

Question

Kernonius

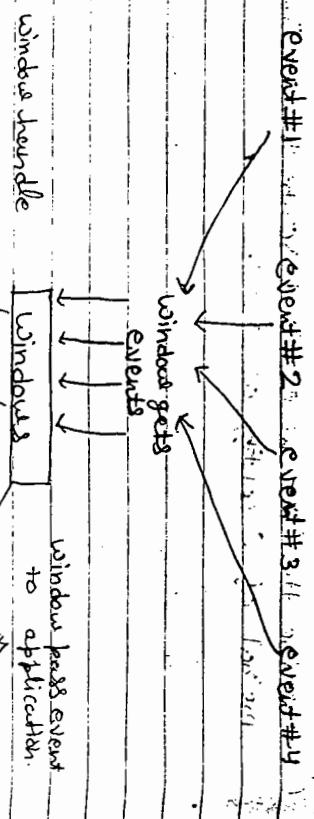
- | | | |
|----|--|---|
| | | Q7 Describe the various events. Describe the various method of creating an event. |
| 11 | Short Note on Treeview. | |
| 12 | list views, image list, TabStamps | |
| 13 | Slider Control, Toolbars. | |
| 14 | Describe five type of text box. | 1-221 |
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| 18 | What is object oriented lang. VB is object oriented? | 4th |
| 19 | difference between High and low level. | 33/36 |
| 20 | difference between Event and procedure oriented. | 33/36 |
| 21 | What is menu editor. | CYBER CAFE ROAD 8070 01252-270 |
| 22 | difference between Traditional and visual programming. | 1.C. IN CYBER CAFE |
| 23 | What is record set? Explain. | OLE ? Explain |
| | | To write an event handle for control follow steps |

I go to the Code window.

At the top of code window there is two drop down list. The first contain the name of all Control and second list contain all events of selected Control.

When window recognize an event it check that event is system event or not, but event directly needed by application window passes that event to the application.

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→ Windows is a multi-tasking operating system so more than one program can simultaneously run program at the time event occur and ignore all others. for example :- → If your program need warning message at preset time your program will have to check timer event to see whether the correct time span has passed. If another prog. did not required timer event that program would ignore all timing event that windows send it to.

Event procedure :-

- 1) When user click any of the command button windows recognize that an event just took place.
- 2) windows analyzes the event and notice that the event belongs to your application.

- 3) windows pass the event and control to your application.
- 4) If your application has an event procedure written for the control that received the event, the event procedure code executes.

Common Control Event →

Here some common event can occur during an application executes:

- (1) Activate → This event occurs when a form get focus. If application contain multiple form the activate event occurs when the user change to a different form by clicking on a form or select form by menu.
- (2) Click → This event occurs when user click any where on the form. If the user click a form that potentially hidden from view becoz another form has the focus both click and activate event take place.
- (3) Dblclick → This event occurs when user dblclick the form.
- (4) Deactivate → This event occurs when another form gets the focus. Both the activate and deactivate event occur when the user select a different form. You may choose to write event procedure for both event for each form.

②

5) Initialize → This event occur when the form is first generated.

6) Load → This event occur right as the form is loaded into active memory and appear on the screen.

7) Paint → This event occur when window must redraw the form becaz the user uncovered part of the form from under other objects such as icon.

8) Resize → This event occur when the user changes the size of the form.

9) Unload → This event occur when application remove a form from the window using code when an application is terminated all loaded form are first unloaded.

mouse Events

The event triggered by mouse action are most common event in the program with VB.

click & Doubleclick → The click event take place when the mouse button is pressed left button; the doubleclick take place when user double-click the left mouse button.

mouse down, mouseup → The mouse down event take place when the mouse button is pressed and mouseup event take place as it released.

mouse move → This event take place continuously as the mouse is moved over a control.
The order in which mouse event take place as follows :-
D) As the mouse move around the mouse event is triggered continuously.
2) When the user press a button the event is triggered.
3) If the user continues to move the mouse around while holding down the button. The program keeps receiving mouse event
4) When the user release the mouse button.
5) The left mouse button was held down the click event trigger immediately after the mouseup event.

Keyboard event → Keyboard event are generated by KeyStroke. The Keyboard events are Keypress, Key down and Key up.
(1) Key down → Key down event occur whenever user press a key. These four both the Key down and Key press event can occur at the same time.

(2) **key up** → The key up event occurs when ever user releases a key.

(3) **key press** → This event occurs when user holds down the key and keyboard auto detect the character. The key press event always associate with what ever object has the focus. If no object has focus the key press event associated with the form.

The keyboard key press event produces procedure always contain int. The definition of key press event →

```
Private Sub Test1_KeyPress(KeyCode As Integer)
```

```
    End Sub.
```

Key ascii argument is the ascii character of key pressed.

Method : Objects have a method which are the actions they can carry out method as the actions of an objects. Their form object for example know how to clear itself and you can invoke the cls method to clear a form. A form also knows how to hide itself or action that you can invoke from within your code with hide method.

1) **Clear** → The clear method tells the control to discard its contents. If the object is a listbox, the clear method removes all its item

from the control. The clear method can also be applied to the clipboard object to clear its contents.

2) **Move** → All controls are visible at runtime and provide a method that lets you move and re-size them & within your application code.

Control.move.left,top,width,height

Control is control name, left, top, are coordinate of upper left corner of control new position and width, and height are the control new dimensions.

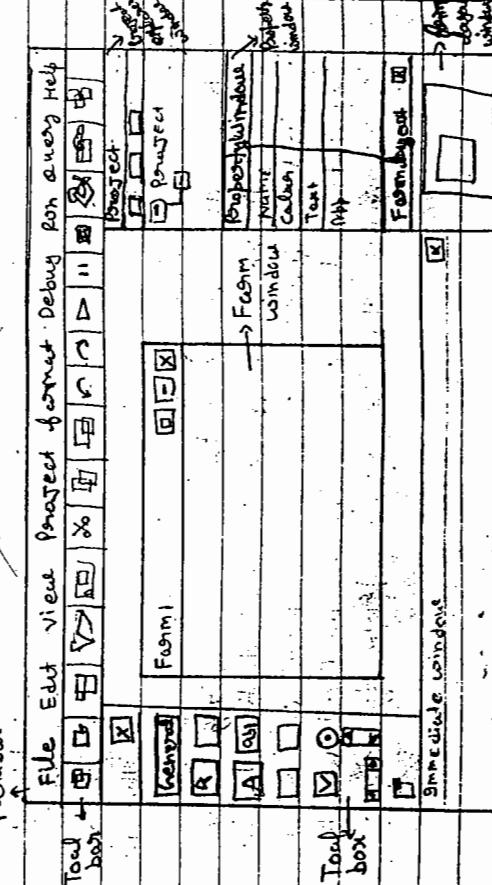
3) **AddItem, RemoveItem** → These methods are used to manipulate the item in listbox and control box control. The application doesn't know how the item are stored in the control. It issue the additem method and control take care of appending the new item in the list. They are the action each control can perform without any assistance the from the programmer. Method hide the implementation details of control feature and programmer can exploit feature by calling a method which is similar to setting a property value.

Q → What do you mean by IDE (Integrated Development Environment)?

Ans → Visual Basic is not just a language. It's an integrated development environment in which you can develop, run, test, and debug your application.

- 1 Standard EXE.
- 2 ActiveX EXE, ActiveX DLL.
- 3 ActiveX Control.
- 4 ActiveX Document, ActiveX Document DLL.
- 5 VB Application Wizard.
- 6 Data Project.
- 7 DHTML Application.
- 8 ITS Application.
- 9 Addin.

In the Visual Basic IDE which is made up of a no. of components



→ Immediate window

1 Menu Bar → The menu bar contain the command you need to work with Visual Basic. The basic menu are :-

- * File :- Contain the command for opening and saving executable files and list of recent projects.
- * Edit :- Contain editing command plus a no. of command for cutting, pasting, & editing.
- * View :- Contain commands for showing or hiding component of the IDE.
- * Projects :- Contain commands that add component to the current project.
- * Debug :- Contain usual debugging command.
- * Format :- Contain command for designing the control on the form.
- * Run :- Contain command for start break and end execution of current application.

2 Toolbar :- Toolbar give you quick access to commonly used menu command.

- * Standard Toolbar :- The standard toolbar is just below the menu bar and display by default.
- * Edit Toolbar :- It contain the command of the edit menu.
- * Debug Toolbar :- The debug toolbar contain the command of debug menu.

3 ToolBox → The toolbox contain the icons of controls you can place on a form to create the application user interface. Toolbox contains the application icons and active controls.

To place a control on a form you first select it with the mouse, click then move the mouse over the form. When the mouse over the form the cursor turns into a cross, and you can draw a control on a form. In the toolbox we can add more control from the component.

4 Project window →

The windows title is Project is the project explorer which

display the component of the project.

Project window has its component in tree structure listing. You can expand or shrink the detail by clicking plus or minus sign that appear to the next object grows. If we double click on a form that form form window appears in the windows editing area.

1. Code window button
2. View object button
3. Toggle folder button.

5 Property window →

Contain the property setting for selected

Controls. Property are the attribute of an

objects such as size, color and caption.

Visual Basic Sets the Control initial properties values. When you display the property window for a control you can modify its values.

Each property has a name you can work with particular property and each property has a value that you either VB assign.

6 Form layout windows →

The Form layout windows which is in the designer input

corner of visual basic IDE, to determine the initial position of the form in your application.

you can move forms around and place them on top of each other. These windows is

useful in application that uses multiple form becaz you can specify how form is positioned with respect to the main form.

7 Immediate window →

The Immediate window is at the bottom of IDE and use the immediate windows to examine and change the value of application variable and to execute visual basic command in Immediate mode. Immediate window is one of the reason of popularity of VB.

