

SWT 12031: Practical for Object oriented Program
Lab Sheet No: 05
Constructors in Java

Time:- 1.30 pm – 3.30pm

Submission Due: 2023-02-16

Title: Constructors in Java.

Aim: Getting practice to use contrctors while writing java programs.

Tasks:

- What is a constructor?
- The types of constructor.
- Including constructors in java programs.

Exercise 01:

1. Write a java program to demonstrate the Default Constructor.
 - a. Create a class Default.
 - b. Initialize two variables called ‘x’ and ‘y’. Make a as the integer variable and b as the Boolean variable.
 - c. Create an object deconstructor.
 - d. Access the objects through reference variables.
2. Write a java program to demonstrate the Non Argument Construtor.
 - a. Create a class University.
 - b. Include a constructor to initialize a name for the object.
 - c. Modify the program to bring the main method to a separate class TestYourUniversity.
 - d. Create one object.
 - d. Access the object / Display the object.

3. Write a java program to demonstrate the Parameterized or User Defined Constructor.
 - a. Create a class Student with the attributes student number, marks and fees.
 - b. Include a constructor to initialize the user defined values for the object and display method to display the object values.
 - c. Create one object.
 - d. Bring the main method to a separate class MyStudent.

Exercise 02:

- a. Create the class Employee with the attributes employee number, basic salary, allowance and net salary.
- b. Create a constructor and initialize the employee object with the input data values (Employee number and basic salary).
- c. Included the methods to do the following.
 - Calculation() – To calculate the net salary with the following conditions.

Basic salary > 100, 000

Allowance – 10%

Basic salary <= 100, 000

- Display() – to display the calculation with employee number
- d. Create one object.
 - e. Bring the main method to a separate class TestEmployee.

Exercise 03:

- a. Create the class Student including the attributes number, name, marks for three subjects, total, average and grade.
- b. Create a constructor and initialize the student objects with the input data values (Number, name and three marks).
- c. A method to calculate the total, Average and grade (pass or fail).
- d. A method to display the calculations with the student number and name.
- e. Create one object.

Discussion

- ❖ Rules to follow while creating constructors in Java
- ❖ Constructor Chaining
- ❖ Private Constructors
- ❖ Overloading Constructors