

Projects for CS 200 Spring 2015

Directions: Choose a project below or find one of your own. Assume that you must figure out the requirements for the project. The requirements listed below are far from complete. Using what you have been reading about requirements, prepare a more elaborate requirements statement for the project of your choice. Be sure to address:

1. What does the client need?
2. What expertise will the SE (software engineering) team need?
3. What choices should you make available to the client?
4. What delivery date(s) will you set?
5. What role will potential users play in the project?
6. What use cases will be addressed?
7. Who will educate the users of the new system?
8. Who will take care of any problems?
9. What hardware will be used?
10. Are there security concerns?
11. Are there external requirements?
12. What standards apply?
13. How will legal concerns be handled?
14. Are there marketing concerns?
15. What are some risks and how will they be handled?
16. How will the final requirements document be agreed on?
17. How will testing be done?
18. What validation checks will be done?
19. How will verification be handled?
20. Will there be prototypes?

1. from TB Inc.

Requirements: The client is currently developing some new hardware. When the hardware has been built, software will be needed to make the hardware useful. The client has designed an assembler language for the hardware and wants a translator for that assembler, as well as a linker/loader that will link and load assembled programs so that the hardware can run them.

In order to test out the assembler and have it ready for the completed hardware, it will be necessary to have an emulator for the hardware (a software package that acts like the hardware).

The project is to write three software packages that will work together: an emulator, an assembler, and a linker/loader.

Background: computer organization (CS 281)

Related Project

Requirements: In order to make the development process easier for the TB software, prepare a user interface for testing the emulator and the assembler.

2. Thornborough Company

Requirements: The client is responsible for making medical school exams available online. There must be a large database of questions from which a different selection will be made for each session. The exams must be automatically graded and scores sent to the appropriate recipients. Security is critical. It must be possible for new questions to be added and old questions removed from the database by authorized faculty.

3. **Requirements:** A user interface for Thornborough project

4. Teaching Machine:

Requirements: The client is a school for special needs students and wants a collection of software materials with appropriate interfaces to help students learn at individual levels. For example, a program might exhibit an orange, an apple, and a pear on the screen requiring a student to point to the correct one when the name of the fruit is spoken.

6. Sports Records:

Requirements: The client, a sports team, want a record keeping system so coaches and players can analyze performance statistics to use in designing individual practice activities. The team will need the Software Engineers to educate them about what options may be available.

7. Package Notification

Requirements: The manager of Slayter mail wants a system that will automatically send a text to any student for whom a package has arrived, so the student will know that the package is available.\

8. Bandersnatch

Requirements: Produce an ap that makes it possible for students to make orders and be notified by a text when the order is ready.