Master of Library & Information Science
323 14
INFORMATION TECHNOLOGY (PRACTICE)
I - Semester

ALAGAPPA UNIVERSITY
[Accredited with 'A+' Grade by NAAC (CGPA:3.64) in the Third Cycle and Graded as Category-I University by MHRD-UGC]
KARAIKUDI – 630 003
DIRECTORATE OF DISTANCE EDUCATION
ALAGAPPA UNIVERSITY

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(A State University Established by the Government of Tamil Nadu)
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Directorate of Distance Education

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INFORMATION TECHNOLOGY (PRACTICE)
# SYLLABI-BOOK MAPPING TABLE

**Information Technology (Practice)**

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The study or use of systems (especially computers and telecommunications) for
storing, retrieving, and sending information is known as information technology.
With advancements made in information technology, the use of computers in a
work environment has become almost a given. Office automation is an attempt to
use these new technological advances to improve and create an efficient working
environment. The term ‘office automation’ refers to all tools and methods that are
applied to office activities which make it possible to process written, visual and
audio data in a computer aided manner. They process data, store information,
solve complex mathematical problems, track inventory and even control
temperature and lighting in office buildings. All this can be done with the help of
various computer office application programs/software, such as Microsoft Word,
Microsoft Excel, Microsoft PowerPoint and Microsoft Access.

Microsoft Office Word, a Word processor, was designed by Microsoft.
Creating and editing document features are very helpful in Microsoft Word and
hence used frequently. Microsoft Excel is an electronic spreadsheet that runs on a
personal computer. A workbook is the Microsoft Excel file in which you enter and
store related data. You can also use it to perform mathematical calculations quickly.
Microsoft PowerPoint allows for creation of professional, effective and creative
business presentations that can be used for corporate or sales presentations and
trainings.

This book, Information Technology – Practice, attempts to provide a
sound practical basis for understanding the subject of information technology. It
contains the steps on how to create a database using MS-Access, MYSQL. It
also describe the steps on how to use the different applications of MS Office, as
well as the steps for installing and searching CD-ROM database and online
databases.
Any person who want to use MS-Access for creation of a database is required to get the MS-Office software or MS-Access package which is generally bundled in MS-Office. The process for installing the MS-Office Software is given below:

First a user needs to get the software and copy the same to your computer. A user can also install the same from the CD/DVD/USB disk by accessing the appropriate folder where the MS-Office software is located.

An example of MS-Office software copied on a PC is explained in the chapter.

Step 1: Check Double click on the MS-office folder and see the list of files available and check for setup.exe file.

Step 2: Once a user double clicks on the setup.exe file the following screen will be displayed where a user is required to key-in the product key of the software. If a user does key-in wrong key then a cross sign (×) will appear and if the keyed in value is correct then a tick mark (✓) will be displayed. Once the tick mark is displayed a user can click on the continue button in order to continue the process of installation of MS-Office.
Step 3: A user is required to accept the license agreement by clicking on I accept button and press the button continue in order to complete the process of installation of MS-Office.

Step 4: Once the installation process will be competed the following screen will be displayed where a user can select an option based on his/her requirements. However, it is recommended to select the first option "Download and Install updated from Microsoft Update when available".
A user is required to click on the Finish button in order to complete the process of MS-Office installation. Once the MS-Office software installation process is completed successfully a user can use MS-Access using the following given procedure.

Click on start button

A user can search the programs by writing the “MS-Access” key word in the search bar in order to start the MS-Access package in less time.

Click on the MS-Access
In case a user does not want to use any existing database then it is preferred to use the “Blank database” option where a new database will be created. A user can use already created templates as well which are installed by default with MS-Office software. The already existing templates are list in the dialog box above.

In-case of already existing database a user is required to select a database from the list available in the dialog box shown below:
If a user selects a “Blank database” option, then a user will be required to key-in database name. As an example name like LabManualTest.accdb can be used to start the process of creating a table.

Once a user clicks on ok, the MS-Access package will by default create a table with name as Table1. However, in order to understand the process of creating a table we can start from scratch.

