Core Specific- Java Assignment 2

Q1. What are the Conditional Operators in Java?

Ans:

Conditional Operators are used in making decisions in programming just as we make decisions in real life. It controls the flow of the program and produces outcomes based on the provided conditions. There are three types of Conditional Operators called as Conditional AND, Conditional OR and Ternary Operator. Let's dig and find out how and when these conditional operators are used in java.

There are three types of the conditional operators in Java:

- Conditional AND
- Conditional OR
- Ternary Operator

Q2. What are the types of operators based on the number of operands?

Ans:

There are three types of operators based on the number of operands are unary , binary and ternary.

- Unary operators perform an action with a single operand.
- Binary operators perform actions with two operands.
- Ternary operators perform actions with two operands or more.

Q3. What is the use of Switch case in Java programming?

Ans:

The switch case in java is used to select one of many code blocks for execution.

Break keyword: As java reaches a break keyword, the control breaks out of the switch block. The execution of code stops on encountering this keyword, and the case testing inside the block ends as the match is found.

Q4. What are the conditional Statements and use of conditional statements in Java?

Ans:

Conditional statements in Java are used to make decisions based on certain conditions. The most common conditional statements in Java are the If-Else statement, the Switch statement, and the Ternary Operator. These statements allow the program to execute different blocks of code based on specific conditions.

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Q5. What is the syntax of if else statement?

Ans:

An **if** statement can be followed by an optional **else** statement, which executes when the Boolean expression is false.

Syntax

Following is the syntax of an if...else statement –

```
If ( Boolean expression) {
  // Executes when the Boolean expression is true
} else {
  // Executes when the Boolean expression is false
}
```

Q6. How do you compare two strings in Java?

Ans:

Using String.equals() : In Java, string equals() method compares the two given strings based on the data/content of the string. If all the contents of both the strings are same then it returns true. If any character does not match, then it returns false.

Q7. What is Mutable String in Java Explain with an example.

Ans:

With Mutable string, we can change the contents of an existing object, which does not create a new object. Therefore mutable strings are those strings whose content can be changed without creating a new object. StringBuffer and StringBuilder are mutable versions of String in java, whereas the java String class is immutable. Immutable objects are those objects whose contents cannot be modified once created.

```
//Java Program to demonstrate the use of StringBuilder class.
public class BuilderTest{
  public static void main(String[] args){
    StringBuilder builder=new StringBuilder("hello");
    builder.append("java");
    System.out.println(builder);    } }
```

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Q8. Write a program to sort a String Alphabetically.

Ans:

```
import java.util.Arrays;
import java.util.Scanner;
public class SortingString {
  public static void main(String args[]) {
    Scanner sc = new Scanner(System.in);
    System.out.println("Enter a string value: ");
    String str = sc.nextLine();
    char charArray[] = str.toCharArray();
    Arrays.sort(charArray);
    System.out.println(new String(charArray));
  }
}
```

Q9. Write a program to check if the letter 'e' is present in the word 'Umbrella'.

Ans:

```
public class UmbrellaCheck {
   public static void main(String[] args) {
      String str = "Umbrella";
      int n =0,m = 0;
      char[] arr = str.toCharArray();
      while (n < arr.length) {
         if (arr[n] == 'e') {
            System.out.println("'e' is present in " + str);
            m = 1;
```

```
            break;

        }
        n++;
    }
    if(m==0)
    System.out.println("'e' is not present in "+str);
  }
}
```

Q10. Where exactly is the string constant pool located in the memory?

Ans:

String constant pool belongs to the permanent generation area of Heap memory.