8 Form window →

The form window is the main window in the middle of the screen and in it you design and edit the application user interface. The same window display text editor in which you can enter and edit the application code. It displays two windows.

1. Form itself
2. Code windows

To switch between these windows little icons at the top of project explorer windows.

Q → Explain Conditional statements with Example

Ans → An application needs a built-in capability to test condition and take a different course of action depending on the outcome of test visual basic provide many control structure.

1. If then → The most important statement in program is the If statement. If provides you application can begin to analyze data and make decision based on that analysis. The body of If can have more than one statement. The body often called the block.
Format:-

```
If Conditional then
    Block of one or more statement
end if.
```

The conditional is any expression that return a true or false result. The conditional might be a Boolean variable. If and only if the condition is true does the code body of if execute.
If the code you wrote executed sequentially the statement after another. If your program becomes decisive and execute only part of the program if the data warrants partial execution.
The if body close with End if.

```
if (txtSales > 5000) then
    Bonus = txtSales * .12
    Sales = txtSales * .11
endif.
```

3. Nesting If-else Statement ⇒ If you embed If-else statement inside another If-else statement you have to use the elseif to start the nested If Statement.

2. If with else → A variation of the If-then Statement is the If-then-else Statement which execute one block of statement If condition is true and another If condition is false.
If condition is then Statement block 1
else Statement block 2
endif.

Else is optional part of if statement. Else specifies the code that execute if comparison test is false. Sometime If-else statement is called mutually exclusive statement.
Vs evaluate a condition, If condition is true the first block is execute then jump to the end-if statement. If condition is false Vs ignore the first block of statement and execute the block of else following keyword else.

```
If hours > 40 then
    Bonus = 400
else
    Bonus = 600
endif.
```

3. Nesting If-else Statement ⇒ If you embed If-else statement inside another If-else statement you have to use the elseif to start the nested If Statement.

1) condition -1
Condition 1 block-1
else Condition 2 block-2
Statement block-2

else Condition-3 then
Statement block-3

else Statement block-4

endif

The Condition are evaluated from the top, and if one of them is true, the corresponding block of statement is executed. The else clauses is executed if none of the previous expression are true.

If score < 50 then

Result = "Fail"

elseif Score < 75 then

Result = "Pass"

elseif Score < 90 then

Result = "Very Good"

else Result = "Excellent"

endif

4) Select Case → Select Case structure compare one

expression to different value. The advantage of Select Case Statement over multiple If-then- else statement is that it makes the code easier to read and maintain.

The select case structure test a single

expression which evaluated once at the top of structure. The result of the test is then compared with several values, and if it is matches one of them, the corresponding block of statement is executed. The case statement is useful when you must make several choice based on data value.

Select Case expression

Case value

Block Statement-1

Case value

Block Statement-2

Case value

Block Statement-3

Case else

Block Statement

End Select

5) Do-While Loop →

Do loop execute a block of

Statement for as long as Condition is true.

Control on Boolean. There are two variation

of Do-Loop Statement.

- (1) Do While (Condition)
- (2) Do Until Condition

Loop Statement block

Loop Statement block

(3)

A loop will be executed either while the condition is satisfied or until the condition becomes false. These two variation use the keyword while and until to specify how long the statements are executed.

If Condition is false the do while loop is skipped; when the loop statement is reached VB evaluate expression and repeat the statement block of the do while loop if the expression is true.

For loop → For loop execute a series of one or more statement a fixed no. of time or until a condition is reached. The for loop is a multiline statement.

For Counter = Start to end [Step, increment]
Statement
Next Counter

The keyword in square bracket is optional. The argument Counter, start, end and increment are all numeric. In executing For - Next loop VB complete following steps

- 1 Set Counter equal to Start
- 2 Test to see if Counter is greater than End if so exit the loop. If increment is negative VB test to see if Counter is less than End.
- 3 Execute the statement in the block.
- 4 Increment Counter by the amount specified with the increment argument.

5 Repeat the statement

For value = 0 to 1000 Step 100
Label: caption = value
Next

1 While → The while-wend loop execute a block of statement while a condition is true. the while-wend loop has following Syntax:

While Condition
Statement-block

wend
If Condition is true: all statement are executed and when the wend Statement is reached Control returned to while Statement which evaluate Condition again. If Condition is still true the process is repeated. If Condition is false the program resume with the statement following the wend Statement.

number = 0
total number = 0
total = total + number
number = int(1000 ("Please enter value"))
wend

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Q: What do you understand by event-driven

Programming?

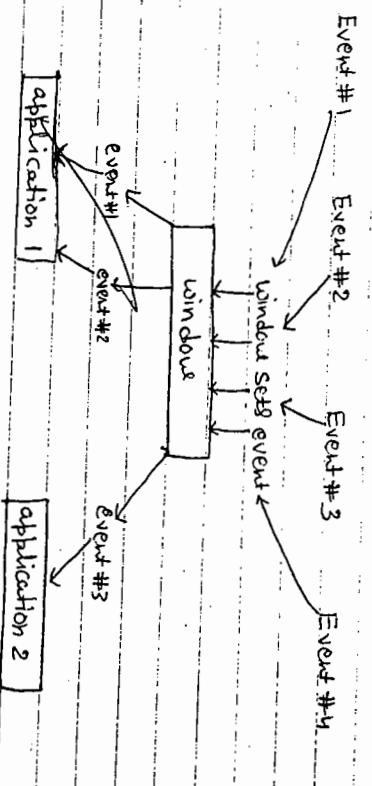
Ans: In the event driven programming the sequence of operation for an application is determine by user interaction with the application interface. The event caused by the user determine the flow of the application.

An event is an activity that occur during a program execution such as mouse click or key stroke. Event driven programming applied to programming that respond to window events. Window handle a few event but passes most to program currently running. Window is a multi tasking O.S. So more than one program run simultaneously. Your program must handle any and all event appropriate at the time the event occur and ignore all the other.

For example, if your program need to display a warning msg. At a preset time interval your program will have to check the timer event to see whether the correct time span has passed since the last warning. If another program running at the same time did not require the timer the prog. would ignore all timing event.

A visual Basic program consist the visual interface that make up the window & control that the user sees and interacts with. In addition programming code connect everything

together. Each Control is both automated and set up to respond to the programming code. Eg a command button will visually show a click action when the user click the button with mouse with the mouse when running the program you have to do nothing more than place the button on the form face the button to concrete. Other aspect of the command button, however are under your control such as the besides the button that you can change although VB assign default value.



Once we place control on a form and assign their individual property value we are ready to write programming code that responds to event. The same control can trigger several different kinds of events.

Q. What is Common dialog box Control. How it is used?

Ans → Common dialog box :- VB provide a special dialog box which perform six different actions such as :-

- (1) Open a file
- (2) Print a file
- (3) Save a file
- (4) Color & file
- (5) Font Selection
- (6) Help about file

The more our application matches the look and feel of popular windows application such as Microsoft word the more likely your user will adapt quickly to our application. If we write this to sell we know the grp. of user acceptance especially when it comes to convincing the user to purchase future upgrade.

Therefore when we write an application that open a file or prints to the printer we can do one of following:

- * mimic the style of other application dialog boxes that perform the same tasks.
- * write our own dialog box and improve the style of standard dialog boxes.

→ The common dialog box Control is a control we can add to our application

Q. What produce one of several standard dialog box with very little effort on our part?
→ The dialog boxes that the Common dialog box control produces like modal dialog box is one that the user must close by clicking OK or Cancel before user can continue with any other part of application.

Create Dialog boxes →
(1) To add Common dialog box Control in the toolbox For this,

Project → Component → mice off Common dialog box.
(2) Select the entry and click OK : The last control in your tool box will now be the Common dialog box.

(3) Click on the Common dialog box then it create a object of Common dialog box class.

(4) Double click on object of Common dialog box class and define the Coding.

→ When we run the program the Common dialog box Control takes on the appearance of one of the dialog boxes listed. VB takes care of the dialog box display by putting the dialog box in the center of the screen no matter where we place the Common dialog Control on the form. we must apply one of the following method to the Common dialog box.

⑦

Q → Difference between Image Box and Picture Box.

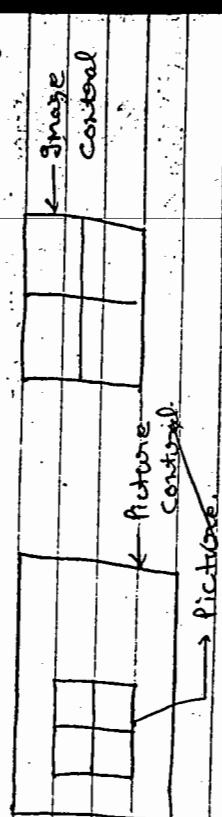
this → Image box and Picture Box both do basically the same thing. They allow you to place Picture from graphic file on a form. The difference of both are:

- Image box → The Image Control is more efficient and works best in the sluggish application on slower pc.
- Picture Box → The Picture Box control offer more flexibility by supporting additional method and property.

Condition where Image Control is best as Picture Box is best.

(i) memory management → Where memory is most an critical factor then we use Image Control becoz it contain less memory than than the Picture Control.