Click on create button.
Once a user clicks on the create menu option, the following four options are displayed for create

i) Table
ii) Form
iii) Report
iv) Query

This block will focused on table creation process. Here two options are available for creating a table.

1) Using the Table option directly: A user can start the process of creating a table directly by clicking on the table option available on the menu bar.

Once a user clicks on the table the following screen will be displayed where a user can key-in the details of the field-names and other required information which is required for creating a table in a database.
2) Using the Table creation in design mode: A user can start the process of creating a table by clicking on the “Table Design” option available on the menu bar.

Once a user clicks on the table design option the following screen will be displayed where a user is required to key-in the field names along with their structure and description in order to create a table in a database.

As an example “LabID” is given as a field name and while selecting a data type a drop down will be displayed where a user can select the type of the data type. The different data types that will be displayed are listed below:
i) Text: This data type is used to store alpha numeric information, where either alphabets or number or combination of both can be stored. However, the number in this data type will be treated as characters while storing the data.

ii) Memo: This data type is also used to store alpha numeric information, where either alphabets or number or combination of both can be stored. However, the limit of storage in this data type is more in comparison with Text data type. In memo data type approximately upto 2Gb data can be stored.

iii) Number: This data type is also used to store numeric information, where only numbers in different formats can be stored as per the requirements of a user.

iv) Date/Time: This data type stores information about date or time. The date and format can be stored in different available formats as per the requirement.

v) Currency: This data type is used to store financial values where the symbol of the currency can also be displayed and the length of the currency values stored in this data type is lesser than the number data type.

vi) Auto Number: This data type is similar to number data type. However, in this data-type the numbers are generated automatically as per the requirements mentioned by a user. This data type is generally used for fields which are primary keys in a table.

vii) Yes/No: This data type is used to store Boolean values which can either be a 0 or a 1.

viii) OLE Object: This data type is used to store images, graphs, documents and other objects either from MS-Office or any other programme.

ix) Hyperlink: This data type is used to stored web addresses in a table.

x) Attachments: This data type is used to store any supported file, documents, images in a table.
As an example four fields have been created in a table and the same are listed below:

i) LabID (Text)
ii) Practical Title (Text)
iii) Hours (Number)
iv) Status (Yes/No)

A user can also add description to all the fields created in order to recall which field was created for what purpose. This option is used by developers in order to understand the basics of a field and the information is used to write programs. After keying in all the field names along with the data types and description a user can create a table and the same is shown in the figure given below:

A user is required to either press **Ctrl+W** to save the table in the LabManualTest.accdb or you can right click on the table and click on save menu in order to save the table in LabManualTest.accdb database.
The following dialog box will appear on your screen once you click on the save button or incase you press Ctrl + W.

A user is required to click on yes button in order to save the details in a table. After clicking on the YES button a user will be prompted to write the name of the table. In this example the name of the table is given as LabDetails and once you click ok the table has been created. The same can be seen in the screen given below:

The complete screen shot is given in the figure given below:
In order to input data in the fields of the table, double click on the LabDetails table.

A user needs to key in the data in the table LabManualTest.

After keying in the arbitrary data the table needs to be stored by pressing Ctrl+W.

The above steps help a user in creating a table.

**Creation of table using mySQL**

One of the most popular Relational Database Management Systems is mySQL. The popularity of mySQL has increased as it has been widely used in web-based applications. The mySQL is an open source software which increases its user base in geometric progression.
In order to create a table in MySQL, first a user needs to install the MySQL software on a computer. Once the software is installed then a user can click on the start button in order to display the list of different applications installed in a computer. A user can then select MySQL from the list of applications available as shown in the figure below:

Once a user clicks on the MySQL Administrator a database along with tables can be created. The table creation process can be started either in command prompt mode or GUI mode. In order to make the process of database creation easier for a user it is recommended to create a database using GUI mode. Once a user proceeds to the authentication step where a user will be required to input the userID and password in order to access MySQL and the same is displayed in the figure given below:

The default location of the server is localhost:3306 and if a user has any other server configure then he/she needs to give the address of the server along with the port.

