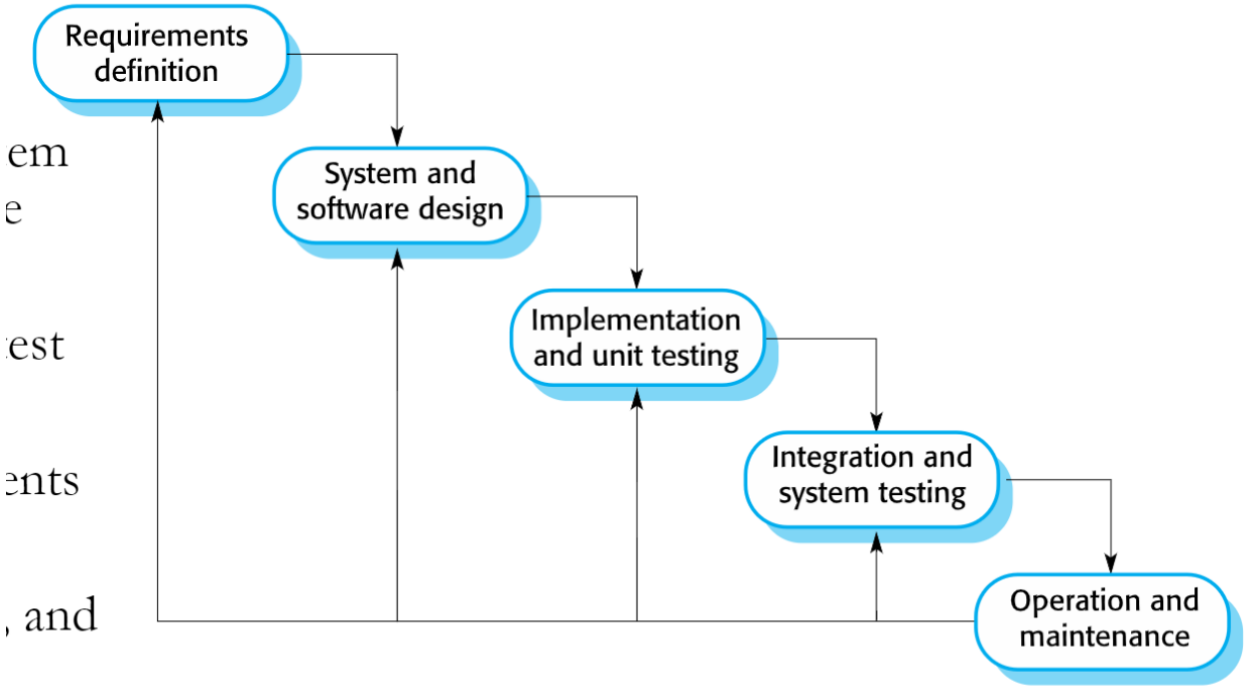
Waterfall



Requirement analysis + definition

Goals:

- Design a university scheduling system (similar to LeopardWeb) that allows students, faculty, and admin to add courses, search for courses, print schedules, etc.
- System should include multiple semesters, print-out of schedule, and scheduling preferences

Constraints:

- **Students** can only search courses, add/drop courses, and print their schedule
- **Instructors** can only print their schedule, print their class list, and search for courses
- **Admins** can only add/remove courses to the system, add/remove users, add/remove students from a course, search/print rosters and courses
- System should work for 100 students, 10 instructors, and 1 admin

Services:

- Databases for students, admins, instructors, CRN's, course names, scheduling times, and rosters

System software and design

1. Display login page for username + password.
2. Prompt user to choose if they are:
    a. Student
    b. Instructor
    c. Admin

3-1. If the user is a Student, prompt the user to either:

    a. Search a course
    b. Add/drop a course

c. Print their schedule

3-2. If the user is an Instructor, prompt the user to either:

a. Print their schedule
b. Print their class list
c. Search for courses

3-3. If the user is an Admin, prompt the user to either:

a. Add/remove courses from the system
b. Add/remove users from the system
c. Add/remove students from a course
d. Search/print roster
e. Search/print courses

Implementation and unit testing:

- Base class “User” created with all three subclasses (Student, Admin, and Instructor)
- Create databases for students, admins, instructors, CRN’s, course names, scheduling times, and rosters

Integration and system testing

- Main program constructed with called classes, login capability, and system navigation

Operation and maintenance:

- System program compiled and tested:
  1. Any user has the ability to navigate the system
  2. Any bugs/issues will be fixed throughout the program