(ii) provide reuse method on facility → Where memory is not critical but provide a various method then we use Picture Control becoz it support more method then Image



| | | | | | | |
|--------------|----------------------|---------------------------------------|---------------------------------------|-------------------------------------|--------------------------------------|-------------------------------------|
| File | Song | <input type="button" value="New"/> | <input type="button" value="Open"/> | <input type="button" value="Save"/> | <input type="button" value="Print"/> | <input type="button" value="Exit"/> |
| Save in | <input type="text"/> | <input type="button" value="OK"/> | <input type="button" value="Cancel"/> | | | |
| List up file | <input type="text"/> | <input type="button" value="OK"/> | <input type="button" value="Cancel"/> | | | |
| File name | <input type="text"/> | <input type="button" value="Save"/> | <input type="button" value="Cancel"/> | | | |
| Save as icon | <input type="text"/> | <input type="button" value="Cancel"/> | | | | |

* Print dialog box → Shows print displaying the print dialog box. In this we can setting the printer and printing page.

| | |
|-------------|--|
| Print | |
| Name | <input type="text"/> [Printer] |
| Status | Ready |
| Type | HP Series |
| Comment | Copies |
| Print style | No. of copy <input type="text"/> |
| Print | <input type="checkbox"/> [Off] |
| Selection | <input type="checkbox"/> [OK] [Cancel] |

Q) Difference between combobox and listbox?

Ans: List box → List box Control occupies

more space than combobox and is populated with a list

of item. The user can select one or more

item with the mouse. The item must be inserted in the list box through the code or

list property in the property window. Each

new item in the list property must be entered on a separate line. To change line press shift enter. When

you are done entering item press enter and the item will appear in the list box control on the

form user can't enter data in a list they can only select item which will be manipulated by the application when they click a button on the

Some other actions:

- A list box control display a list box form which the user can select one or more item. The user can't edit the data in the list box directly.

VB add a vertical scroll when the list of data is too long for the list box.

Function for list box:-

i) Clear → The clear method remove all item from the control. Syntax is as follows:

List1.Clear

(ii) List Count → This is the no. of item in the list. The item in the list can be accessed with the index value.

(iii) List → This is an array that hold the list item. the element List(0) holds the first element of the list and so on.

Diet

(iv)

list index → This is the index of the selected

item in the list.

if multiple items are

selected list index is the index of most recent

selected item. The list property can be used

to access specific element in the list.

Combo box :-

Combo box are these control that

usually display a text box and a

drop down list.

This control also contain multi-

ple item but

occupies less space on the

screen.

The combo box is expandable list

control.

The user can

select

expand it to

make a selection and

retract it after the

selection is made.

The main advantage is

user can add new information. The Combo

box are three types:

1 VB Combo drop down (1) → Drop down Combo include

a drop down list a text box.

The user can

Select from the list box

2

VB Combo simple (1) → Simple Combo box includes a

simple text box and a list

which doesn't drop down. The user can select

from the list box type in the text box.

The

size of simple Combo box includes both the edit

and list portion.

By default a simple combo

box is

sized

so that none of the list is

displayed.

Increase height property to display

more of the list.

3

VB Combo drop down list (2) → drop down list this

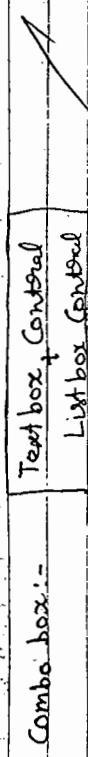
style allows a selection only from the

drop down list.

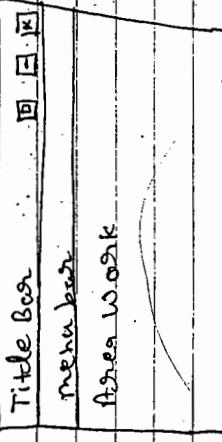
This is a good one to

keep in mind when we want to

not teach the user input. If we user want to give this one you should also consider simple list boxes.



Q → What do you mean by SDI and MDI interface? Explain some MDI property and method with example.
Ans → SDI → SDI stands for single document interface SDI limits our application to one open document. 1 window after time most application that our write will probably be SDI application. For example - Notepad.

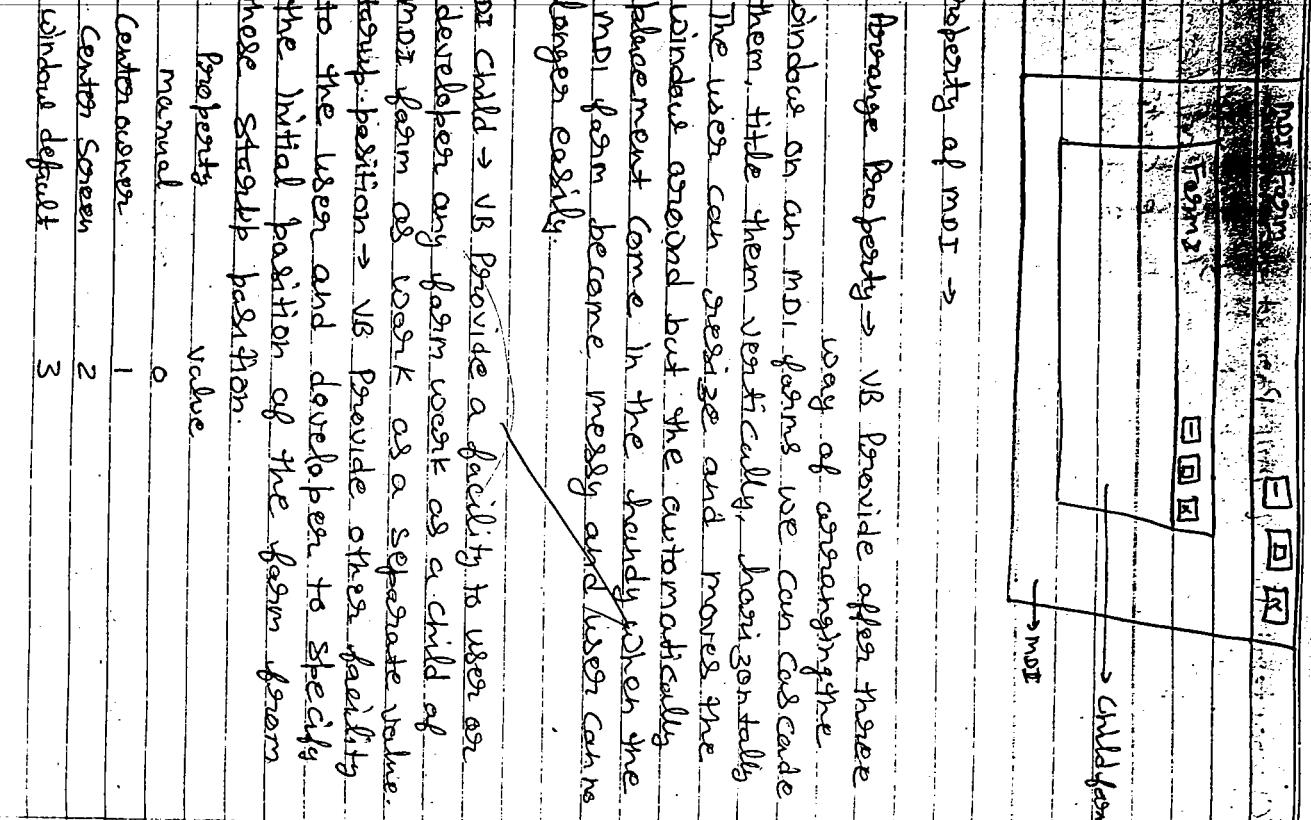


Characteristic of MDI Parent form →

- 1 An application can have only one menu bar.
- 2 The MDI can contain only these controls that support the align property such as a shape box or tool box Control. we can't place other control on MDI form.
- 3 We cannot use the print method of our other graphic method to display MDI parent motion on MDI form.
- 4 The MDI parent window and all child windows are represented by a single icon on the window task bar. If the Parent form is minimized than all child form are minimized to the same layout.
- 5 If a menu is defined for a child form the menu is displayed in the parent form menu bar. if a menu is defined for the parent form it is not shown at all if a child form has its own menu in the active form.

Characteristic of MDI Forms →

- 1 Each child form is displayed within the confines of the parent form. A child form cannot be moved outside the boundary of MDI Parent form.
 - 2 When a child window is minimized its icon is hidden. In the parent window not on the window task bar.
 - 3 When one child form is maximize all other child form are maximized as well as
- MDI → MDI stands for multiple document interface. It allows us application to contain multiple document windows. It effects the interface lets our work with several set of data in multiple windows with in our program each document window is called a child window for example - ms word etc.