Once the process of login is completed a user can start the process of creation of a table in a database. Once the MySQL authenticates a user the following screen will be displayed on your screen and the same is shown below:
The screen displayed above corresponds to four sections:
(i) Navigator
(ii) Query
(iii) Information
(iv) Output
The Navigator will display the complete tree of a database along with the tables.

If a user will click on any of the links in the Navigator, the expansion of the same will be displayed based on the created tables within a database.

The mySQL query panel allows a user to write a SQL query or execute a query in order to check the results of the query as per the requirement of a user. The button is used to execute a query. Similarly, other buttons can be explored by the user as per the requirements. The button can be used to execute current.
query in mySQL panel. Similarly the button is used to use Explain command for the selected query. The query panel can be used to analyze and check a query for different parameters as and when required.

The information panel displays information about a table that is selected in the navigator panel. The information about the fields, their datatype and other relevant information is displayed in the panel. This panel helps a programmer while writing a program in tandem with database connectivity as well.

The Output panel displayed the resultant of the query executed with the details of the rows selected after execution of a query.

The output panel displays the time when a SQL command was executed along with the SQL command, message (which is generally the number of rows fetched or returned) and duration in seconds taken to complete the command of fetching data from a table or a database.
In order to create a new database a user needs to use the command from the menu given below:

![Database Creation Menu]

In order to create a database a user needs to click on the button 👉. Once a user clicks on the button a name needs to be given for the database to be created and the same will be displayed in the Navigator panel once the process is successfully completed. The first step to create a database or a schema is to input a name on the window displayed after clicking on the create database button.

![Database Name Input]

Once the name of the database which is also known as schema is given the charset and collation need to be selected as per the requirement. However, if a user does not select any value for charset and collation then the default charset and default collation will be selected.

![Charset and Collation Selection]

After selecting the Charset and Collation value a user has to press on the Apply button in order to finalize the database creation process.

![Apply Button]

A SQL query “CREATE schema 'testdb2' will be created automatically after clicking on the above buttons. A user can review the SQL script created by applying the above steps before finalizing the database creation.

A database will be created after following all the steps and the same will be displayed in Navigator Panel.

![Database Created]

In order to execute different commands on the schema a user needs to expand the database created and the following option will be displayed in the panel where a user can execute the same as per the requirement.
The tables option will help a user to create a table which will be used to store data in the rows and columns. Similarly the Views, Stored Procedures and Functions will be used by a user as per the requirement.

A user can view the operation that can be performed once table option is clicked on the Navigator Panel. A user can also create a table using a SQL command CREATE.

The create command is used to create a table and an example of the same is given below:

Create table detailstest (personid int, name varchar(40), address varchar(50));

Similarly a table can be created using GUI interface where a user has to click on AddTable option and the corresponding field names along with data types can be given by selecting an appropriate option on the panel.

After creating a table a user can insert the values in rows using the INSERT command. Once the data is inserted into a table a user can write queries in the similar fashion as explained above in the query panel. A user can write a query for selecting all the records in a table by mentioning a query like (SELECT * from detailstest). The query will display all the records existing in the detailstest table in testdb2 database.

In case a user want to filter the information based on a criterion then as per the need the user has to use the clause WHERE like (SELECT * from detailstest where personid = 2).

In GUI interface a user has to first expand the database in order to view tables by clicking on the table option. All the tables created will be displayed in the Navigator panel. Once a user selects a table then a query can be created in the query panel and the output of the same can be displayed by clicking on the Execute Query button.
Part A: Microsoft Word (MS-Word)

Microsoft Word is a word-processing package developed by Microsoft. Microsoft word actually comes with packaged software popularly known as Microsoft Office. Microsoft Office in addition to word-processing software package also have packages for data processing or spreadsheets called as Microsoft Excel and a software package for designing presentations known as Microsoft Power Point. Microsoft is a software development company that is known for developing an array of operating systems and other related and relevant software tools. Microsoft have released different versions of its office package like Office 95, Office 97, Office 2000, Office XP, Office 2003, Office 2007, Office 2010, Office 2013, Office 2016 and finally we have Office 2019. These versions do come with number of updated features. The Office package that will be covered in this manual is Microsoft Office 2007. Therefore, the thorough understanding of the Microsoft Word 2007 can be understood by going across the below described steps.

