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ELEC 3225 – 01

Assignment 2

5/30/2021

**Integrate and Configure**

1. *Requirement definition: (Estimated time of completion for whole system – 14 weeks)*
   1. There needs to be 3 types of users that can access the system.
      1. Students
         1. Will be able to register for classes, see available course, and see their own schedule.
      2. Instructors
         1. Will be able to see available courses as well as their own class’s roster.
      3. Admin
         1. Can see all students/instructors as well as courses/rosters.
         2. Can edit the courses, users, and schedules.
   2. There needs to be databases.
      1. Database of users
         1. There needs to be up to 100 students, 10 instructors, and 1 admin.
      2. Database of courses
         1. This will contain all CRNs for courses, their names, times, and the instructor for the course.
   3. System needs to include multiple semesters, print out of schedules, and scheduling preferences.
2. *Component Analysis (Estimated time of completion for component analysis – 8-9 weeks)*
   1. A program with the user interface for a student database as well as the code with the database was found at the following source: <https://www.geeksforgeeks.org/student-data-management-c/>
3. *Requirements Modification (Estimated time of completion for modification – 1-2 weeks)*
   1. Some of the revisions to be made from the following program that would be used to help model the system are mainly focused on the objects’ member functions, and the UI for the system. This source used various if and if else statements to interact with the user. The system being designed will be using a switch. The member functions differ slightly based on the design requirements and how they differ from the code in the resource.
4. *System Design with Reuse (Estimated time of completion for system design – 1-2 weeks)*
   1. Taking the useful information modeled in the example code, the differences in what the design requirements call for and what is implemented in the example code will be the focus of what is being implemented in this step of the process. Taking the overall design from the source as a guideline and implementing the original design requirements in a unique but guided system.
5. *Development and Integration (Estimated time of completion for development and integration – 1-2 weeks)*
   1. The program will be tested as one system. The individual components such as the UI, database, and the classes/objects, and their functions, will be tested to fix all existing bugs that remain.
6. *System Validation (Estimated time of completion for validation – 1-2 weeks)*
   1. Once the bugs found in the testing part of this version are resolved, the program will be run to ensure the system is completely working and all bugs are fixed. Any updates that are needed are implemented in this stage of debugging and maintenance to come out with a final product.