



## **BAHRIA UNIVERSITY (KARACHI CAMPUS)**

Assignment-01

### **(Software Construction)**

Class: **BSE [4]-5 (B)**

**(Morning)**

Course Instructor: **Dr. Salahuddin Shaikh**

Submission Date: **31/10/2023**

Date: **(19/10/2023)**

Max Marks: **5 M**

Student's Name: \_\_\_\_\_

Reg. No: \_\_\_\_\_

**Title: Software Construction: Transitioning from Design to Implementation**

**Course Learning Outcome (CLO) 1:** Demonstrate a comprehensive understanding of software engineering process models, infrastructure, and process improvement.

**Assignment Objective:** In this assignment, students will work on transitioning a software project from the design phase to implementation while also considering software engineering process models and infrastructure for process improvement.

### **Assignment Description:**

#### **Part 1: Design Review (40%)**

**Select a Project:** Choose a software project that you would like to work on. This project can be selected based on the student's preferences or can be assigned by the instructor.

**Review the Design:** Evaluate the existing software design for the selected project. Identify strengths, weaknesses, and areas that need improvement.

**Propose Design Enhancements:** Suggest design enhancements or modifications based on software engineering principles. Explain how these changes can improve the overall quality of the software.

## Part 2: Process Model and Infrastructure Analysis (60%)

Process Model Selection: Evaluate and select a software engineering process model (e.g., Waterfall, Agile, or DevOps) that is most suitable for the project.

Infrastructure and Tooling: Identify and implement infrastructure and tooling that supports the chosen process model. This may include setting up collaboration tools, automated testing, and deployment pipelines.

Process Improvement: Analyze the project's progress and assess the effectiveness of the selected process model and infrastructure. Identify areas for process improvement and suggest enhancements.

This assignment helps students apply software engineering principles in practice, transition from design to implementation, and gain experience in selecting and optimizing process models and infrastructure for software development. It aligns with CLO1 by demonstrating a comprehensive understanding of software engineering process models and process improvement.

**Submission Deadline: 31<sup>st</sup> October 2023**