

**Question1 :- Compare VB and VB.net**

**Answer 1:**

1. VB.NET has much enhanced object oriented support than VB6
2. VB6 does not allow developing the multithreaded applications. In VB.NET we can create multithreaded applications.
3. VB6 was only considered good for desktop windows application. In VB.NET we can also develop web applications.
4. VB6 uses ASP to build web applications. VB.NET uses ASP.NET to build web applications.
5. VB6 used ADODB and record-sets to implement data access applications. VB.NET uses ADO.NET and datasets to build data access applications.

**Question 2 :- Name the data type used in VB.net .**

**Answer 2:**

Data Types Used in VB.net:- A *data type* determines the size and layout of the variable's memory. followings are commonly used data type in VB.net.

Data Type	# of Bytes	Values
Boolean	1	True or False
Byte	1	Unsigned
Char	2	Unicode character
Single	4	32-bit Floating Point Number
Double	8	64-bit Floating Point Number
Integer	4	32-bit Signed Integer

Int16	2	16-bit Signed Integer
Long	8	64-bit Signed Integer
SByte	1	8-bit Signed Integer
Short	2	16-bit Signed Integer
UShort	2	16-bit Unsigned Integer
UInt16	2	16-bit Unsigned Integer
DateTime	8	Date and time of day
Decimal	16	Decimal number

### Question 3:- what is access control?

#### Answer 3:

Access control is a way to make Variables, Properties, and Methods visible or accessible within block, procedure, class or project.

Following access control term or scoping terms are used in vb.net

#### Scoping terms

Term	Used With...	Visibility
Public	Variables/Properties/Methods	Anywhere in or outside of a project
Private	Variables/Properties/Methods	Only in the block where defined
Protected	Variables/Properties/Methods	Can be used in the class where defined. Can be used within any inherited class.
Friend	Variables/Properties/Methods	Can only be accessed by code in the same project/assembly.
ProtectedFriend	Variables/Properties/Methods	Combination of Protected and Friend

#### Question 4 :- What is concatenation operator?

##### Answer 4:

Concatenation operators join multiple strings into a single string.

There are two concatenation operators, + and &. Both carry out the basic concatenation operation.

example

```
Dim p As String = "abc"  
Dim q As String = "def"  
Dim z As String = p & q  
Dim w As String = p + q
```

'The preceding statements set both z and w to "abcdef".

The + Operator has the primary purpose of adding two numbers. However, it can also concatenate numeric operands with string operands.

The & Operator (Visual Basic) is defined only for String operands, and it always adds its operands to String.

#### Q5. What is case structure?

##### Answer 5:

It is a decision structure used to test conditions and then, depending on the results of that test, perform one of the different operations.

Case Structure is used to define several blocks of statements, one of which will be executed depending on the results of that *expression*

Select Case

Select Case *expression*

[Case *expression1*  
[*statementblock-1*]]

[Case *expression2*  
[*statementblock-2*]]

.

.

.

[Case Else  
[*statementblock-n*]]

End Select

**Q1. What is Network Layer?**

**Answer 1:**

In the seven-layer OSI model of computer networking, the network layer is layer 3.

The main aim of this layer is to deliver packets from source to destination across multiple links (networks). The network Layer controls the operation of the subnet.

The network layer is responsible for packet forwarding including routing through intermediate routers, whereas the data link layer is responsible for media access control, flow control and error checking.

**Q2. What is Routing Algorithm?**

**Answer2:**

A routing algorithm is a set of step-by-step operations used to direct Internet traffic efficiently. When a packet of data leaves its source, there are many different paths it can take to its destination. The routing algorithm is used to determine mathematically the best path to take.

**Q3. What is Flooding?**

**Answer 3:**

Flooding is a computer network routing algorithm in which every incoming packet is sent through every outgoing link except the one it arrived on

When a packet is received, the routers send it to all the interfaces except the one on which it was received. This creates too much burden on the network and lots of duplicate packets wandering in the network.

There exists another approach for flooding, which is called Selective Flooding to reduce the overhead on the network. In this method, the router does not flood out on all the interfaces, but selective ones

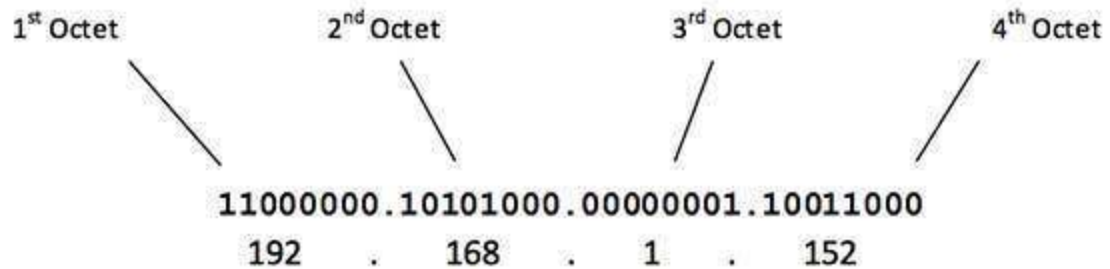
#### **Q4. What is IPV4 Addressing Class?**

#### **Answer 4:**

IPv4 - Address Classes

The IPv4 Addressing system is divided into five classes of IP Addresses. All the five classes are identified by the first octet of IP Address.

