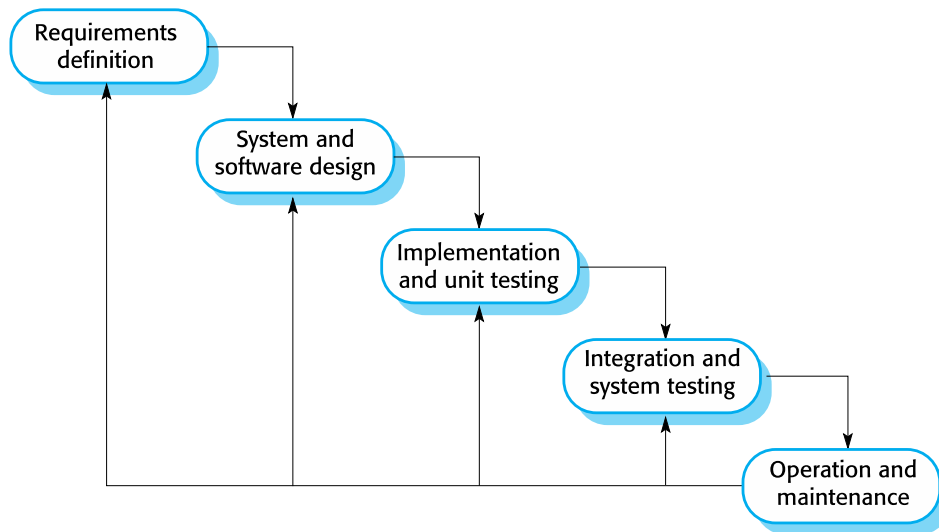


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ELEC-3225-03B

### Waterfall Model Diagram:



### Phase Descriptions (University Schedule System):

#### Requirements Definition:

Design a scheduling system for a university. The system will allow three different users (Student, instructor, and admin) to add courses, print schedules, search for courses, etc. Each user has different options in the system. The database could potentially work for 100 students, 10 instructors, and one admin.

#### System and Software Design:

There will be one base class (User) and three derived classes (Student, instructor, and admin). The user class will have three attributes (First name, last name, and ID), and methods to set each attribute and print all the attributes of the user. The derived classes will have no additional attributes. The main code will have if statements for each derived class selected by the user.

#### Implementation and Unit Testing:

Each class (User, student, instructor, and admin) is coded and tested. The main code is written and tested without the inclusion of the classes.

#### Integration and System Testing:

The classes are fully implemented in the main code and the entire code is tested using different test cases. Each option for each type of user is tested.

#### Operation and Maintenance:

The system is used by a student, instructor, or admin. If there are criticisms from the users, the system would be returned to one of the earlier phases and eventually be used by the users once again when a later version is released.