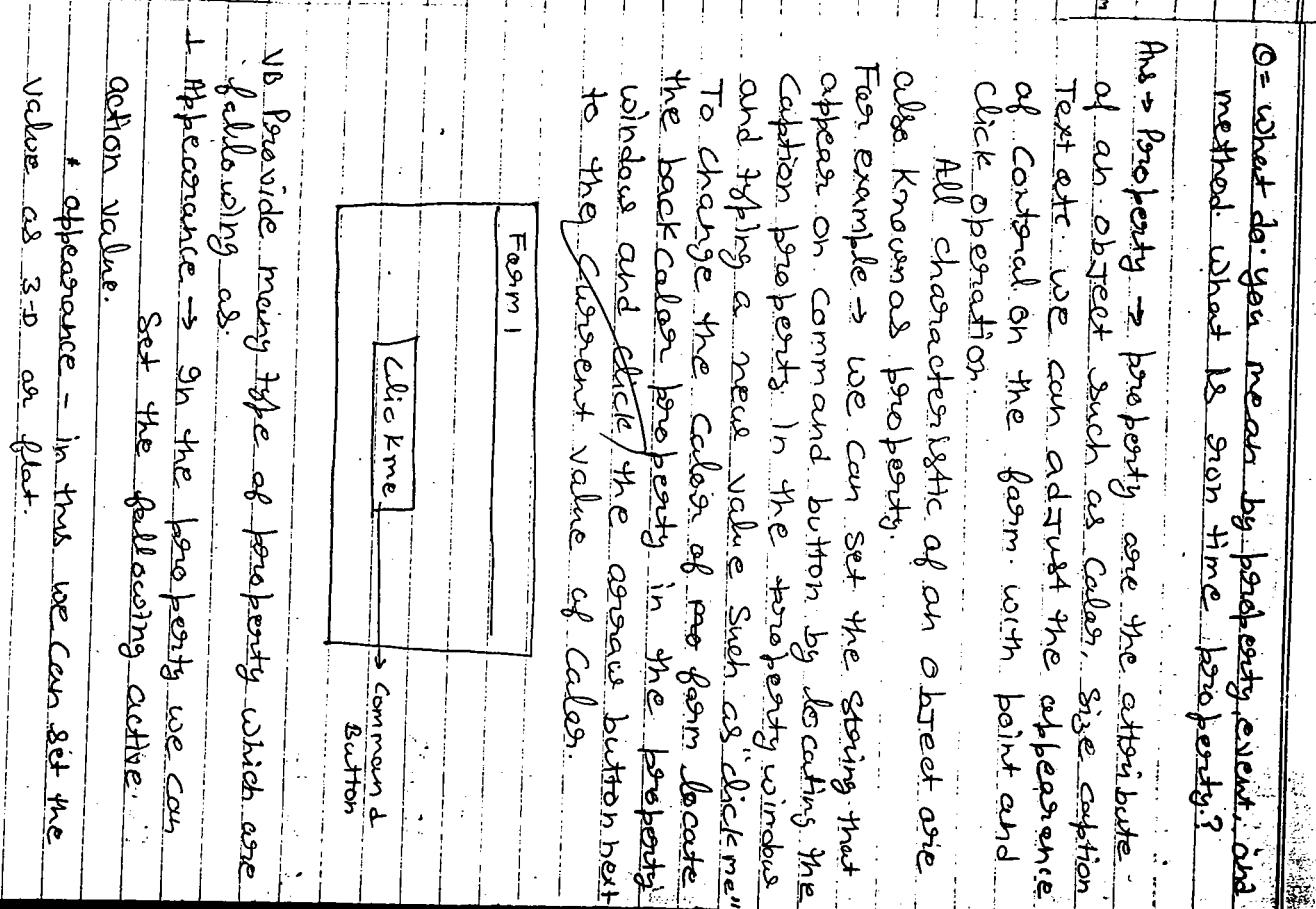
Property of MDI →

i) Arrange Property → VB Provide offer three way of arranging the

windows on an MDI forms we can cascade them, title them vertically, horizontally. The user can resize and moves the windows around but the automatically placement come in the boundary when the MDI form became messy and user can't longer easily.

All characteristic of an object are also known as property.

Ans → Property → property are the attribute of an object such as color, size, caption of control on the form with point and click operation.



- * Back color → In this we can set the back color of any object.
- * Border style → In this we can set the border of any label or object. It's value are None, Fixed style, Filled dialog.
- * Caption → In this property we can type any word on the command, or other object.

2 Behaviour → In this property we set the behaviour of the form and any object. V.C.E. → To set the objects comes from left or right.

Visible → This property is used in run time. Any object see in run-time or not.

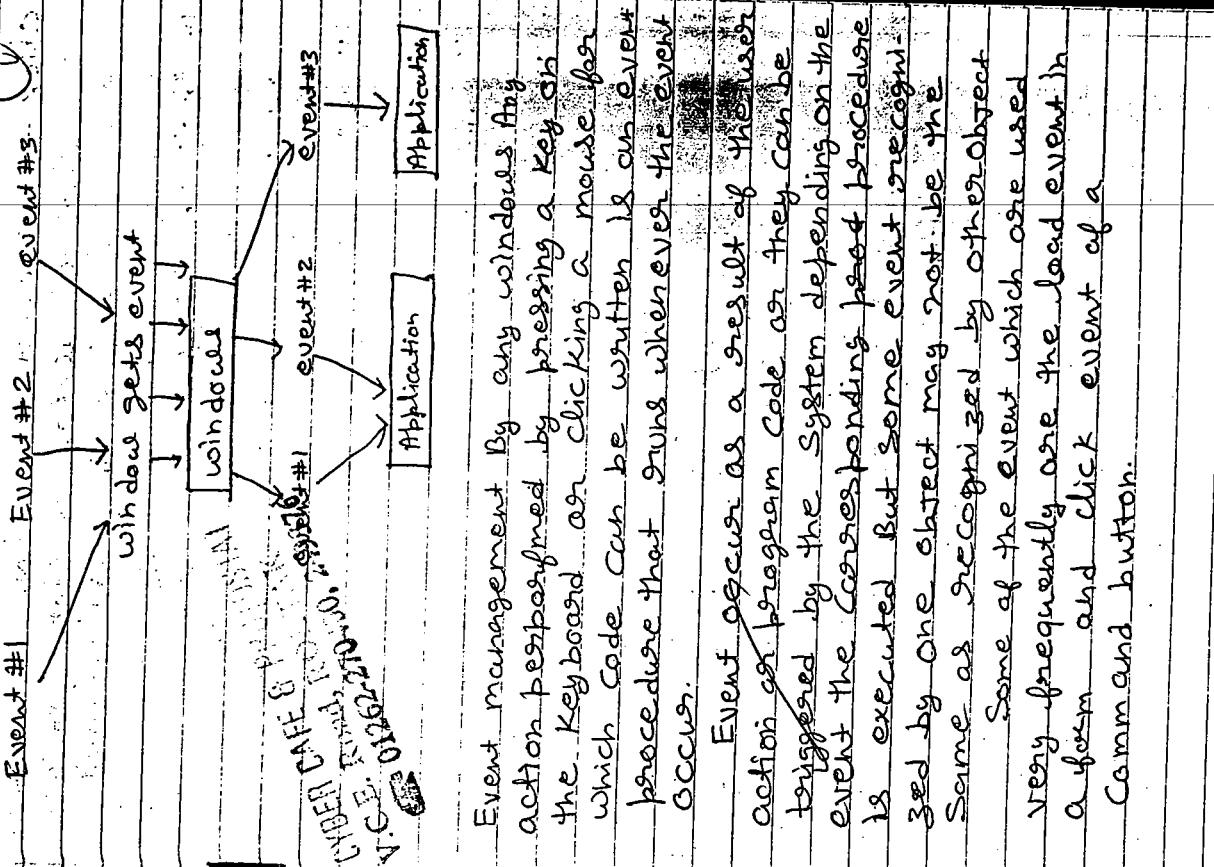
3 DDE → This property is used in linking of database such as link mode or link topic.

4 Font → To set the size, style, font style of any object with the help of font property.

5 Position → With the help of this property we can set the x-axis, y-axis, left margin, height, width of any object.

6 Scale → With the help of this property we can set the scale left, height mode, scale top, scale width.

Event → An event is an activity that occurs during a program execution such as mouse click or key stroke.



click → This event occurs when the user

click anywhere on the form. In the user click form obj. that partially hidden from view.

double click → This event occurs when the user

move the double click on the form.

move → This event occurs when the user moves the cursor on the form.

key press → This event occurs when the user press any key. this event work with ascii code.

key down → This event occurs when the user down any key.

key up → This event occurs when the user up any key from the form.

method → method are procedure that

operate on object method can be an

object to perform an action. method are part of object like properties and perform the action you want.

some common method

1. clear
2. add item
3. move

Q = what is function. Has a function in VB 6.0. explain with some internal function in VB. Has many value. can a subroutine procedure method?

Ans → Function → function is set of instruction that perform a specific task. The primary job of a function is to return a specific item. A function contains many argument.

Function =
Function name (argument1, ..., N) as type

end function

A function call is always part of a statement.

Variable name = function name (arg1, ..., argN)
Unlike the argument just in a call to a sub procedure the argument sent to a function are enclosed in parentheses after the function name.

The argument may appear as literal value matches the data type specified in function definition.

Passing parameters → usually the code in a procedure needs some information about the state of the program to do its jobs. this information is passed to the procedure as argument when the

procedure is called parameter is argument we are passing the parameter in two forms

Passing parameter by value
Passing parameter by Reference

Passing parameter by value → When a variable is passed by a value then only a copy of a variable is passed to it. But if there is any change in the value caused by the procedure then it affect the value and next the variable itself. By Val Keyword must be used to indicate that a variable is passed by value.

Example → Function functionname(By val as integer) as type data + type function emp (By Val empno as integer)

Text1.Text = "6001"
End Function

Passing argument By Reference → In VB we passing By Reference is By default where the original argument in the procedure can gain access to the actual variable content from its memory address location to the result the variable value. Can be permanently changed by the procedure to which it is passed by value.

function functionname (By Ref as Integer) as type

Some internal function →

1. Int (numeric value) → Int() return the next lowest integer position of its argument.

Int (val = Int(6.8))
variable int is function name

2. Fix (numeric value) → Fix() return the truncated integer position of the argument.
Fix (val = Fix(-1.8))
variable fix is function name

3. Abs () → It return the absolute value of any value.

Abs (val = Abs (-19))
variable abs is function

String function →

(i) Len () → This function calculate the length of the string.

intonly = msgbox (len ("abcde"))
return 's' value.

(ii) Left (string value, numeric value) → This function return the character from left side of a string.

Str1 = "abcdef"
Str1 = Left (str1, 1)
at string 'a' only.

Other Internal function →

`msgbox()` → A message box is a small dialog box used for output

during a program execution. The user can close the message box by clicking

a command button and can move the message box but the user can't resize the message box.

`int response = msgbox([String], [int style], [String])`

`String prompt → To set any message`

`int style → To set style of any button`

such as:

| Name | Name | Description |
|------|---------------|-----------------------|
| 0 | vbok | OK button |
| 1 | vbokcancel | OK and Cancel |
| 2 | vbabortcancel | Abort, Cancel & Retry |
| 3 | vbyesnocancel | Yes, No, Cancel |
| 4 | vbyesno | Yes, No |
| 5 | vbretrycancel | Retry, Cancel |

`String title → To set the title of msg_box.`

`int response = msgbox(["Ready to Print?", 2, document])`

| | |
|-----------------|--------|
| Document 1 | [] |
| Ready to Print! | |
| Ok | Cancel |

Input Box → An input box is a message box with a field in which the user can

type a value such as a word or phrase that might answer a question we ask in the box title.