The first octet referred here is the left most of all. The octets represented in dotted decimal notation of IP Address:



*The number of networks and the number of hosts per class can be derived by this formula:*

$$\text{Number of networks} = 2^{\text{network\_bits}}$$

$$\text{Number of Hosts/Network} = 2^{\text{host\_bits}} - 2$$

These five classes are named as Class A, Class B, Class C, Class D, Class E,

**Q5. What is subnetting ?**

**Answer 5:**

Subnetting is the strategy used to partition a single physical network into more than one smaller logical sub-networks (Subnet)

*Class A Subnets*

*In Class A, only the first octet is used as Network identifier and rest of three octets are used to be assigned to Hosts (i.e. 16777214 Hosts per Network)*

*To make more subnet in Class A, bits from Host part are borrowed and the subnet mask is changed accordingly.*

Network Bits	Subnet Mask	Bits Borrowed	Subnets	Hosts/Subnet
24	255.255.255.0	0	1	254
25	255.255.255.128	1	2	126
26	255.255.255.192	2	4	62
27	255.255.255.224	3	8	30
28	255.255.255.240	4	16	14
29	255.255.255.248	5	32	6
30	255.255.255.252	6	64	2

**Q1. What is clipping**

**Answer 1:**

In computer graphics, clipping is the process of removing lines or portions of lines outside an area of interest. Typically, any line which is outside of the viewing area is removed by clipping.

In java any Shape object can be used as a clipping path that restricts the portion of the drawing area. The clipping path is part of the Graphics2D .

To set the clip attribute we have call Graphics2D.setClip and pass in the Shape that defines the clipping.

**Q2 .What is Graphics in Java**

**Answer 2:**

In Java , graphics object is attached to the applet. The paint method is used for coloring of the pixels.

java.awt.Graphics class provides many methods for graphics programming.

Here rectangle is used as graphical Object

```
import java.awt.*;
import java.applet.*;
public class Rectangles extends Applet
{
    public void init()
    {
        setBackground(Color.black);
        setForeground(Color.green);
    }

    public void paint(Graphics g)
```



```

    {
        g.drawRect(10, 10, 60, 50);
        g.fillRect(100, 10, 60, 50);
    }
}

```

### Q3. Differentiate between applet and application programs

#### Answer 3:

##### Applet

1. Small Program
2. run a program on client Browser
3. Applet is portable and can be executed by any JAVA supported browser.
4. Applets are created by extending the java.applet.Applet
5. Applet application has 5 methods which will be automatically invoked on occurrence of specific event

##### Application

1. Large Program
2. Can be executed on standalone computer system
3. Need JDK, JRE, JVM installed on client machine.
4. Application can access all the resources of the computer
5. Application has a single start point which is main method

### Q4.What is SetForeground( ) ?

#### Answer 4:

SetForeground (java.awt.Color) method is used to change foreground colour of applet windows. It is used to change the colour of text , graphics in applet.

```

import java.awt.*;
import java.applet.*;
public class Rectangles extends Applet
{
    public void init()

```

```

{
    setBackground(Color.black);
    setForeground(Color.green);
}

public void paint(Graphics g)
{
    g.drawRect(10, 10, 60, 50);
    g.fillRect(100, 10, 60, 50);
}
}

```

### Q5. What is Applet Life Cycle

#### Answer 5:

Various states, an applet, undergo between its object creation and object removal is known as Applet Life Cycle.

Each state is represented by a method. There exists 5 states represented by 5 methods. That is, in its life of execution, the applet exists (lives) in one of these 5 states.

1. init() method
2. start() method
3. paint() method
4. stop() method
5. destroy() method

These methods are known as Applet Life Cycle methods.

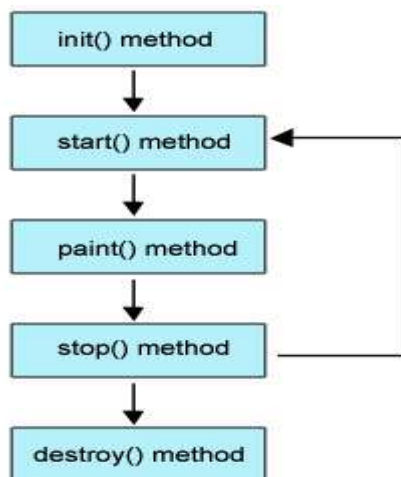


Figure: Life cycle of Applet

### Brief Description of Life Cycle Methods

Following is the brief description of the above methods.

1. **init():** The applet's starts here. In this method, the applet object is created by the browser.
2. **start():** In init() method, even through applet object is created, it is in inactive state. To make the applet active, the init() method calls start() method. In start() method, applet becomes active and thereby eligible for processor time.
3. **paint():** . This is the place where the programmer can write his code of what he expects from applet like animation etc.
4. **stop():** In this method the applet becomes temporarily inactive.
5. **destroy():** This method is called just before an applet object is garbage collected. This is the end of the life cycle of applet.