Step 1: Installing Microsoft Office 2007

In order to install Microsoft Office 2007 it is primarily to obtain a registered copy of the software. The genuine software can be download from Microsoft’s Official Website or from its registered outlets.

After Typing Microsoft Office 2007 in Google like above the following results will be revealed.
Step 2: One can select the appropriate link to download the whole software package.

Step 3: Find the downloaded file in your system, open it and begin the installation.
Click or open setup file to install

After you click on setup follow the steps that pop up during the process and respond them appropriately to finish the installation.

**Step 4**: Go to Start, All programs locate Microsoft Office, open it by clicking on the folder and select Microsoft Office Word 2007 the screen will look like the one as shown below.
Step 5: Click over the highlighted option that is Microsoft Office Word 2007 to open.

In the above diagram it can be seen that a blank word document is created where one can create any type of document.

After finishing your document the document can be named, saved and closed through following steps:
Step 6: 

Step 7: After assigning name for the file specify the location from your hard disc to store the program.

Step 8: Click Save to save the document in your computer.
How to open a saved document from your computer

Step 1: Open Microsoft office then go to left top to word click on the icon as shown in the image below;

Step 2:

Step 3:
Step 4:

After Finishing your document save the document as specified already above.

SAVE AS

This option you can obtain by clicking icon at left top corner as shown below;
Save as is more or less similar to that of save with some minor differences. The difference is that ‘save’ option saves the document normally but ‘save as’ option provides the user with the add on feature to save the updated document of any previously saved document with other name as well as other store location.

The same is shown in the following figure:

The main purpose of using ‘Save as’ option to generate or make updated version of the previously created document. As shown above one can change name or change the location as well. However, it must be remembered that if the name or location are left out same the previous copy of the document will be overwritten by recent new copy.

If you want to store both version of the document it is therefore, important to use save as carefully

How to format the document

The formatting of the document means to change the look or view of the text on the document to increase its understandability or to create distinction among the different sections of the document. Word contains many functions and features and the same is indicated through the following figure.
Changing text font, Size and color

Select the Text that needs to be formatted

Go to fonts, click on the dropdown list and identify the preferred font name to be assigned for the highlighted text. After selecting the desired font its impact can be clearly seen in the text as shown in figure.
Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

NOTES

The font size can be changed by following the steps described in the figures provided below.

Select different font sizes to make relevant impact on text.

To change the font color, it is important to select the text for which color needs to be changed. The same can be achieved by following the steps described in fingers mentioned below.
In order to change the **background color** the following steps described in below mentioned figures are followed:

Select the text and then select the background as shown below;

To change the **style** of the text like to make it bold, italics, underline or strike through the following procedure described in the figure is followed:
Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

NOTES

After selecting different font styles following impact are reflected on the text.

How to format as Subscript and Superscript.

Changing Case
Changing text from small case to Upper Case or title case to sentence case can be performed by selecting the text and selecting the appropriate option as shown below.
Text Alignment

In a word text document, text can be aligned by adopting four different ways: left alignment, right alignment, center or middle alignment, and justify. The procedure to implement these is shown below:
Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

NOTES
To change Line Spacing between lines of the document and how to specify space before and after the paragraph the procedure laid down in figure can be used.

**Bullets**

The textual information can be formatted by using different types of bullets as specified in figure below:
Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

NOTES

Insert Menu
This menu item contains different options required to insert various kinds of objects into a word document. Like Inserting table, Shapes, Hyperlinks, ClipArt’s, Header, Footer, Page number, Mathematical expressions, symbols etc. These options that are attributed to Insert Menu are shown in figure below;

How to insert Table

An alternative to above can be by doing what is described in figure below;
Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

NOTES

Inserting Images
Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

NOTES

Inserting Clip Art

Select the required ClipArt from the
provided list to do the job.

