**SDLC (Software Development Life Cycle)**

The Software Development Life Cycle (SDLC) is a process used to design, develop, test, and deliver software products. It provides a framework for managing and controlling the development of software systems. The SDLC aims to produce high-quality software that meets the requirements of its users, while also minimizing costs and ensuring timely delivery.

# ***Phase 1: Planning***

Requirements Gathering: The requirements for the Request System were gathered, including the need to collect user information, item details, and total cost, as well as generate a unique ID and approval reference number.

Feasibility Study: The feasibility of the project was studied, and it was determined that the project could be completed using Python.

Phase 2: Analysis

Use Case Analysis: including submitting a new request, displaying all requests, and displaying request details.The use cases for the Request System were identified,

Class Diagram: A class diagram was created to model the Request System class and its attributes and methods.

Phase 3: Design

System Design: The system design was created, including the architecture and components of the Request System.

Interface Design: The user interface was designed, including the input prompts and output formats.

Phase 4: Implementation

Coding: The Python code was written to implement the Request System class and its methods.

Unit Testing: Unit tests were written to test individual methods and functions.

Phase 5: Testing

Integration Testing: Integration tests were written to test the entire system.

System Testing: System tests were written to test the system as a whole.

Phase : Maintenance

Bug Fixing: Bugs were identified and fixed.

Enhancements: Enhancements were made to the system to improve its functionality and performance.