`String answer = inputbox([String prompt], [String title], [String default], [int style])`

`String prompt → To set the any message on the input box`

`String title → To set the title of input box`

`String default → To set default message on the input box`

`int x_pos → To set the position of Y-axis of input box`

`int y_pos → To set position of Y-axis of input box only Y-axis.`

`String answer = inputbox("What is your name?", "Document Input", 500, 500)`

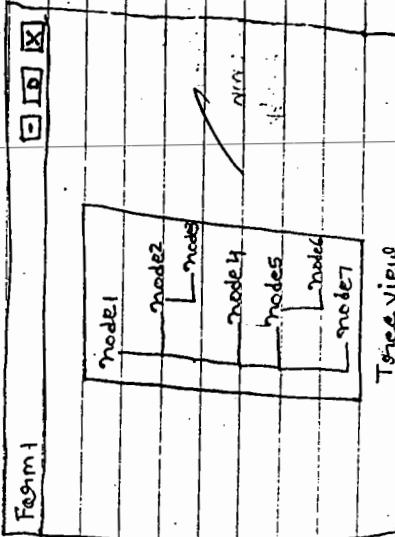
| | | |
|----------------|-------------------|--------|
| Document Input | What is your name | Y-axis |
| Title | String | X-axis |
| Message | Ok | Cancel |

Input Box

g8/03/27

Q → Tree View?

- Ans → Tree View :- Tree view present data in hierarchical way such as the view of directory that appear in the tree view of windows Explorer. Tree view composed of cascading branches of nodes and each node usually consist of an image and label (set with the text property). Image for the nodes are supplied by image list control associated with the tree view control.
- A node can be expanded or collapsed depending on whether or not the node has child nodes. At the top most level are root nodes, and each root node can have any number of child nodes. Each node in a tree is a programmable node object which belongs to the nodes collection. Each member of the collection has unique index and key property that allows you to access the property of node.



Q • Short Note → List View → List View Control display

Ans → List view → List view Control display as its name implies lists

of items. The list view is displaying the lists of files each item in a list view

Control is itself a list item object and can have both text and image associated with it.

The list item object are stored in the list view list item property.

List view list item property

List view can display data in four different way:

i) Icon mode → Can be manipulated with the

mouse allowing user to drag and

drop and one arrange object.

ii) Small icon mode → Allows more list item object to be viewed

iii) List mode → Presents a sorted view of the list item object.

iv) Report mode → Present a sorted view with sub-items allowing extra information to be displayed.

The list view in windows explorer displays files in repeat mode. In this mode you add

sub-item to each item and text in these

sub-item will appear under the various

column headings.

→ You usually associate text & image

list control with a list view one to hold the icon for icon view mode and

one to hold small icon for other three modes.

Q → Short note on Image List Control →

Ans → Image List Control →

Image List Control

are invisible control that serve one purpose to hold images that are used by other controls.

Image list control gives you another way to store a group of images in a single place. You add images to an image list control at design time using insert picture button in the control property page. You can also add image to an image list at run time using add method.

→ To use the image in the image list you usually associate the image list with a windows common control. In an image list each image has an index value as you can specify the key value. As you can also reach the images in an image list with the listimage collection picture property. For example if you wanted to add image in picture through image list Picture.picture = imageList.Images(0).Picture.

| Property | Page | Index | Image | Color |
|----------|------|-------|-------|-------|
| | | 0 | | |

| Insert | Remove | ImageCount | OK | Cancel | Help |
|--------|--------|------------|----|--------|------|
| | | 0 | | | |

⑨ → Tab Stripes → A tab stripes contains:
 Ans → Tab Stripes → A tab stripes contains:
 present the user with
 or group of tabs that acts like the dividers
 in a notebook. The tab stripes the user
 can click a tab and see a whole new
 panel of data like opening a file folder.
 The most common use of tabs
 stripes today is to organize dialog boxes.
 after those dialog boxes that let the user
 set program options into many different
 Panel: all hidden from view except the
 current one the user has selected.

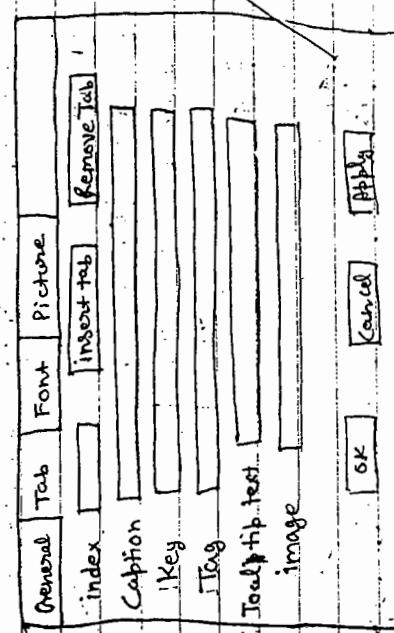
→ In this way you can pack a great deal
 into a small space in a dialog box and
 avoid the need for many dialog boxes.
 → A tab stripe control consists of one
 or more tab object in a tabs control
 collection. At design time you can
 set the Tab Object appearance by setting
 property and at run time by invoking method
 To add and remove objects.

⑩ → Slider Control →
 Ans → Slider Control →
 similarly to a scroll bar. It is a little
 box with optional tick marks that contains
 slider. The user can move the slider by
 dragging it, clicking the mouse to either
 side of the slider. Just as scroll bar key
 property are max, min and value which
 determine largest smallest and current value
 for slider. The Key event is scroll event
 which is triggered when the user moves the
 slider on a slider control.



Adding a slider control follow these steps:-
 (1) Select the project/component menu item and click
 Controls tab in Component box
 (2) Select Microsoft Windows Common Controls
 (3) Close component box by clicking OK. Slider tool
 appear in toolbox.

(4) Set the slider orientation property to Horizontal
 or vertical to specify as you want.
 (5) Set the slider min, max, SmallChange, Large
 change.
 (6) Set the slider tick frequency property to
 the no. of ticks between ticks on slider scale.
 (7) Add the code you want to the slider event
 You want. Change on scroll.



Q → Short Note on ToolBar?

Ans → ToolBars →

Toolbar are the bar at the

top of a windows that are filled with button and sometimes other control like

Combo box.

→ A toolbar contain button that correspond to item in an application menu providing in an easy interface for user to reach frequently used function and command. The user can also customize toolbar by double clicking a toolbar at runtime open the customize toolbar dialog box which allow the user to hide, display or rearrange toolbar button.

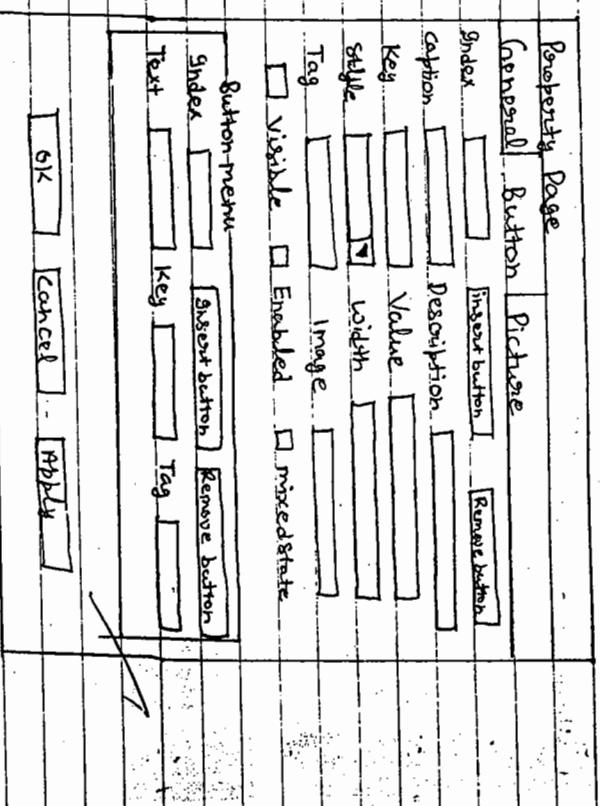
→ To add the toolbar control to a form you select Project/Component menu item, then click the Control tab in the Component dialog box, Select microsoft windows common dialog box Common Control, and click OK.

The toolbar add on the toolbar.

→ To add a button to toolbar you add button object to its Button Collection, by working with toolbar property page each button can have text or image. Set text with caption property and image with image property for each button. Object At run time you can add or remove button by using add or remove method.

→ After add a toolbar to a form its align property is By default is top.

→ You add button to toolbar Control at design time by right Click the Control and clicking the property item in the menu that appear. The tool bar property page is open.



You insert new button by click insertbutton.

When you add a new button to a toolbar you can associate a picture or caption with it. Each button gets a new index value which will be passed to the click event handler and in last click ok button to close property page.

Add Image to Toolbar Button → Add images to

button in toolbar before we add images

to image control just control. After add it the image will control. Then add image in just control associated with toolbar. For add image in toolbar follow these steps.

- (1) Right click on the toolbar and select property page and go on property page.
- (2) Next, click the button tab in the property page.
- (3) Enter the index of the image control you want to connect to the first button in the box labeled of Image.
- (4) Keep going for other button entering the image control indices of the image you want to connect to those button.
- (5) Click on OK button to close property page.