Inserting Graphs

Before inserting graphs into a word document the required data for which there is
need for graphical representation needs to be selected. Then the steps shown in
below figure are carried out:

Inserting Header

Select the Graph Type and Then Click OK

Provide type of Header you want to save for your document sign. Right click on
header and select Insert.
Similar procedure for inserting footer and pager number as shown below;

Inserting Expression

\[ A = \pi r^2 \]
Page Layout

Page Layout deals with the various options required to format the page margins, change orientation page size, convert text into columns, inserting page break, water mark, etc. These options are shown in figure below;

Changing Margins:

Page Orientation:
Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

NOTES

Self-Instructional Material
Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

NOTES

Assigning Line Number to word document:

Inserting Watermark:

Changing Page Color:
Thorough Knowledge of MS-Word, MS-EXCEL and Power Point

NOTES

Self-Instructional Material
Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

NOTES

Part B: Microsoft Power Point (MS-PowerPoint)

This is another software package provided by Microsoft with Microsoft Office. This is generally used to design power point presentation for varying purposes.

Steps Open Microsoft Power Point

Go to Start -> All Programs -> Locate Microsoft Office -> Microsoft Power Point -> Click over there to open as shown below:
Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

NOTES

Steps Make a small Presentation.

Each Presentation Comes with Slides on each slide one can write different information.

Let’s Consider an example of Making a Presentation to show what is Family

Step 1:
Step 2:

Step 3: Adding new Slide to existing Presentation

Step 4: Editing Presentation

Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

NOTES

Step 2:

Step 3: Adding new Slide to existing Presentation

Step 4: Editing Presentation

Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

NOTES
Step 5: Features provided within the slide

Step 6: Inserting table into slide

Step 7: Inserting different features into your presentation

The features and functionality shown in above figure have been already discussed in Word. The same can be consulted here in case of presentation preparation.
How to change background and Design of Slide

Step 1: Go to Design Menu Option as shown below:

Step 2: Select Any Design as Provided in Microsoft PowerPoint Presentation.

Step 3: Orientation, background, font and color change can be made as shown in figure below

Applying Animation

Go to menu bar and select Animation and then the options/features related to animation gets displayed as shown below.
In order to animate any object in powerpoint document that objects needs to be selected before assigning any animation effect on its behaviour, the same is shown in figures mentioned below:

**Step 1:**

**Step 2:**
Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

NOTES

Step 3: Custom Animation

The animation effects can be assigned to any selected text by selecting add animation option. Thereafter different effects of animation can be customised by using Custom Animation option. From Custom Animation different animation options get displayed to change the entry, emphasis, motion and motion paths as shown in figure below:

Step 4: Controlling the direction and behaviour of the animation the required procedure is shown in figure below:

The animated effects on the text can be played or pre-reviewed by clicking either on Play option or Preview option as shown in the above figure.

Slide Show

After the preparation of Microsoft Power Presentation, the different effects of the presentation can be previewed by playing the whole presentation. The required
option for that is to perform slide show the same can be done as shown in figure below.

Step 1:

Thorough Knowledge of MS-Word, MS-EXCEL and Power Point
Apart from the above there are other functions and features also the simple way to simply select the content and use them for your desired functional purposes.

It must be noted that there are number of features that are provide with right click behaviour of the mouse. The same can be accessed accordingly.

Part C: Microsoft Excel

Microsoft Excel is a spreadsheet created by Microsoft for Windows. It features calculation, graphing tools, pivot tables, and a macro programming language called Visual Basic for Applications. It has been a very widely applied spreadsheet for these platforms, especially since version 5 in 1993, and it has replaced Lotus 1-2-3 as the industry standard for spreadsheets. Excel forms part of Microsoft Office. In excel the data is placed within rows and columns with appropriate captions. In addition to addition storage excel provides users a multitude of functionality to perform data manipulation and interpretation. The basic view of the excel is shown in the figure below:

Steps to open Microsoft Excel

The procedure to open Microsoft excel is similar to that of Microsoft word and PowerPoint. Even to open or create a new excel sheet is similar to that of opening or creating a new word or PowerPoint.

