

# Lab Day 1

## Task No. 1: Waterfall Model - Requirements Gathering

Scenario: The software development team needs to gather requirements for a library management system.

Steps:

1. Write a Python script to take input from a user to gather requirements (e.g., number of books, borrowing period).
2. Print the gathered requirements.

## Task No. 2: Agile Development - Iterative To-Do List

Scenario: The team wants to use Agile practices to develop a to-do list manager.

Steps:

1. Implement a simple to-do list manager in Python that allows adding and deleting tasks.
2. Print the list after each iteration.

## Task No. 3: Incremental Model - Feature Addition

Scenario: The team is using an incremental model to add features to an application.

Steps:

1. Write a Python script to implement a basic calculator with addition.
2. In the next iteration, add subtraction functionality.
3. Print the updated features after each iteration.

## Task No. 4: Prototyping Model - Quick Prototype

Scenario: The team needs a quick prototype of a login system.

Steps:

1. Write a Python script to simulate a simple login system with hardcoded usernames and passwords.
2. Allow the user to input credentials and validate against the hardcoded values.

#### Task No. 5: Spiral Model - Risk Analysis

Scenario: The team is using the spiral model and needs to perform risk analysis.

Steps:

1. Write a Python script that simulates a simple risk scoring system.
2. Take input for different risk factors and calculate a total risk score.