**Task 1 Date:04.08.2025**

1.What is method overloading?

Method overloading refers to the process of creating multiple methods with same but different parameters. Method overloading in java is called "virtual

polymorphism" or "compile time polymorphism". In method overloading java compiler itself will resolve the method call and binds the method call with method body.

2.How can you handle the divided-by-zero?

By Exception handling, divided by zero is handled differently based on the data type:

eg:

\*Dividing an integer by zero causes a runtime error

java throws an exception java.lang .Arithmetic Exception :/by zero

for integers: use if or try-catch.

\*Floating point Division (float,double):

java does not throw an exception ,Instead of it returns

1.Infinity for positive division by 0

2.Negative infinity for negative division by 0

3.NaN for 0.0

3.Difference between "==" and equals?

=>Using "==" operator , we can compare reference of 2 Strings.

=>Using "equals()" method, we can compare content of 2 Strings.

4.What is basic data types in java?

=>Integer datatype

java has been provided 4 data types to manage integer type data

\*byte

\*short

\*int

\*long

java has been provided 4 data types to manage real number type data based on accuracy level

\*float

\*double

5.How is Scanner used for input?

Scanner Class is used to read the inpuut from the user, such as numbers, Strings, etc. It is a part of java.util package

6.Explain the role of loop in java?

A loop in java is used to execute a block of code repeatedly as long as a specified condition is true.Role of loop is avoids repetition ,efficient execution, used for

iteration

7.Difference between while and for loop?

=>For loop

1.used when number of loops are known

Syntax :for(initialization;condition;increament/decreament)

=>while loop

1.used when number of loops are unknown

Syntax:while(condition)

8.What is the JVM?

JVM stands for Java Virtual Machine.It is the part of Java runtime environment.It is responsible for running java program by converting bytecode onto machine code

that the computer can understand.It loads the .class file.

9.How is java platform independency?

byte code is platform independent.using bytecode concept,we can achive platform in-dependency in java.JVM is a platform dependency software because major portion of JVM has been designed by "c" language.

10.How do you debug program?

debugging is the process of finding and fixing errors in java

using print statement