

Topic One : An introduction to the project

1- Write the scientific term:-

1- way to explore the world through a book featuring geographic maps, and related to a specific topic like continents and countries, examples of such Atlas: World Atlas, Atlas of Africa, Arabic Atlas. (Atlas)

2- It can be Text, Image or Picture, Sound and Video Clip. (Data or Information)

3- It is the necessary devices used to handle data and information of different types, from these devices the Scanner, Digital recorders and, Digital Camera.

(Hardware)

3- It is the set of programs and applications used to handle data and information such as: Movie Maker Program - Sound Recorder program - Windows Media Player program. (Software)

2- Complete:-

1- Multimedia Elements are **Data or Information**, **Hardware** and **Software**.

2- The stages of project's implementation are

1- **Problem Definition.**

2- **Determine the outputs.**

3- **Determine the inputs.**

4- **Develop an Algorithm.**

5- **Coding a computer program.**

6- **Program Testing and debugging**

7- **Program or Project Documentation.**

3-Tick (✓) in front of the right sentence and sign (×) in front of the wrong one:

1-You can get the data required to solve any problem through the stage of identifying inputs. (✓)

2- The stage "test and debug the program errors" in the problem solving stages is to write a program (Coding) using one of the computer languages. (×)

3- After setting a plan for solving a problem; you can define the problem. (×)

4- The program documentation is the final stage in the problem solving stages.(✓)

5- Data related to a specific project are collected after creating this project. (×)

4- Study the interface of the program for the proposed project as shown in the figure:



Choose the correct answer of the following:

The data required for the project are of the type.....

- A) texts
- B) pictures
- C) sounds or music or video clips.
- D) **all the above**

5-Choose the correct answer of the following:

(1) The stage..... is considered the first stage of the problem-solving stages

- (A) **Identify the problem**
- (B) the program documentation.
- (C) Coding the program
- (D) test and debug the program errors

(2) The stage which precedes writing program code is

- (A) Identify the inputs.
- (B) determine the outputs.
- (C) Problem definition.
- (D) **develop an (Algorithm).**

(3) Transferring (problem solving steps) into an application using one of the programming languages is calledStage.

- (A) Determine the output
- (B) **Coding the program using a computer**
- (C) documentation of the program or project
- (D) Develop an Algorithm

Briefly mention what is meant by the following:

1. "Define the problem"

Define the problem, required output and available inputs as an overview

2. "Determine the outputs"

The outputs are the important information and results obtained after solving the problem.

3. "Coding a computer program"

We have already planned for solving the problem, when using computer we have to translate the steps of solving problem; into an application using one of the programming language.

4. "Develop an Algorithm"

We set a logical sequence of steps, these steps are called (Algorithm). To illustrate this sequence of steps; many tools can be used the (Flowchart) is one of them .

Topic Two : Managing Project's data

1- Complete:-

1- **Data management** is the process of organizing and directly controlling data generated during a searching process, then collecting and, entering this data that will be processed then saved, and producing its output.

2- To create (Folder -File): Right-Clicking with the mouse in free place on the Desktop, choose the command **New** then **Folder** while to delete(Folder- File): Select a folder; choose the command **Delete** and to naming (Folder -File): Select a folder; choose the command **Rename**.

3- There are many famous Search Engines: Search Engine www.google.com and www.yahoo.com.

4- **Encyclopedia** is a distinct type of reference that shows a structured summary of knowledge in a particular field, and is arranged in accordance with a certain classification; that facilitates searching of required information such as: alphabetic order.

5- There are two ways to organize information contained in encyclopedias: **Sorting by alphabet** and **Sorting by scientific classification**.

6- The most important encyclopedias the Wikipedia www.wikipedia.org .

