to **XML** and then close the **XMLport-Properties** window.

In **XMLport Designer**, in the first row, in the **Node Name** column, enter **Root**.

In the **Node Type** column, verify that **Element** is selected.

In the **Source Type** column, verify that **Text** is selected. This node represents the beginning of the XML document.

In the second row, in the **Node Name** column, enter **Customer**.

In the **Node Type** column, select **Element**.

In the **Source Type** column, select **Table**. This node represents a customer record in the XML document.

In the **Data Source** column, select the **Customer** table (18) from the **Table List** window. The data will be exported from the **Customer** table.

Select the **Customer** row and use the right arrow button to indent the row one time to make it a subset of the **Root** element.

The next step is to select the fields that you want to export.

In the next empty row under the **Customer** row, in the **Node Type** column, select **Element**.

In the **Source Type** column, select **Field**.

In the **Data Source** column, select the **No.** field from the **Field Lookup** window, and then choose the **OK** button.

In the **Node Name** column, enter a name for the field. For example, you can enter **No**. This node represents the fields in the record. You can enter any name, but because of consistency you might want to enter the name of field that you select.

Note
The name that you enter in the **Node Name** column cannot contain spaces. White space in the name will result in a compile error.

Select the **No.** row and use the right arrow button to indent the field one time to make it a subset of the **Customer** element.

Repeat these steps to select additional fields that you want to export. For this walkthrough you can select the following fields.

Node Name	Node Type	Source Type	Data Source
No.	Element	Field	Customer::No.
Name	Element	Field	Customer::Name
Address	Element	Field	Customer::Address
City	Element	Field	Customer::City
Contact	Element	Field	Customer::Contact

On the **File** menu, choose **Save As**.

In the **Save As** window, enter **50001** in the **ID** text box.

In the **Name** text box, enter **CustomerXMLport**, verify that the **Compiled** check box is selected, and then choose the **OK** button. You will use the name of the XMLport later in the codeunit.

Close XMLport Designer.

Creating the Code unit to Export the Data

After you have created the XMLport, you create the codeunit that will run the XMLport and save the data. In this walkthrough, you will save the XML document on the client computer. To do this, you create the file in a temporary folder, and then download it to the client after the export is completed. In the codeunit, you will specify the path of the temporary file and the path where the XML document will be saved on the client.

To create the code unit

In Object Designer, select **Code unit**, and then choose **New** to open the **C/AL Editor**.

You will declare variables that you will use in the code. You will create variables for the XML file, the output stream that exports the data, and the return value for the EXPORT Function (XMLport). You will also create variables for the file that will be downloaded from the server and the file that will be saved on the client.

In the C/AL Editor, place the cursor in the OnRun function, and then, on the **View** menu, choose **C/AL Locals** to open the **C/AL Locals** window.

On the **Variables** tab, in the **Name** column, enter **CustXmlFile**.

In the **DataType** column, choose the drop-down arrow and select **File**. This variable represents the XML file.

Repeat steps 3 and 4 to create the following additional variables.

Variable name	DataType
CustXmlFile	File
XmlStream	OutStream
IsExported	Boolean
FromFile	Text
ToFile	Text

You will create the text constants that will store messages that are displayed in the message boxes. In the **C/AL Locals** window, choose the **Text Constants** tab.

In the **Name** field, enter **Text000** and then in the **ConstValue** field, choose the **EditAssist** button to open the **Multilanguage Editor**.

In the **Multilanguage Editor**, in the **Language** field, select **ENU** from the **Windows Language List** window and then choose the **OK** button.

In the **Value** field, enter the following text: **The Customer table export to XML is completed.**

Create another text constant that is named **Text001** with value **The Export Failed.**

Close the **C/AL Locals** window.

