Applied Programming Concepts Assignment 1

Sophia Sistachs, Sophia

5/12/2024

Figure 1: Waterfall Method

For the Waterfall method I decided to start by creating the parent class followed by the inherited classes. Then, I moved onto the database and finally the GUI. This way allows for proper testing of each part, before moving on to the next stage.

Waterfall

Part 1

Create parent Class (Users)
- with attributes:
    first name + last name
- with methods to display attributes

↓

Create admin class:
- Inherit Attributes from user class
- Create method for: add course to system
    remove course from system
    add user
    remove user
    add student
    remove student
    Search roster
    Print roster

↓

Create Instructor Class:
- Inherit Attributes from user class
- Create method for: Print schedule
    Print class list
    Search course

↓

Create Student Class:
- Inherit Attributes from user class
- Create method for: Search course
    add course
    drop course
    print schedule

↓

Test System

↓

Create a main function with a user interface to all the classes

↓

Create a database of courses containing: - CRN
    - Course name
    - time
    - instructor

↓

Create a database of users: - 100 students
    - include first, last name, id, courses, semester schedule
    - 10 instructors
    - include first, last name, id, courses, semester schedule
    1 admin
    - include first, last name, id

↓

Test Database

↓

Create a Graphical User Interface

↓

Test GUI

↓

Go back to fix any issues in previous steps