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2-Tick (✓) in front of the right sentence and sign (×) in front of the wrong one:

- 1- Electronic encyclopedias are considered one of the search engines on the Internet. (×)
- 2- It is better to name folders with names suitable for the content of its files and folders. (✓)
- 3- The site www.google.com is one of the search engines for searching information through the Internet. (✓)
- 4- Encyclopedias are considered a special kind of references that provide the most important information and facts related to various human knowledge or part of it. (✓)
- 5- File consists of a group of Files and Folders. (×)
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3- Choose the correct answer of the following

- 1-a single folder may contain.....
- (A) Multiple files. (B) Several folders
(C) Empty folders. **(D) all of the above**
- 2-The following Internet sites are considered one of Search Engines except....
- (A) **www.twitter.com**. (B) www.google.com
(C) www.yahoo.com. (D) www.Altavista.com
- 3-Electronic encyclopedias are characterized by
- (A) Fast and easy search for information.
(B)The diversity and enormousness of the forms of information
(C) Lack of information inside them. **(D) Both (A) and (B)**
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4- What is the purpose of using electronic encyclopedia?

- 1- **It provides an overview of one of the topics and the facts accompanied with articles, tables, images, forms, maps and bibliographic sources.**
- 2- **Encyclopedias especially the dedicated ones provide instant inquiries and show summaries for specific topics.**
- 3- **Encyclopedias are characterized by the diversity and huge amount of different types of information displayed, and the easiness of searching and quick access.**

Topic Three : Collecting Project's data using Spreadsheets applications

1- Complete:-

1- **A spreadsheet** is a workbook made up of many different **worksheets** or spreadsheets. A spreadsheet consists of **columns** and **rows**; it is made up of **cells**.

2- **A cell** is the intersection of each row and column.

3- There are three basic types of data that can be inserted in the table cells, they are: **Text data (letters or texts)**, **Numeric data (numbers)** and **Formulas (mathematical formulas)**.

2- Tick(✓) next to the correct answer, or (×) next to the wrong answer:

1- Spreadsheets program can be used to create a database. (✓)

2- The column in a database represents one record (×)

3- In Spreadsheets program, a Data Table is made up of a group of rows and columns. (✓)

4- The Spreadsheets programs can be used to collect and organize data for use. (✓)

5- The workbook can be saved and considered a database file (✓)

3- Read the following table, and then fill in the blanks:-

أهم موانئها	عاصمتها	اسم الدولة
الاسكندرية وبورسعيد	القاهرة	مصر
جدة	الرياض	السعودية
الدار البيضاء	الرباط	المغرب

a) The shown table is formed of **4** rows, and **3** columns.

b) Each row represents **Record** and each column represents a field.

c) The following: ' اسم الدولة ', عاصمتها , أهم موانئها are fields in the table.

Topic four : Edit and design images

1- Complete:-

1- There are many programs that you can use for doing specific task as editing pictures, some of them are: **CinePaint (O/S Linux)**, **PicsArt (O/S Android)** and **Paint.NET (O/S Windows)**.

2- There are several Types of image files that have different extensions like:

Bmp - gif – eps -jpg - pcx – png - wmf - tif - ..etc.

3- Some types of pictures that we collect or display using the computer are briefly divided into two main types according to its processing inside the computer: **Vector Graphics** and **Raster Graphics**.

2- Write the scientific term:-

1- They are based on mathematical expressions—to represent images in computer graphics; they are not affected by scaling (enlarging or reducing their size) where image scaling doesn't reduce picture quality. they are characterized by their small storage size; and their type such as eps, emf and wmf. **(Vector Graphics)**

2- They are a dot matrix data structure; they are affected by scaling (enlarging or reducing their size) where image scaling reduce picture quality. these files are characterized by their large storage size; and their type such as raw, bmp, tiff, gif, jpg, png. **(Raster Graphics)**

3- Tick(✓) next to the correct answer, or (×) next to the wrong answer:

1- The picture of type .gif is characterized by its greater number of colors and sharpness than the .jpg type. (×)

2- You can use an image editing software to delete part of a sound file. (×)

3- When creating Web sites it is better to use .bmp images . (×)

4- You can add effects on pictures' sections ; using Graphic design programs (ready-made applications). (✓)

5- The image of type .wmf has small size compared to the .bmp type. (✓)

4- Fill in the spaces :-

1. Type four types of image files that can be inserted , into some of the control tools in the Visual Basic Language : **wmf, png, gif, jpg and bmp.**

2. Image files can take the following extensions:

a. Animated pictures files take the extension: **gif.**

b. Image files doesn't support animation take the extension : **raw, bmp, wmf, png, jpg**

3- What does (Multimedia) mean and what are its components?