- Q) List various types of boxes used in VB
Explain five of them.
- Ans → 1. Text box 2. List Box 3. Combination Box
4. Drive List Box 5. Directory List Box
6. File List Box 7. Check Box
8. Rich Text Box 9. Image Combo Box
10. Picture Box

- (i) Text Box → use the text box control when you want the user to type something such as answer to a prompt. When you want to collect values such as name, address information. Text box don't make for good yes/no true/false answer.
When you place value at design time it is default value and user will see at runtime. At runtime user can change the value of text box.
- These are useful property of text box:
- (i) Alignment → This property determines how the text align inside a text box whose multiline property is true.
 - (ii) Locked → This property determine whether the user can enter a value or change the default value of text box. If true the user cannot change the text box value.
 - (iii) maxLength → This property determines the maximum characters that text box will accept.

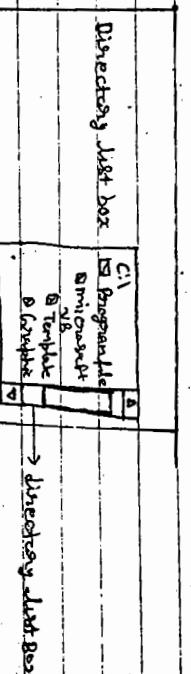
(iv) multiline → This property specify that the text box can hold more than one single line.
all scrollbars → This property determine how many scroll bar appear on text box.

0 → No ScrollBar

1 → Horizontal Scrollbar

2 → Vertical Scrollbar

No Text → This property specify the text that appear in text box:



2 Directory List Box →

Directory List box Control to let user select a directory folder. This

control is smart enough to search the host computer and determine which directories exist in the system. A directory list box display the directory structure of current drive. The current directory shows up as an open file folder. Sub directory of the current directory are shown as closed folder.

→ The list property of directory list box works a little different than file list box. While sub directory of current directory are numbered 0 to listCount-1. VB uses negative index for current directory and its parent and grand parent directory.
→ For example -1 is the index for the current directory, -2 for its parent directory and so on.

The important property of directory list box is path property which hold the path of current directory. When the user change the current path a change event is generated.

3 Rich Text Box →

The Rich text box control is a full blown word processor. It provide all functionality of text box control. It gives you the capability of mix different font size, and attribute. And it gives you precise control over the margins of text. You can place image in the Rich text box.

The fundamental property of Rich text box control is TextRTF property. This similar to the Text property of text box control, thus property the text content display by the control. The Text RTF property retain the text along with any formatting information. You can use the Rich text control to specify the text formatting including paragraph indentation, font, font size, etc style.

RTF stands for Rich Text format which is the standard for storing information along with text by using Rich text box control the programmer need to supply the formatting code.

To add rich text box to a form follows

these step:

- (1) Select the project/components menu item.
- (2) Click the Control tab in Component box.
- (3) Find and Select the Microsoft Rich Text Box Control box, and click on OK to close Component box.
- (4) The rich text control now appear in tool box and you can use it to add rich text box to your form.

[Important property of Rich text box]

(i) Seltext, Selstart, Sellength →

These properties are related to selecting text in the Rich text boxes. Seltext shows the selected text. Selstart tells the starting position of text. Sellength tells the length of text. For example if we change the selected text in the upper code → RichTextbox1.Seltext = "Use (RichTextbox1.Seltext)" in another example if we want to find length of text then we use Sellength or Selstart property.

RichTextbox1.Selstart = 0

RichTextbox1.Sellength = Len(RichTextbox1.Text)

[Same method of RichTextbox]

Span and up to

On many Text editor user select an entire word or sentence or more pointed to end of word. By using

Span and up to method we can add

(ii) SelBold, Selunderline, Selstrikeout :

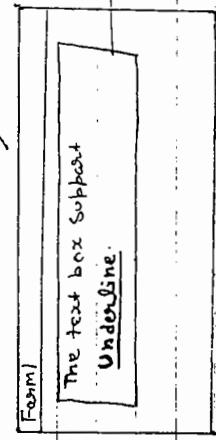
These property are used to make the text bold, italic, underline, strikethru. For example

RichTextbox1.Selstart = RichTextbox1.Find("underline")

RichTextbox1.Span = ("underline")

RichTextbox1.Selunderline = true

RichTextbox1.SelBold = True



(iii) Selindent, Selhangingindent, Selrightindent →

To indent Paragraph by paragraph we use this property. Selindent → Indent the first line of the property. Selhangingindent → indent all other lines of the Paragraph with respect to Selindent. Selrightindent → Set right indentation of Paragraph.

[Same method of RichTextbox]

Span and up to

On many Text editor user select an entire word or sentence or more pointed to end of word. By using

Span and up to method we can add

Same capability to application. The `Up` method specify the characters that identify where the pointer will move. The `Up` Span method to specify the characters that signal the end of Selection.

Syntax:-
Rich text Box. Spans CharacterSet, [Forward, Inverse]]

The characterSet parameter is a string that specifies the set of characters to look for. The forward parameter determine which direction the insertion point moves. The negate parameter specify the whether the characterset define the set of target characters.

When you call the `Span` method the Rich text box, contained start searching from:

the current position for one of the character in specified character set. The first character found cause the search to stop.

(ii) **SaveFile and Load :-** These method are related

Save file → Save the content of content to a disk file.
Load file → Load the content from a file.

Syntax→

Rich Box: `SaveFile (filename, filetype)`

Rich Box: `LoadFile (filename, filetype)`
Filename is the full path name of file where the content of content to be saved. And file type determine how the content content will be saved.

Q) Sheet note on Data access object?
Ans → Data Access Object →

Data access object is a structure of object for accessing data through Data Access Object. When VB working with databases it uses Microsoft Jet database engine. The Jet engine represented a considerable advance for VB because you could work with all kind of data format in the field of data base. Text, integers, long, double, date, char etc.

The Jet engine also support SQL. Microsoft added the data control to VB and you can use that control to open Jet database objects to VB.

(i) DBEngine → The Jet database engine.

(ii) Work space → An area hold one or more database.

(iii) TableDef → Definition of a table.

(iv) QueryDef → Definition of query.

(v) Recordset → The set of record that make up the result of a query.

(vi) Index → An ordered list of record.

→ Working with Data Access object, you can use the database and recordset Data Access Object in your procedures. The database and Recordset object each have property and method of their own. And you can write procedure that use those property and method to manipulate your data.

Creating DAO database → From creating database

To add a reference of:

Microsoft DAO Object Library. Select the

& Project Reference menu item. Select micro-

soft DAO object library then click OK.

We can make use of DAO object in library to create a new database. Create data-

base is a method of DAO work space object.

(ii) Creating table with table def object →

we create a table by tabledef object and you can append field to the table.

(iii) Add an index to a table def object → you use an Index to a table and you create an index with DAO CreateIndex method. The Create-

Index method Create an index object and you can make one of the field in a table that table index with that index object CreateIndex method.

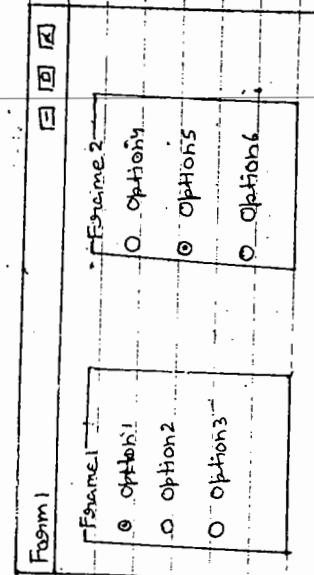
(iv) Creating a Recordset → After defining a data-base table with DAO TableDef object you can append that object to DataBase object which add table to that

Object. You can use OpenRecordSet method to open record set and working with data. Set Recordset = database. OpenRecordset (source, type, Options, LockMode)

we use the frame control to group option button together. A frame for each group of option button you want on a form and add option button to the frame. Each frame of option button will act as its own group and user can select one

Q → Define Option Button? How it is created in VB?
 Ans → Option Button is nothing but radio button. Option button is also called Radio button. You can select or deselect them. They are in group shape. Option button always work together. When you select one option button in a group other are automatically deselected. For this reason any application that uses more than one group of option button on a form must use a frame to separate the groups.

→ The value property of option button tells you whether a option button was selected by the user. If the value property is true, the user selected that button; otherwise its value property is false.



option button in "either" group.

One option button is created.

For creation of

option button we select option button from from toolbar and draw it on a form. Option button has a property

Caption: we change the caption property of option button and give meaning full name. If we

want to select more than one option button then we make a group of option button by using same control.

Example :-

| | |
|---------------------------------------|------------------------------|
| Form1 | |
| Name | <input type="text"/> |
| Salary | <input type="text"/> |
| Frame1 | <input type="checkbox"/> Age |
| <input checked="" type="radio"/> male | <input type="radio"/> > 20 |
| <input type="radio"/> Female | <input type="radio"/> ≤ 20 |
| <input type="button" value="Click"/> | |

```
Private sub Command1_Click()
    if option1.value = option2.value = true
        Text1.text = "Kapil"
        Text2.text = "5000"
        msgbox "Person is male & Elder"
    else if option1.value = option2.value = false
        Then
            msgbox "Person is male and tiny age"
```

```
Text1.text = "Child"
Text2.text = 6000
```

```
else
    msgbox "Person is female"
    Text1.text = "Anna"
    Text2.text = 7000
endif
```

```
msgbox "Person is female"
Text1.text = "Anna"
Text2.text = 7000
endif
```

Q → Mask Edit Box Control?

Ans → Mask Edit Box Control →

The masked edit box control can save you a lot of code work. When you trying to control the input to text boxes. This ~~box~~ control will seem like an ordinary text box. The difference is that you can restrict the character entered without having a write code in the key events. The masked edit control let you set up input field such as phone no. with ~~any~~ one code and automatic parenthesis and hyphens.

