

Tripillar Solutions - Coding Assignments

Greetings Students,

This document outlines the coding assignments based on the syllabus covered during the first three days of your training program with Tripillar Solutions at Sapthagiri College of Engineering.

All solutions to these problems must be compiled and submitted in a single GitHub repository. This repository will serve as a common reference and portfolio of your work throughout this program and beyond.

Instructions for Submission:

- 1 Create a new public repository on your GitHub account.
- 2 Solve the following problems in your local development environment.
- 3 Organize your code by modules or topics within the repository.
- 4 Push your code to the GitHub repository.
- 5 Share the repository link with your instructor for review.

Module 1: Programming Fundamentals & Java Basics

- 1 Write a program to check if a given number is positive, negative, or zero.
- 2 Write a program to find the largest of three numbers using if-else statements.
- 3 Write a program that takes a student's marks as input and prints the corresponding grade (A, B, C, D, or F) using a switch statement.
- 4 Write a program to print the multiplication table of a given number using a for loop.
- 5 Write a program to find the sum of all even numbers between 1 and 100 using a while loop.
- 6 Write a program to check if a number is prime or not.
- 7 Write a program to print a pyramid pattern using nested loops for a given number of rows.

Module 2: Methods & Runtime Concepts

- 1 Write a program with a method that calculates the factorial of a number using recursion.
- 2 Write a program with a method that checks whether a given string is a palindrome.
- 3 Write a program to demonstrate method overloading by creating multiple methods with the same name but different parameters.
- 4 Write a program that uses a default constructor and a parameterized constructor to initialize objects of a class Student.

Module 3: Object-Oriented Programming

- 1 Create a class BankAccount with attributes accountNumber and balance, and methods deposit and withdraw. Use encapsulation.

- 2 Write a program to demonstrate single inheritance with a base class Animal and derived class Dog.
- 3 Write a program to demonstrate polymorphism using method overriding with a base class Shape and derived classes Circle and Rectangle.
- 4 Write a program to demonstrate the difference between method overloading and method overriding.

Regards,
Tripillar Solutions Team