The term (multimedia) is composed of two parts: the first part is (Multi) and means multiplicity, and the second part is (Media) and it means media carrying different information such as(audio, image and video) .

4. Mention four advantages of using (Multimedia) in education?

Multimedia has many advantages like:

1-Saving the time and effort for both teacher and learner.

2-Making learning process enjoyable and interesting.

3-Grabbing attention of information presented, which facilitate understanding.

4-Providing a diversity of methods to display information which stimulate audio-visual senses.

5- Complete the following table with the appropriate file names listed:

Filename.raw - Filename.doc

Filename.gif - Filename.rft - Filename.png - Filename.wmf

Picture File that supports transparency; is not an animated picture and has larger size	Smaller file	larger file	Animated picture file
Filename.png	Filename.wmf	Filename.raw	Filename.gif

6- Choose the correct answer

1. You can insert different types of image files using the control (PictureBox) except the file type:

a- **Raw** b-.bmp c-.jpg d-.gif

2. Image files take the extension

a-.wmf b-.bmp c-.jpg **d-all of the above**

3. Animated picture files take the extension:

a-. jpg b-. **gif** c-. png d-. wmf

7- Specify the files 'names of pictures that support transparency?

Filename.gif

8- Specify the files 'names of pictures that are animated pictures?

Filename.gif

9- Specify the files 'names of pictures that are less in storage size?

Filename.wmf

10- Specify the files 'names of pictures that are bigger in storage size?

Filename.raw

11- Specify the files 'names of pictures that have few colors?

Filename.gif

Topic Five : Creating and manipulating Sound files

1- Tick(v) next to the correct answer, or (x) next to the wrong answer:

- 1- You can apply audio effects on specific clips such as amplify or reduce the sound. (v)
- 2- You can use one of the audio editor software to modify the dimensions of the images. (x)
- 3- The size of the audio file type .wav is smaller than the type .mp3 .(x)
- 4- You can use one of the audio editor software to duplicate a portion of the (clip) inside the audio file. (v)
- 5- You can use one of the audio editor software to delete a portion of the (clip) of the audio file. (v)

2- Choose the correct answer

1-The following extensions are types of audio files; except:

- a-.wav b-.mp3 c-**.png** d-.wma

2. The smaller in size audio file is

- a- Filename.wav **b- Filename. mp3** c- Filename. Wma

Topic Six : Creating and editing videos

1- Tick(v) next to the correct answer, or (x) next to the wrong answer:

- 1- Searching the Internet ; Video files can be obtained of formats: .wmf, .wmv ,.mp4. (v)
- 2- You can use MS Paint to modify sound files and video files. (x)
- 3- File video .3gp is characterized by its high quality and small size.(x)
- 4- You can use the Internet and mobile phones to collect videos files used for making projects. (v)

