

Assignment: Java 8

Overview:

This assignment has eight exercises, ranging between 15-45 minutes. You are expected to complete the course/ reference reading before attempting the exercise.

Learning Objective: This assignment has eight exercises. On completion of these you will be able to implement lambda expression in a Java program.

Lamda Expressions and Stream API

Exercise 1: Write a program to construct a thread using lambda expression

Recommended duration: 15 minutes

Solution Guidance (if applicable): Use `java.lang Runnable` interface.

Exercise 2: Write a program to filter the files with given extension in a directory using lambda expression?

Recommended duration: 15 minutes

Solution Guidance (if applicable): Use `java.util.Scanner` class for the required input.

Exercise 3: Write a program to add Integer objects to ArrayList and sort them using lambda expression?

Recommended duration: 20 minutes

Solution Guidance (if applicable): Use `java.util.Comparator` interface for the required input.

Exercise 4: Write a Java class to receive employee data (employee code, employee name, position and salary) from console as an input, create the objects for employee class and add them to ArrayList and Print the employee list using lambda expression?

Recommended duration: 20 minutes

Solution Guidance: use `forEach()` method

Exercise 5: Extend the Question 4 to print the employee names which starts with "S" using lambda expression

Recommended duration: 10 minutes

Solution Guidance: use `filter()` method from Stream API

Exercise 6: Write a Java class to receive employee data (employee code, employee name, position and salary) from console as an input. Each employee needs to assign to a department (you need to capture department id, department name and location). Write a java client to print the each department id along with employees count in it using lambda expression?

Recommended duration: 40 minutes

Solution Guidance: use Stream API

Exercise 7: Extend the Question 6 print the each department along with max, min, average salaries paid by department wise?

Recommended duration: 45 minutes

Solution Guidance: use Stream API

Exercise 8: Extend the Question 5 separate the employees belong a department and add them to another ArrayList?

Recommended duration: *45 minutes*

Solution Guidance: use Stream API