Java Prelims Papers

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Q-1(A)

1. Instance Initialization Block
2. Java vestial machine
3. Java Runtime Environment

Q-1(B)

1. • Arithmetic operators • logical operators
   • Relational operators • Assigment operators
   • Unary op operators • Terneary operators
   • Bitwise operators

- Unary operators :- it is increment value by 1 ++, and decrement value by 1 --.

Q-1(C)

1. default Constructor
   Explicit Constructor
   Canonical Constructor
   superclass Constructor
   Anonymous Constructor
   Inner class Constructor
   Enum- Constructor
   Generic Constructor
   Private Constructor
   overloaded Constructor.

- Example

```
public class Cns
{
    public static void main (String s[])
    {
        Cns c = new Cns(5);
    }

    public void Cns (int i)
    {
        int a;
        System.out.println("Enter any number 0 to 9 ");
        a=i;
        System.out.println("Your Number is :"+a);
    }
}
```

output :-

```
Enter any number 0 to 9 : 8
Your Number is          : 8
```

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Q-1(A)

1. Object oriented Programming
2. Integrated Development Environment
3. NetBeans is open source IDE. for Java.

Q-1(B)

1. An array of arrays where each element of the outer array can be an array of a different size.

```
class Jagged {
    public static void main( String s[] ) {
        int aa[][] = new int[2][];
        aa[0] = new int[3];
        aa[1] = new int[2];
    for(int i=0 ; i<aa.length; i++ ) {
        for(int j=0; j<aa[i].length ; j++ ){
            //aa[i][j] = count++;
            System.out.print(aa[i][j]+" "); }}
    }
```

output :- 012
34.

Q-1 (c)

1 Static membes belong to the class itself, Non-Static membes belong to specific objects of the class.

- public class Test {

```
    Static int a = m1();
    Static int m1() {
        System.out.println("RMI");
        return 20; }

    Public Static void main(String s[])
    {
        System.out.println("Value of a : "+a);
    }
```

output :- 20

Q-2(A)

1. Java.lang
2. object class
3. False.

Q-2(B)

1. In Java, Method overriding allows a subclass to provide a specific implementation of a method that is already defined in its superclass, enabling runtime polymorphism and customized behaviors

Q-2(C)

1. Package

A namespace that organizes related classes, interfaces and sub-packages, promoting code organization, access control, and avoiding naming conflict.

List of Packages in Java

Java util Package
Java lang package
Java IO Package
Java networking
Java.awt
Java SQL Package
Java.applet
Java Math Package
Package

⊙ Java.util.

- The Java util (Java.util) Package contains a collection framework
- It contains a collection classes, date and time, event models, and various utility classes
- util Package in Java is a versatile utility package encompassing numberous classes and Interfaces designed for the various advanced Programming tasks
- util is an abbreviation for "utility" - in vince.
- Contains the collections framework, some internationalization support classes, a service loades, properties, random numbes generation, string passing and scanning classes.

Q-2(A)

1. length(), charAt(), Substring()
2. public
3. True

Q-2(B)

1. In Java, Wrappes classes are used to treat premiptive data types like int boolean, chas etc.

enabling their use in object-oriented contexts like collections and generics. Each primitive type has a corresponding wrapper class (Integer for int, Boolean for boolean).

Q-2(c)

1. Example :-

```
public class Wrapper
{
    public static void main (String s[])
    {
        int a = 1;
        double b = 20D;
        char c = 'k';
        boolean d = false;

        Integer e = a;
        Double f = b;
        Character g = c;
        Boolean h = d;

        System.out.println("Int :" +e);
        System.out.println("double :" +f);
        System.out.println("char = " +g);
        System.out.println("Bool: " +h); }}
```

output :- Int : 1

double : 2.0
char : K
Bool : flase

Q-3(A)

1. An error that happens during a program's execution.
2. A unit of execution within a program.
3. often "wrappers" for byte streams.

Q-3(B)

1. Java file class part of the java.io package, represents a file or directory path-name in an abstract form allowing you to interact with the file system.
   - it provides methods for creating, deleting renaming, and manipulation fles and directories.

Q-3(C)

1. File writer is a class for input of text in a file. for class

Example

```
import java.io.*;

public class FW
{
    public static void main(String s[])
    {
        try {
            File f = new File("c://write.txt");
            FileWriter fw = new FileWriter(f);
            writer.write("This is write");
            writer.flush();
            System.out.println("Data Inserted");
        }
        catch (Exception e)
        {
            e.printStackTrace();
        }
    }
}
```

output :-

Data Inserted

Q-3 (A)

1. Byte stream classes are used to perform input and output of 8-bit bytes.
2. getPriority(), getStackTrace(), getState()
3. .iml, .jar, .java, .javadoc

Q-3 (B)

1. Built-in Exception
   - NullPointer Exception
   - IoException
   - classNotfound Exception
   - Interrupted Exception
   - SQL Exception.
   - Filenot found exception
   - NoSuch Field Exception.
   - NoSuch Method Exception
   - InstantiationException.

```
Public class main {
    public static void main (String. s[]){
        String s = null;
        int length = s.length();
        System.out.println(length); }}
```

Output:- nullpointer Exeption.

