

CSC 493 Senior Projects

R5: Weekly Report 5 with Prototype Implementation

On the structure, format, and purpose of the weekly reports

Be sure you have read http://faculty.berea.edu/pearcej/csc493/R_OnReports.pdf because you will be expected to follow the guidelines stated there for each weekly report. In particular, each weekly report must be formatted as described there and must include the cover page, the Application Development section, and the Executive section as described there.

Summary of the task for inclusion in the Application Development Section

This week we are finally working on implementing some portion of your project. There are a number of design methodologies in software development. However, all good methodologies use a technique of implementing and testing small components.

The technique for writing a program using a top-down method is to write a main procedure that names all the major functions it will need. After testing the main program with stubs, the functions are each coded as subroutines or methods. When all the various subroutines and methods have been coded and tested the program is complete. The bottom-up method works kind of in reverse. In bottom-up programming, you build the language up toward your final program by first creating methods and functions which will help you to achieve small goals needed by the program. So, in bottom-up programming an application is constructed starting with existing primitives of the programming language, and constructing gradually more and more complicated features, until the all of the project application has been written.

Agile software development is a group of software development methodologies based on iterative and incremental development. In this methodology, software evolves incrementally, and both the requirements and the solutions evolve through frequent contact and collaboration between the programming team and the client team.

There are other methodologies as well... feel free to Google them. But suffice it to say, they all recommend breaking systems down into small units. So, this week's work will be to fully implement some small portion(s) of your project. Of course, it is required that these components have internal documentation though comment lines.

You will be submitting:

- A plain text document entitled README.txt
- The code for these components with header-style descriptions in each software component as well as internal documentation though comment lines.
- Your updated Weekly Report in pdf format.

More about each of these is below.

README.txt:

Readers, including your project director will appreciate a brief README file. You may certainly want to add to this file later, but at this point, the README file must include the following:

- The application's name
- The project author's name and contact information (use permanent contact information, if possible)
- System and hardware requirements for the software
- Installation and use instructions (which are brief but clear)

Application Development Section of the Report:

The Application Section of the report should be divided into the following sections, revising only as needed and clearly indicating any revisions with what was changed and when it was changed.

- **The Project Concept Proposal** (indicate and date all updates)
- **Inspiration** (indicate and date all updates)
- **Vision and Scope** (indicate and date all updates)
- **Software Requirements Specifications** (indicate and date all updates)
- **System Design and Architecture** (indicate and date all updates)

- **Implementation**
In this section of the Application Development Section, list all submitted files (listing README.txt first). Briefly describe the correspondence between all of the software components in each file and the related Software Design element of the Software Architecture as well as the date the software component was completed.
Note that it is perfectly acceptable to revise the description of the software architecture as you implement—in fact it may be essential in order to make sure that the implementation follows an up-to-date architectural plan.

Report Format and Submission:

Convert the file to a pdf, name the file *yourusername-R5.pdf*, and submit into our course management system in time to meet the stated deadline.

Note that the pdf file does not need to be printed, but you will need to retain the electronic copy of the original editable file because you will use it to build your next weekly report.