How to Store Data of students describing their marks and obtaining the total marks and percentage. The steps required to carry out this operation is described in the following steps with figure provide.
Step 1: Identify the fields to be stored like the ones shown in figure below.

Step 2:

Step 3: Tools required to format and edit the excel document are shown in figure below and can be used in the similar way as used in case of word or PowerPoint presentation.
Step 4: How to use mathematical functions in Excel. In case of the above example, the total marks are calculated by using steps shown in figures below:

Step 5:

Step 6:

Step 7:
Step 8: Formatting Cells, columns or rows

The rows, columns, or cells can be formatted to serve different purposes in Excel like highlighting the cells with greater than or less than or even within some specify range. There are ways provided by Excel to perform similar activities as shown in figure below:

Step 1: In order to use this format option you need to specify the cells for which the format criteria is to be applied.
Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

NOTES

Step 2: Selecting cells and applying rule

Step 3:

Step 4: Top/Bottom rule is used to reveal top n or bottom n values from among the selected values as shown in figure below:
Step 5:

Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

Step 6:

NOTES

Formatting Table

The table can be formatted by selecting the options as mentioned in the figure below:

Step 1: select table/cells
Thorough Knowledge of MS-Word, MS-EXCEL, and Power Point

NOTES

Step 2: Selecting the table type

Step 3: Generate table

Specify the data for table or alternatively if whole area is occupied as one part of the table then select the whole data before proceeding to this step and then simply click ok.

Step 4: Generated Table view

Table View
Step 5: To change cell style

Step 6:

Step 7: To insert extra rows or columns in the existing worksheet, the procedure is shown in the figure below.
In addition to insertion one can use the delete option to delete the specified or selected row or column.

Step 8: How to perform different operations) Arithmetic, statistical, etc on the given data. Excel comes with inbuilt feature to perform such operations as shown in figure below:

Insert Menu in Excel

Excel contains many options those correspond to different insert functionalities as shown in figure below:

In addition to above mentioned functions and features there are many more also. Your are advised to try them to gain hands on them. To discuss each and every single feature is beyond the scope of this manual however, the interested students can find them and use them accordingly.
Part A: Online Databases

In order to understand the concept of online databases and the usage of online database Scribd, the online repository is treated as an example. Scribd is a digital library, e-book and audio book subscription service that includes one million titles. Scribd hosts 60 million documents on its open publishing platform.

How to open Scribd?

Make sure that you are connected to internet. Open www.google.com and enter Scribd in Google search tab. The same is shown in figure below:
Installing and Searching CD-ROM Database and Online Databases

NOTES

After successful sign you will be in your Scribd account as shown below
Example: To search books related to Computer Sciences

Enter Computer Science in search field or one can directly click on the link BOOKS provided therein. The same is represented in the figure below:

Or directly clicking on link “books”
After entering the search string hit enter and the following results are generated.

Filtering to find more relevant results

The generated results can be further modified by filtering the results after selecting a proper filtering criteria like Books, Audio books, Articles, documents or sheet music. The same is shown in figure below:
Advanced Filtering

Finding the interested book

Once you have located the books for which you have initiated the search, click over the said book to read online or download as shown in figure below:

Reading online
If you are a paid user then you can even download it for future use by storing in your local computer.

Similar to above example there are hundreds or even thousands of online databases from which interested users can search, read or download their desired content. E.g., IEEE Explorer, Google, etc. The database of interest can be searched directly on Google as shown in figure below:

Or even UGC Journal list is stored as online database and can be accessed by different approaches and the same is shown in figure below:

Part B: Installing and searching CD-ROM Database

As mentioned earlier that database is the collection of records used to serve different purposes. As far as CD-ROM Database is concerned it simply means storing a database on a portable offline media to facilitate many organizational, scientific, investigational, managerial or observational decision making after revealing from the data stored on CD after imposing a specific query string.
The searching approach that is to be adopted for searching data from within the database stored on CD-ROM is similar to that of searching any information or data from any of the partitions of the hard disc mounted on your computer.

