Brock Weekley

Assignment 3: Requirements Analysis: Spring 2020

CS4320/7320 Software Engineering

Types of Users using the software system:

CS Department Faculty
CS Department Staff
CS Department Students

Activities performed in the software:

Faculty- Ability to manage the course, sections, TAs, and assignments.
Staff- Ability to collect assignments.
Students- Ability to submit programming work.

Relevant data and constraints:

For the ability to manage the course:

  - Courses must have an assigned ID
  - Professors must be able create course
  - Professors must be able to delete courses
  - Professors should not be able to delete active courses
  - Professors should be able to edit courses
  - Course should have a description
  - Course should have contact information

For the ability to manage sections:

  - Sections must have an assigned ID
  - Professors must be able to create, delete, and update sections
  - Professors should be able to add and remove students from sections

- Sections should have a list of assigned students
- Sections should have a list of assigned TAs
- Sections should have a description

For the ability to manage TAs:

- TAs should have a list of assignments to grade
- TAs should have an assigned ID
- TAs should have a name
- TAs should have contact information
- TAs should be able to be added or removed
- TAs should be able to have section assignments

For the ability to manage assignments:

- Assignments should have an assigned ID and assigned student ID
- Assignments should have a description
- Assignments should have a section assigned
- Assignments should have a start date and due date
- Assignments be able to be added, removed, or edited

For the ability to collect assignments:

- TAs must not be able to edit assignments
- The TA should have an ID attributed to the assignment to grade it
- The TA should be able to leave a grade on the assignment
- Assignments should be added to the list of TAs assignments

For the ability to submit programming work:

- Students should be able to submit files
- Students should have a name
- Students should have an assigned ID
- Students must not be able to submit more than once
- Students must not be able to access assignments before the due date
- Students must not be able to submit after the due date
- Students should be able to leave comments
- Students should have contact information
- Students should only be able to submit the assigned type of file

System constraints and requirements:

- A server with scalable memory is required to accommodate growth
- A server that has no downtime is required to allow constant access
- The server should not be able to be accessed with administration rights from anyone but Faculty
- A server that can run a database is required to store date
- A server that is able to send and receive requests is required to transfer data
- The server should prevent common to advanced types of malicious attacks
- The server must be stored in a secure location
- The server must have sufficient processing power to run requests and storage