2- Choose the correct answer

1. The following are extensions of video files except the extension :

- a-. mp4 b- **.png** c-.3gp

2. The Highest quality of video file is:

- a- Filename.3gp b- **Filename.mp4** c- Filename.wmv

3. The smaller video file is:

- a- Filename.mgp b- **Filename.3gp** c-. Filename.mp4

Topic Seven : Establish Project's interface and, set Project's properties

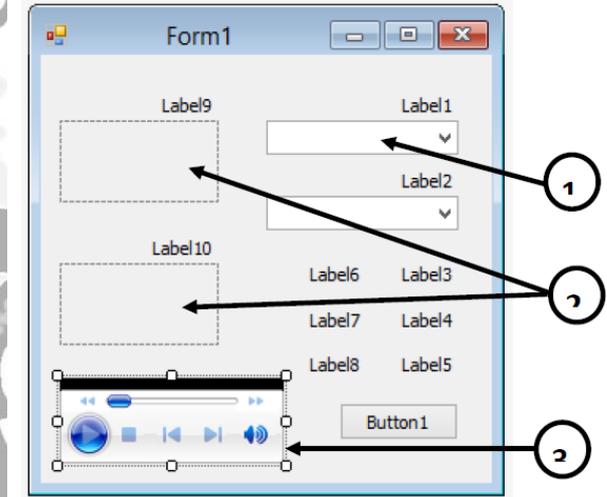
1- Tick(v) next to the correct answer, or (x) next to the wrong answer:

- 1- Elements can be placed inside the control (ComboBox) through the property "Items ". (v)
- 2- Use the control (ComboBox) to choose only one item from the list.(v)
- 3- V.basic .net language allows adding new Controls to the (Toolbox) controls. (v)
- 4- You can use (Windows Media Player) program to run text files. (x)
- 5- The user can insert animated pictures using the control (PictureBox) ;thus it appears animated after the execution. (v)

2- Choose the correct answer

1. The result of a calculation can be displayed in the control Label, it is preferably that the value of the property Name is:
- a- Label1 b- Name c- **lblResult** d- MyName
2. The most suitable control that can be used to display a list of names are:
- a- Button b- PictureBox c- Label d- **ComboBox**
3. The following controls are used to display images except:
- a- **ComboBox** b- Label c- PictureBox d- Button
4. The control used to play sound and video files are:
- a- RadioButton b- **WindowsMediaPlayer** c-ComboBox d- PictureBox
5. The control used to display a list of items through it is:
- a- **PictureBox** b- ComboBox c- Button d- Label

3- In the following figure, objects /controls are displayed on the showed (window form); write down in the table the exact number that designates the proper control.



Number	Indicates
(.2..)	The Control used to display pictures inside.
(.3..)	The Control used to display sounds, and video files.
(.1..)	The Control used to display a list of names through it.

Topic eight : Reading data from an Excel sheet using Visual Basic.net

1- Complete :-

1- **A Class** is the blueprint/ plan / template, from which the individual objects, are created. It is the blueprint that describes the details which any object takes (its Properties, Methods and, Events); and are derived from the (Class). Where; **ADO.NET** is a set of classes that provides access to multiple data sources; such as "Microsoft SQL Server, Microsoft Access, and Oracle ". These softwares can create/manipulate databases; ADO.NET is a part of the Framework.

2- **A Namespace** contains a set of related classes that can be used when needed.

3- **Framework**: Is the platform for Visual Studio. NET applications that :

- 1- Enables developers to create applications like (Desktop applications , Web applications and Mobile applications).
- 2- Provides a development environment for running all applications.

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4- The Framework is composed of :

- 1- The execution engine (CLR) Common Language Runtime.
- 2- The .NET class libraries (System Class Libraries).
- 3- (Compilers).
- 4- Other elements.

5- An Object is characterized by:

- 1- The properties that describe and specify an Object.
- 2- The events that occur on an Object.
- 3- The methods or actions that an object can perform; upon the occurrence of a particular event.

6- An (Object) is the basic constructive element in Object Oriented Programming; it is created from a defined class. Thus an (Object) exists only after a certain (Class) has been created.

7- SQL (Structured Query Language) : It is a programming language designed for managing database files.

8- Select : It is one of the SQL statements used to retrieve records from a table or from multiple tables in the database.

9- DataSource : The source of data (A file located in a storage media or a table stored in the memory).