The steps that might be adequate to perform database related operations on CD-ROM database are mentioned as under:

**Step 1:** Installing or loading the media that is CD-ROM on CD driver/Player.

**Step 2:** Open the CD by either opening your My Computer then find the CD and then click to open the CD else the CD can open in Autoplay mode as well.

**Step 3:** The database stored on the CD-ROM will be loaded on the screen of your computer.

**Step 4:** Find or Enter the relevant search string as a query to get the desired data from the stored database.

**Step 5:** The search results can be further filtered by using the provided search mechanism.

**Step 6:** After you are done with the desired database operations on the data stored on CD-ROM close the CD and remove the disc from the CD driver or player.
The process of installing the MS-Office has already been discussed in Block-1. Therefore, the prerequisite for the formulation of query will be that a user should know the process of database and table creation.

Click on start button

Click on the MS-Access

Open an existing database from the list of already created database. As discussed in block one select LabManualTest.accdb file to open an existing database.

Click on the LabDetails table. After selecting LabDetails table you need to click on create menu option.

Click on Query Design Button in order to start the process of designing a query.
The screen will display information as given below:

The ShowTable dialog box will display the list of all tables that are existing in the LabManualTest.accdb. In this case, only one table has been created therefore the list will correspond to only one entry.
A user can formulate queries on queries as well and the option is also available on the ShowTable dialog box as shown in the figure above. A user can also select either from the table or query by clicking on the “Both” option available in the ShowTable dialog box. As only one table LabDetails has been created in this database therefore we will add only one table for formulation of a query. A user needs to select the table and click on the Add button.

Once the table is added a user needs to click on the close button in order to close the Show Table dialog box.

A user has to drag the table fields into the area where a query will be formulated. The selection of fields in formulation of a query is based on the requirement of the user. A test case has been taken to explain the process of formulation of a query where all the fields have been selected to demonstrate the process of formulation of a query using MS-Access.
Press Ctrl+W to save the query in the Lab—.accdb or you can right click on the query and click on save menu in order to save the query in lab—.accdb database.

Following Dialog box will appear
After giving query-name, the query “LabDetailsQuery All” will be saved.

In order to display the results generated by executing the query a user needs to double click on the query. After double clicking on the query, following results are generated for the query designed.

In order to use a criterion in the query, a user is required to open the query in design mode. A user can right click on the query for which criterion needs to be inserted.
Once a user clicks on the Design View Option the following screen will appear.

The criterion will help a user in retrieving information as per the filtering format requirement of a user. As a case a filtering format is used to display only records from LabID greater than 4 and less than 7.
The query needs to be saved after making the modifications. A user needs to double click on the query "LabDetailsQuery All" and the result generated is displayed below. The records displayed are having LabID greater than 4 AND less than 7. The boolean operator AND has been used to insert a criterion using a boolean operator.

A user can use OR boolean operator in the criterion of a query. The criterion has been used for LabID field with greater than 4 OR less than 7 condition.
The records displayed are having LabID greater than 4 OR less than 7. The boolean operator OR has been used to insert a criterion using a boolean operator.

Similarly the NOT operator can also be used in criterion in order to use the Boolean operator NOT in query using MS-Access. Please note that the NOT operator is automatically changed to a inverse condition in MS-Access in order to generate the inverse results for a query. A test condition is mentioned in the criterion as (NOT >4) and the same is shown in the figure given below:
After saving the query with NOT operator, the result can be displayed by double clicking on the query and the same is displayed in the image given below:
Master of Library & Information Science  
323 14  
INFORMATION TECHNOLOGY (PRACTICE)  
I - Semester  

ALAGAPPAPA UNIVERSITY  
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