JAVA-ASSIGNMENT 02

Q1. What are the Conditional Operators in Java?

A) In java, conditional operators are used to perform conditional operations and make decisions made on certain conditions.
There are 3 conditional operators in java
1)Logical AND(&&) operator
2)Logical OR(||) operator
3)Ternary operator.

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

A) Based on the number of operands, operators can be classified as:

- Unary Operators: Operators that operate on a single operand(e.g., ++, --, !)

- Binary Operators: Operators that operate on two operands (e.g., +, -, *, /)

- Ternary Operator: The conditional operator (?:) is the only ternary operator in Java, which takes three operands.

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

A)The switch case statement in Java is used to perform different actions based on different conditions. It provides a concise way to write multiple if-else conditions. It evaluates an expression and matches its value with different cases to execute the corresponding code block.

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

A)Conditional statements in Java are used to make decisions based on certain conditions.
There are five types of Java conditional statements:-

1. Java If Statement
2. Java If-Else Statement
3. Java If-Else-If Ladder Statement 4. Java Nested If Statement
5. Java Switch Statement

Q5. What is the syntax of if-else statement?

A)The syntax of the if-else statement in Java is as follows: ```
if (condition) {

// code to be executed if the condition is true } else {

// code to be executed if the condition is false }

Q6. How do you compare two strings in Java?

A)In Java, you can compare two strings using the `equals()` method or the `compareTo()` method. The `equals()` method checks if two strings have the same content, while the `compareTo()` method compares the lexicographical order of two strings.

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

A)In Java, strings are immutable, which means their values cannot be changed once created. However, the `StringBuilder` and `StringBuffer`

classes provide mutable string objects. These classes allow you to modify the content of a string without creating a new string object. For example:

StringBuilder sb = new StringBuilder("Hello"); sb.append(" World");
String result = sb.toString(); System.out.print(result); // result = "Hello World"

Q8.Write a program to sort a String Alphabetically

A)import java.util.Arrays;

```
public class StringSorter
{
   public static void main(String[] args)
 {
       String input = "teja";
       String sortedString = sortStringAlphabetically(input);
       System.out.println("Sorted string: " + sortedString);
   }
```

```
    public static String sortStringAlphabetically(String input)
{
        char[] charArray = input.toCharArray();
        Arrays.sort(charArray);
        return new String(charArray);
    }
}
```

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

A)

```
public class LetterChecker
 {
    public static void main(String[] args)
{
        String word = "Umbrella";
        boolean isPresent = checkIfLetterIsPresent(word, 'e');
        if (isPresent) {
            System.out.println("'e' is present in the word '" + word + "'.");
        } else {
            System.out.println("'e' is not present in the word '" + word + "'.");
        }
    }
public static boolean checkIfLetterIsPresent(String word, char letter) {
        for (int i = 0; i < word.length(); i++) {
            if (word.charAt(i) == letter) {
                return true;
```

```
            }
        }
        return false;
    }
}
```

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

A)In Java, the string constant pool is a part of the Java heap memory.