2- Tick(v) next to the correct answer, or (x) next to the wrong answer:

1- We open channel of communication between the programme that is created in Visual basic Dot Net language and Excel file by using ADO.NET tools. (v)

2-Variable of type (OleDbConnection) is used in closing the communication channel that has been opened. (x)

3-The return value from the function :

“GetDatafromExcelSheet (FilePath As String, sql As String) As DataTable” is of type String. (x)

4-The announcement of a Function is done by using the word "Sub". (x)

5-You can use a variable of type (OleDbCommand) for the purpose of opening a channel of communication data file. (x)

6-You can create a variable of type (DataTable) in-memory ; in which we store data that were brought from the data file. (v)

Examples of select statement

If you have a spreadsheet as follows:

القارة	الدولة	العاصمة	من أهم الموانئ	من مصادر المياه
آسيا	السعودية	الرياض	جدة	وادي فجر - أبو جيدة
آسيا	الكويت	الكويت	الأحمدي	وادي الباطن
آسيا	اليمن	صنعا	عدن	وادي الخارد
آسيا	قطر	الدوحة	الدوحة	تحليه الخليج العربي
آسيا	عمان	مسقط	مسقط	وادي العين - مسلم
أفريقيا	مصر	القاهرة	الأسكندرية	نهر النيل
أفريقيا	ليبيا	طرابلس	بنغازي	وادي زمزم - بي الكبير
أفريقيا	تونس	تونس	صفاقس	وادي مليان - مجردة
أفريقيا	الجزائر	الجزائر	وهران	وادي تمانراست
أفريقيا	المغرب	الرباط	الدار البيضاء	نهر الربيع - بوقراق

Example No 1:

Find the sum of the two numbers 8 and 10 using the Select statement.

Syntax: Select No1 + No2

Statement: Select 8 + 10

Output: 18

Example No 2:

Retrieve all records from a spreadsheet *Table1* using the Select statement.

Syntax: Select * from TableName

Statement: Select * from Table1

Example No 3:

Show the "Continent" column from the data table *Table1* using the Select Statement.

Syntax: Select FieldName from TableName

Statement: Select القارة from Table1

Output

القارة
آسيا
أفريقيا

Example No 4:

Show the "Continent" column from the data table *Table1* "without repetition using the Select Statement.

Syntax:

Select Distinct FieldName from TableName

Statement:

Select Distinct القارة from Table1

Output:

القارة
آسيا
أفريقيا

Example No 5:

Write the Select Statement required; displaying only the countries in " آسيا " continent from *Table1*.

Syntax:

Select FieldName from TableName Where Condition

Or:

Select [FieldName] from TableName Where Condition

Statement:

Select الدولة from Table1 Where القارة = 'آسيا'

Or:

Select [الدولة] from Table1 Where [القارة] = 'آسيا'

Output

الدولة
السعودية
الكويت
اليمن
قطر
عمان

Example No 6:

Write the Select Statement required; to retrieve the column " من اهم المواني " from the data table *Table1*.

Syntax

Select FieldName from TableName

Statement

Select [من اهم المواني] from Table1

Output

من أهم المواني
جدة
الأحمدي
عدن
الدوحة
مسقط
الأسكندرية
بنغازي
صفاقس
وهران
الدار البيضاء

Example No 7:

Write the Select Statement required; to retrieve the two fields " الدولة " and " العاصمة " from the data table *Table1*.

Syntax

Select [FieldName1], [FieldName2] from TableName

Statement

Select [الدولة] , [العاصمة] from Table1

Output

الدولة	العاصمة
السعودية	الرياض
الكويت	الكويت
اليمن	صنعاء
قطر	الدوحة
عمان	مسقط
مصر	القاهرة
ليبيا	طرابلس
تونس	تونس
الجزائر	الجزائر
المغرب	الرباط

Example No 8:

Write the Select Statement required; to get the number of countries from the data table *Table1*.

Syntax

Select Function (*) from TableName

Statement

Select Count (*) from Table1

Output: 10

Example No 9:

Write the Select Statement required; to get the number of countries in " أفريقيا " from the data table *Table1*.

Syntax

Select Function (FieldName) from TableName.

Statement

Select Count (الدولة) from Table1 Where القارة = ' أفريقيا '

Output: 5