**ASSIGNMENT-6**

**WEB TECHNOLOGY**

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IT

Q1. Why java uses Unicode system?

Ans.

Unicode is universal international standard character encoding which is capable of

representing almost all the well-known characters of every language .

Before Unicode there were many languages standards which caused two problems:

1. A particular code value corresponds to different letters in the various language

standards.

2. The encoding for languages with large character sets have variable

length.Some common characters are encoded as single bytes, other require

two or more byte.

To solve this problem Unicode was discovered and as JAVA was developed for

multilingual languages that is why JAVA adopted Unicode.

Q2. Differentiate between logical && and bitwise &.

Ans.

In logical: The expression x && y will return value 1 if both x and y are non-zero and 0

otherwise. If value of x is 0 it won’t evaluate y any further .

In bitwise: The expression x & y will perform bitwise operation on each individual bit

in x and y . So if x is 1010 in binary and y is 1100 so it will be evaluated as 1000. The

return value of x and y cannot be interpreted as boolean value.

Q3. Differentiate between logical || and bitwise |.

Ans.

In bitwise:

| it is a bitwise operator for comparing each operands bitwise. It is a binary OR operator

and copies a bit to the result it exists in either operands.

E.g.

Int a = 60 ;

Int b = 13;

Then ( a|b) will give 61 which is 0011 1101.

| is used during bitwise operation

In logical:|| is an logical OR operator which returns the boolean value true (1) if either or both

operands is true and return false (0) otherwise.

E.g.

int a= 30;

Int b= 40;

If( a<b || a=b)

Return 1;

Else

Return 0;

The output will be 1 as a<b.

|| is used during logical operation.

Q4. What happens during runtime when we execute a java code?

Ans.

In Java, programs are not compiled into executable files; they are compiled into

bytecode (as discussed earlier), which the JVM (Java Virtual Machine) then

executes at runtime. Java source code is compiled into bytecode when we use

the javac compiler. The bytecode gets saved on the disk with the file

extension .class. When the program is to be run, the bytecode is converted,

using the just-in-time (JIT) compiler. The result is machine code which is then

fed to the memory and is executed.

Java code needs to be compiled twice in order to be executed:

Java programs need to be compiled to bytecode.

When the bytecode is run, it needs to be converted to machine code.

The Java classes/bytecode are compiled to machine code and loaded into

memory by the JVM when needed the first time.

Q5. Design program to initialize a data member using function or method.

Ans:

package WebTechJAVA.Assignment6;

class Student {

*int* rollno;

    String name;

*void* insertRecord(*int* *r*, String *n*) {

        rollno = *r*;

        name = *n*;

    }

*void* displayInformation() {

        System.out.println(rollno + " " + name);

    }

    public static *void* main(String *args*[]) {

        Student s1 = new Student();

        Student s2 = new Student();

        s1.insertRecord(2508, "Rudrashis");

        s2.insertRecord(2811, "Pooja");

        s1.displayInformation();

        s2.displayInformation();

    }

}