Q-3 (C)

1. File Reader is a class for read file text in Java.

- Example

```
import java.io.*;
public class FileReader{
    public static void main(String s[]){

        try
        {
        FileReader FR = new FileReader("C:
                                // Read.txt");
        int i;
        while((i=fr.Read()) != -1)
        {
            System.out.print((char)i);
        }
        FR.close();
    }
    catch (Exception e)
    {
        e.printStackTrace();
    }
    }
}
```

Output :-

This is text and Read it

Q-4(A)

1. Oracle Corporation.
2. Javafx.application.Application.
3. Rich internet application.

Q-4(B)

1. The Color class is used to encapsulate colors in the default sRGB Color Space.
- Every color has an implicit alpha value of 1.0 or an explicit one provided in the constructors.
- The alpha value defines the transparency of a color and can be represented by a double value in the Range 0.0-1.0 eg 0-255

Q-4(C)

1. Javafx is a Java API for creating and delivering desktop, mobile, and embedded applications with rich user interfaces, inbuilt multimedia support and 2D/3D Graphics capabilities, all while leveraging the power of Java.

- Features

→ Rich UI Controls

- JavaFX provides a wide variety of UI controls (buttons, tables, sliders, etc.) for building interactive applications.

→ CSS Styling

- You can customize the appearance of your application using Cascading Style Sheets (CSS).

→ FXML

- JavaFX uses FXML, a declarative markup language, to define the UI structure and components.

→ Scene Builder

- JavaFX offers a visual layout tool, Scene Builder, for designing UIs without writing code.

→ 2D and 3D Graphics

- JavaFX supports both 2D and 3D graphics for creating visually rich applications.

Q-4(A)

1. init(), start(), stop()
2. JavaFX is a software platform and API for creating and deploying rich client applications.
3. User interface.

Q-4(B)

1. The JavaFX allows the users to draw the following shapes : Predefined shapes like line, rectangle, ellipse, circle, cubic curve, etc. Path elements like a horizontal line, vertical line, quadratic curve etc.
- it also allows the uses to draw a 2D shape by passing the SVG Path.

Q-4(C)

1. A JavaFX application structure revolves around the JavaFX platform, utilizing a scene graph to represent the UI and is controlled by the Application class, which manages the application lifecycle and invokes the start() method.

- Here's a more detailed breakdown:

→ JavaFx Platform:

- The foundation of a JavaFX application, it manages the application's lifecycle, including building the application's lifecycle,
- Thread

→ Application class:

- You extend the JavaFX Application class to create your application

→ Scence Graph:

- This is a hierarchical tree of nodes that represents the visual elements of your appliccation.

→ Stage
→ Scence
→ Nodes
→ FXML
→ CSS
→ JavaFX scence Builder
→ Java API Integration

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Q-5(A)

1. java.awt
2. Stage()
3. SetScene()

Q-5(B)

1. Slider is a UI control consisting of a track and a thumb along with other optional elements like tick marks and tick labels.

Q-5(C)

1.	ListView	Combobox
	• We can't add value via property • we can't create an api for listview • Scrollable list of items	• we can add value or item via property • we can create an api for combobox • Drop-down with a text field

• Multiple items can be selected	• only one item can be selected at a time
• Takes up more space on the screen	• Compact, takes up less space.
• Can scroll through long lists	• Users can type of select from the list.

Q-5(A)

1. javafx.Scene
2. onClick event
3. Label(), Label(String text), & Label(String text, node graphic)

Q-5(B)

1. Textarea supports the notion of showing prompt text to the user when there is no text already in the textarea either via the user, or set programmatically).

- This is a useful way of informing the user as to what is expected in the text area, without having to resort to tooltips or on screen labels.

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Q-5 (c)

check Box	Radio Button
• check Box tack multiple value by check it	• Radio Button tack single value by check it
• check Box use for choise of user like multiple value of intrest	• Radio Button use for select one of many option is find for user.
• check Box is useful ~~for~~ for ~~to~~ tack multiple value in Javafx	• Radio Button is use ful for tack single option for user
• Example :- Hobby Dance, Sing Read, waite.	• Example :- Male, Femal
• ☐ ☑	• ○ ◉