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ELEC3225

HW2 Process Models

This project will create a Leopard Web like software to manage students, instructors, and admins, and their classes and class lists.

Waterfall Process

**Feasibility study:** can it be built with current hardware and software – yes. Is it affordable – yes.

**Requirements specification:**

* All users will have the following attributes:
  + First Name
  + Last Name
  + ID
* Users will have the ability to set each attribute and print all info for the object

There will be three derived classes:

* Student: Students will have the ability to do the following
  + Search courses
  + Add/drop courses
  + Print schedule
* Instructor: Instructors will have the ability to do the following
  + Search courses
  + Print class list
  + Print schedule
* Admin: Admins will have the ability to do the following
  + Add/remove courses to system
  + Add/remove users
  + Add/remove student from a class
  + Search/print rosters
  + Search/print courses

**Requirements validation:** These requirements were specified by the customer; therefore, we can assume that they are satisfactory.

**AFTER completing this step, move on to the next step**

**System and Software Design:**

* Architectural Design: database, functions, classes and objects, user interface.
* Interface Design:
  + Object information like users, courses, and class groups will be stored in a database. We will write code to link the database information and a graphical interface.
  + The GUI will allow users to view information stored in the database in a neat and organized manner.
* Component Design:
  + Aside from a User, Student, Instructor, and Admin, we will need auxiliary/helper classes like Course, and Class.
* Database design: Tables will include table of students, table of courses, table of instructors, table of admins, links from courses to users.

**AFTER completing this step, move on to the next step**

**Implementation and Unit Testing:**

We will write automated test to test our code efficiently.

**AFTER completing this step, move on to the next step**

**System Testing:**

Our code will then be tested as a whole to make sure everything runs smoothly. We can also beta test our code with the potential customer to see if the requirements were met.

**AFTER completing this step, move on to the next step**

**Operation and Maintenance:**

* Once the customer has tested our program. Implement any necessary changes and test again