→ You can show any character in the control to give user a visual cue that they should be entering a phone no. or social security no. This control is better aware.

→ The most important property of mask edit box control is mask. ~~when~~ you can set this property at run time as well as design time. This property controls what the user see and what he or she enter. For example if you wanted to allow only U.S. phone number to be entered.

maskEditBox1.mask = "(###) - ### - ####"

The most common ~~reg~~ character used in mask.

Mask Characters : Description

→ Require the user to enter a digit only.

. → Decimal placeholder.

Form 1

Enter your telephone no. (###) - ### - ####

16

mask character

Thousand separator
Time separator

Convert all character that

follows to uppercase

Convert all character that follows to lowercase

Alphanumeric character be entered

Allow digit to be entered.

All other symbol are displayed as themselves.

If you want to have one of the special character shows up precede it with a backslash (\). For example using "\#\#\#\" as a mask would show up as # followed by a blank where user can enter digit.

These are some predefined masks:

| mask | Description |
|---------------|-------------|
| # #-? #-# # | medium date |
| # #-# #-# # | short date |
| # #: #-# ? ?, | medium time |
| # #: ! # # | short time |

Q: What is object oriented language? Is VB a object oriented language?

This \Rightarrow Object Oriented Language \rightarrow

Object oriented

language is an approach to perform organization and development which attempt to eliminate some of pitfall of conventional programming method. Object oriented language follows bottom-up approach we divide the

language your program made up of object with certain property and functionality.

With OOP you work with package consist of both data and functions that manipulate them.

OOP has some feature as compare to conventional programming:

i) Classes \Rightarrow A class is usually describe as the template from which an object is

actually made. When you create an object from class you have created an instance of the class. The instance of your class are actual object.

\rightarrow All tools on the toolbar are classes

When you add a text box to form you have made an instance of text box class. The members of a class are property, constant and method that belong to class.

iii) Encapsulation \rightarrow Encapsulation is another key concept in working with objects.

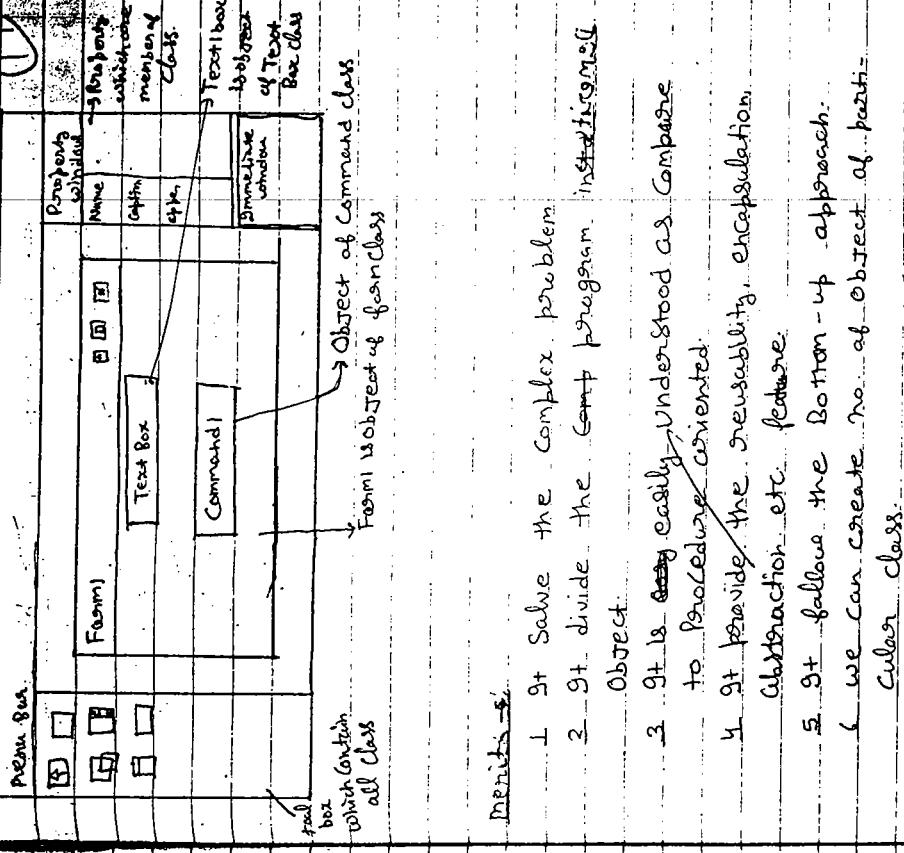
Encapsulation is: Integrating their combining & hide data and behavior in one package and hiding the implementation of a program. Only through object should interact with data. Only through object method and properties. VB fully supports encapsulation.

(iii) Inheritance → The ability to make classes that are based on other classes is called inheritance. The purpose of inheritance is reuse the code. VB supports the inheritance because VB IDE and wizards will do an equally good job of saving you from needless typing.

(IV) Interface & Polymorphism :- VB decided to use same mechanism used in windows to implement control and other OLE object. This is called interface. The purpose of interface is to implement a programming idea that is usually called polymorphism. Polymorphism means more than one form. VB supports the polymorphism.

VB is basic supports these all feature of object oriented programming so we can say VB is a object oriented programming.

→ Inheritance



Q = Describe the difference between High level and Low level language?

Low level language →

Is called machine language. In the machine language each data and program instruction represented by series of 0 and 1. These language is understood by computer becoz it is in binary format. In other word in machine language each number, characters represented by combination of 1 or 0. Codes. Each instruction contain two part.

1. OP - Code
2. Address

Demerits →

- Low level language are machine dependent.
- It require the knowledge of hardware.
- It produce more errors.
- Time taken for developing program.
- Size of program is very lengthy.
- Programs are very difficult to Debug.
- High preparation cost.

merits:-

- Computer can easily understand.
- No need to compiler.
- Time taken to execute program is less.

High level language → Language in which instruction are given in English like text rather than in Binary.

digit that computer understand are known as High level language.

→ Instruction used as termed macro-instruction which means that a single instruction may produce several line of machine language code. These language also known as procedural language becoz these language require every step of task to be submitted to the computer in the form of procedure.

Demerits →

- It take more time for execution.
- It consume more main memory becoz it require compiler.

Merits →

- High level languages are machine independent.
- High level language are simple and well understood, learnt by user.
- These languages are very easier debugging.
- It consume less time for development of program.
- It provide good documentation for well understood.
- HLL program are very easy in their maintenance.

| Low Level Language | High Level Language |
|---|---|
| 1. It is easy to understand By Computer. | ① → Difference between Event oriented and Procedure oriented language? |
| 1. It does not follow a pre-determined path. it execute different code section in response to event. | 1. It does not follow a pre-determined path. both: It use top to bottom approach. |
| 2. It need to other program like compiler for convert High level to low level. | 2. Event oriented language shows the Syntax errors during the Coding of program. |
| 3. Its execution speed is very fast. | 3. Event- oriented language provide both integrated compiler & compiler during the Coding of program. |
| 4. It consume more to develop a program. | 4. It is very difficult to use for both developer as well as user. |
| 5. It is machine dependent language. | 5. It is machine independent language. |
| 6. In this debugging is very difficult. | 6. In this debugging knowledge of hardware is not required. |
| 7. It requires the knowledge of hardware. | 7. It not require Knowledge of hardware. |
| 8. In this we see the output without create exe file that exe file of project. | 8. In this we see the output without create exe file that exe file of project. |
| 9. This we created object which is related to real world. | 9. This we don't create any object. |

I go this many feature I go doesn't provide

any object oriented procedure

(i) Inheritance

(ii) Polymorphism

(iii) Dynamic Binding

(iv) Data hiding

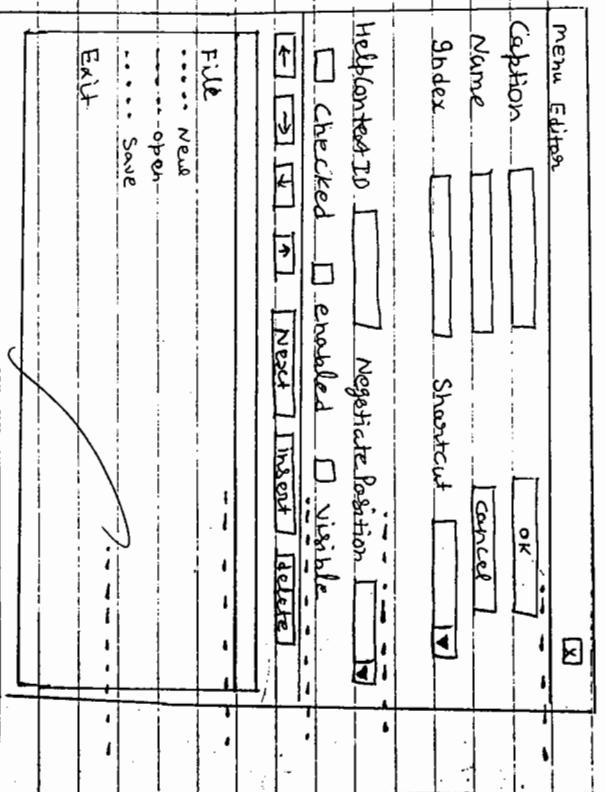
(v) Data Abstraction

Q → what is menu editor? How the menu is created in VB?

Ans → menu are most common and characteristic element of windows user interface menu that contain submenu are usually called hierarchical menu.

menu editor:

You create menu in VB by using the menu editor window available by choosing Tool menu editor. In menu editor window you can specify the structure of your menu by adding one command at a time.



What is menu editor?

Caption text box → what you type in caption text box is what the user see.

The caption also shows up in the text area inside

(V)

level deeper.

→ Clicking the up arrow button interchange the highlighted menu item with item above it. Clicking the down arrow button interchange the highlighted item with the item below it.