In the **C/AL Editor**, in the **OnRun** trigger, add the following code.

```
CustXmlFile.CREATE(TEMPORARYPATH + 'Customer.xml');

CustXmlFile.CREATEOUTSTREAM(XmlStream);

IsExported := XMLPORT.EXPORT(XMLPORT::CustomerXMLport, XmlStream);

FromFile := CustXmlFile.NAME;

ToFile := 'CustomerClient.xml';

CustXmlFile.CLOSE;

IF IsExported THEN

BEGIN

DOWNLOAD(FromFile,'Download file','C:\Temp','Xml file(*.xml)|*.xml',ToFile);

ERASE(FromFile);

MESSAGE(Text000);

END

ELSE

MESSAGE(Text001);
```

The code uses the CREATE Function (File) to create an XML file that is named CustXmlFile in a temporary folder on the server. The TEMPORARYPATH Function gets the path of the temporary folder. The CREATEOUTSTREAM Function (File) opens a data stream to output the data from the table to the XML file. The EXPORT Function (XMLport) uses the XMLport and the stream to export the data. If the export succeeds, the DOWNLOAD Function (File) downloads the file from the temporary folder on the computer that is running Microsoft Dynamics NAV Server to the client. The default path of the file on the client computer is set to 'C:\Temp' but you can change it in the download dialog box. A message is displayed at the end of the export to indicate that the export is completed. Otherwise, an error message is displayed. This message is not required but it lets the user know that something actually occurred. The temporary file is deleted after the download is completed.

Close the **C/AL Editor** and choose the **Yes** button at the prompt.

In the **Save As** dialog box, in the **ID** text box, enter **50000**.

In the **Name** text box, enter **ExportCode**.

Verify that the **Compiled** check box is selected and then choose the **OK** button.

Running the XMLport

After the XMLport is created and the codeunit is written, you run the codeunit to export the data.

To run the XMLport

In Object Designer, select the **ExportCode** codeunit (50000), and then choose the **Run** button. The Microsoft Dynamics NAV Windows client opens and the **Export File** dialog box is displayed. You can choose the **Open** button to open and view the file or choose the **SAVE** button to save it. In this walkthrough, you will save the file.

Choose the **SAVE** button to open the download window.

In the **Download file** window, choose the **SAVE** button. You can change the default name of the file and location where it will be saved.

After the export is complete, browse to the location where the XML document was saved and open it. Notice that all the records in the table are now in XML format. The `<Customer></Customer>` element represents a record and each record contains the fields that you selected in the XMLport Designer.

The XML file that is exported resembles the XML file in the following illustration. The XML file contains data for only the first four customers.

```
<?xml version="1.0" encoding="UTF-16"?>
<Root>
  - <Customer>
        <No>01121212</No>
        <Name>Spotsmeyer's Furnishings</Name>
        <Address>612 South Sunset Drive</Address>
        <City>Miami</City>
        <Contact>Mr. Mike Nash</Contact>
    </Customer>
  - <Customer>
        <No>01445544</No>
        <Name>Progressive Home Furnishings</Name>
        <Address>3000 Roosevelt Blvd.</Address>
        <City>Chicago</City>
        <Contact>Mr. Scott Mitchell</Contact>
    </Customer>
  - <Customer>
        <No>01454545</No>
        <Name>New Concepts Furniture</Name>
        <Address>705 West Peachtree Street</Address>
        <City>Atlanta</City>
        <Contact>Ms. Tammy L. McDonald</Contact>
    </Customer>
  - <Customer>
        <No>01905893</No>
        <Name>Candoxy Canada Inc.</Name>
        <Address>18 Cumberland Street</Address>
        <City>Thunder Bay</City>
        <Contact>Mr. Rob Young</Contact>
    </Customer>
```

XML file that was exported from the Customer table

ASSIGNMENT QUESTIONS

1. Perform exporting of report into XML page.

VIVA QUESTIONS

Q.1 Explain XML documents.

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Q.2 Write difference between HTML and XML documents.

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Q.3 Write down all the tags used in HTML and XML page.

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