OK and Cancel button → Click OK when you finishing the designing the menu. Click Cancel if you decide not to build menu at all.

Index Box → use the index box if you want to make a menu item part of control array.

Shortcut Box → This box you add accelerator keys to your menu item. Recall the accelerator Keys either function key or ~~ctrl + key~~ combination.

Help Context ID → This is used when you are adding a help system.

Enable Check Box → Determine the value of checked property of the menu item.

Visible Check Box → Determine the value of visible property of menu item.

رسول Button → These button let you work with the current menu item. Submenu one indicated by indentation level in the text window. The left and right arrows button control the indentation level.

→ clicking left arrow button moves the highlighted item up one level. Clicking right click arrow button moves it one indentation

Q → Difference between traditional and visual programming?

Ans → Traditional Programming.

Visual Programming

1. It don't provide the graphical environment.
2. In this developer can't develop the more user-friendly application.
3. Traditional programming don't provide the tools, menu, and other control.
4. In traditional programming user write a code for each control.
5. In traditional programming it developing time.
6. It takes user write more code.
7. Example of traditional Prog - Gramming = C, C++, VB, VC++.
8. It don't provide help about about syntax.

Q → What is Recordset? What are its main properties?

Ans → RecordSet →

Recordset are object that re-

present collection of records from one or more table. In database Programming Recordset are the equivalent of variable in regular Programming. You can't access the table of database directly.

2. In this developer can't develop the more user friendly application.

3. Visual Programming

provide tools, menu and other control.

(i) DynaSets → Which are updatable view of data.

Dynaset are updated every time user change the database and changes they make to corresponding Recordset and reflected in the

Underlying tables. This is the most flexible and powerful type of Recordset. A few operation may be faster with table Recordset

(ii) Snapshot →

SnapShot are static view of same

data. A SnapShot contain the records requested the moment the SnapShot was generated and you can't update SnapShot. It is least flexible Recordset type. The SnapShot is most efficient in term of overhead.

There is also navigation of Snapshot if the record only Snapshot which is even more limited than the Snapshot type, but faster forward only snapshot let you move forward only, you can use this in programming situation in which you want to scan a no. of record and process them sequentially.

Table Recordset → The table Recordset is a reference to a table in the database. The table is faster than other type of Recordset always in sync with table, data and can be used to update the database. But table type is limited to a single table. When accessing a table through table Recordset you can take advantage of table indices to perform very fast search.

Properties of Recordset

- RecordsetType → This property returns or set a value indicating the type of Recordset object.

Constant Description
VBEST.TheTable 0 Attached type of Recordset
VBEST.Dynaset 1 A Dynasettype " "VBEST.Snapshot 2 A Snapshot " " " EOFAction

- Readonly → This property return or set a value determine whether the Recordset is open for read only.

Constant Description
VBEOFActionEOF 1 Reposition the Control on last record and land on invalid record.

EOF → The EOF (end of file) property return a true/false that indicate whether the current record position is after the last record in a Recordset.

BOF → The BOF (begin of file) property return a true/false property that indicate whether a current position is before the first record in Recordset object.

Option → This property set one or more character of the Recordset object.

| Constant | Value | Description |
|----------------|-------|---|
| dbEngWrite | 1 | in multiversion environment user can't change record |
| dbDenyRead | 2 | User can't Read record |
| dbReadOnly | 3 | User can only Read the data |
| dbAppendonly | 8 | User can add new records |
| dbInconsistent | 16 | Updates can apply on all records |
| dbConsistent | 32 | Update apply only those record which don't have volatile condition. |

BOF Action → This property is set what action the data control takes when EOF Property is true.

- EOFActionMoveFirst 1 Reposition the Control on last record.
- EOFActionEOF 2 move past the end of Recordset and land on invalid record.

Q: Active X Controls?

A: \Rightarrow Active X Controls \rightarrow Active X is a group of

technologies consisting of:

- (i) Active X Documents
- (ii) Active X Containers
- (iii) Active X Servers
- (iv) Active X Controls

Component for the comes development and implementation of application on the internet. Active X comes

from Dynamic data exchange which forms the basis for OLE 1.0. OLE 1.0 was used for linking object to one another or to embed the object inside another.

\rightarrow Typical example is wordprocessor / spreadsheet combination wherein a ref to the spreadsheet file is added to word processing document.

If user click on the reference the spread sheet program that it is used to edit the spread sheet could be loaded automatically and changes could be made there itself.

\rightarrow OLE automation make it possible for execution of commands of one application into another application. It also known as ActiveX automation.

\rightarrow The development of Active X which is an extension of OLE over the internet. Another technology which has led to the development of ActiveX is Component object model.

Com provide the fundamental ability

for multiple application.

\rightarrow Com define a set of standards that all component object must follow using these standard application can utilize object without knowing detail of object itself.

Object itself:

Types of Active X \rightarrow

- (i) Active X Documents
- (ii) Active X Containers
- (iii) Active X Servers
- (iv) Active X Controls

(i) Active X Documents \rightarrow one objects of Com

the document in various ways such as spread sheet and a document. Active X

document require an environment called ActiveX Container. This allows a distribution of data across the Internet. They also provide an effective way to distribute the software. Active X document make it easy to convert stand alone VB application to application that run across a network.

ActiveX Container \rightarrow are OLE Container with COM interfaces added to support new interface in ActiveX Container document. The Container have a capacity to take on the appearance of any native application.

ActiveX Server \rightarrow are three types.

- (i) Full Server \rightarrow This works both as an ActiveX Server and a fully functioned application.
- (ii) mini Server \rightarrow we can use server

of one application into another application

(ii) Automation Server → This Server exposes objects, methods and properties in order to enable the user to access them.

There are no of available Active X Components.

They are Active X DLL, ActiveX EXE, ActiveX Control, ActiveX Document and ActiveX Control.

Active X Control → Active X Control are reusable and programmable OLE Control that are used in a variety of programming or non-programming environment. They are embedded in an Active X Container.

→ Active X Controls are created using the Active X Control Project Type. This project type starts with a User Control project which is similar to a form object.

→ An Active X Control is an extension of VB toolbox. You use & Active X Control just as you would use any of the standard built-in controls. When you add Active X Control to a program, it becomes part of the development and runtime environment.

Active X Control increase your capabilities as a VB programmer by retaining some familiar properties, event and method such as the properties which behave as you would expect.

→ Active X Control have the extension .OCX. You can use Active X Controls provided with VB or obtain from third party.

Q-1) Describe OLE? Difference between Linking and Embedding? OLE in details?

Ans → OLE → OLE stand for Object Linking

and embedding. OLE is a familiar term to windows user and programmers.

We can embed OLE object into our application to enhance the power of our program as well as reduce coding. By using OLE object that are already defined by other application we take advantage of object reuse.

OLE originally originated from extended data exchange. This used technology was used in automatic clipboard transfer. When an OLE Container Control is used in a VB application. This acts as a bridge to any other windows application.

OLE lets VB application access the functionality of other application in the windows environment. For example a word or excel document can be incorporated in a VB application.

It then becomes necessary to have some knowledge of COM

modules which forms the basis of the OLE. This is model is called as the component object model or COM. Which is an open standard feature - It establishes a common model on interaction among

softwares like application, libraries, modules, system software and more. The term .COM differs to the technology of building interoperable components best known as COM that object linking and embedding should be renamed to simple OLE.

OLE objects → An item that has been made available by an OLE application is an OLE object.

Container Application → It is an application that contains linked or embedded object. That container is also referred to as a client because it uses the services of OLE servers.

Object embedding → With this technique, we can insert an object from one application into another application. The inserted object is a copy of the original and can be manipulated and stored separately from the original object. For example, you can embed a range of cells from an excel worksheet in a word document to edit the access cells. You switch to excel by double clicking on the embedded excel object.

Linking → This technique is smaller than embedding except that the embedded data is also linked to the document from which it comes. Changes to the object in the server are reflected automatically. Linking in the container application. Linking does not store the object but makes a reference to the object exposed by the server application. Linked objects are not copied. Each time you open the document that contains the linked object the container application contact the server application which acts as a proxy. The most up-to-date version of the linked objects will be opened.

Difference →

Linking

- ① When we link to another application over OLE Container contain a link data object into to another application over application documents.
- ② In linking of the other application changes in application changes in next document, our application will reflect the changes because our application has a copy of object.
- ③ Linking does not store the object but make a reference to the object exposed by the server application. Separately from the original objects.
- ④ Linking take less space.
- ⑤ Speed is very fast.
- ⑥ Speed is slow in case of link to another application over OLE Container.
- ⑦ Embedding not conserves memory because there is no copy of object.
- ⑧ Copy of the object documents.
- ⑨ The linked object in the container application.

(Q) Linking of the other application changes in application changes in next document, our application will reflect the changes because our application has a copy of object.

③ In application the original application changes the object changes in our application which reflects the changes because our application has a copy of object.

④ In application the original application has a copy of object which reflects the changes in our application because our application has a copy of object.

⑤ In application the original application has a copy of object which reflects the changes in our application because our application has a copy of object.

⑦ It is ~~not~~ portable. ⑦ It is portable.

Types of OLE → There are four type of OLE:

- (A) Linking
- (B) Embedding
- (C) OLE Automation
- (D) ActiveX Controls

(A) Linking → Linking means that an object in the container

document is only links to the server document. Linking conserve memory bcz there is no copy of the linked object in the container application. The draw back of linking is that it ~~is~~ not portable.

(B) Embedding → Embedding actually makes a copy of the object and embed its into the container document. It provides portability.

(C) OLE Automation → OLE Automation allows the user to take control of the owner application even if application can take control of other application.

⑦ ActiveX Controls → The activeX controls include

the OLE implementation of COM over the Internet.

✓ 3/4/04