

Check-List

Senior Project

Assessment of Student Outcomes of the BS in Computer Science of the School of Computing and Information Sciences Florida International University

The School of Computing and Information Sciences evaluates the Senior Projects of its graduating seniors for the purpose of assessing the level of attainment of the Student Outcomes of the BS in Computer Science program.

To assist the evaluators, the project team is asked to identify aspects of the project related to the various Student Outcomes. For each Student Outcome, a checklist of 4 typical project features related to the outcome is provided. There is no requirement or expectation that any particular feature must be present in your particular project. Nor is the checklist exhaustive. Please add to the lists any additional features of your project that relate to any of the Student Outcomes.

For each checklist item represented in your project, please document where that item is evidenced in your project by noting the **deliverable** (*Feasibility Study, Requirements Specification, Design Document or Final Document*) and **section or page number**.

Your responses to this survey will be used solely for the purpose of assessing the Student Outcomes of the BS in Computer Science program of the School of Computing and Information Sciences at FIU. This survey is expressly NOT for assessment of student performance in the SCIS Senior Project course for assignment of letter grade, nor for assessment of the instructor(s).

Project Title: SAM GUI

Semester & Year: FALL 2010

Moderator (Faculty / Industry Sponsor): DR. XUDONG HE

Team Members: JUAN DUARTE
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Student Outcome (a): *Demonstrate proficiency in the foundation areas of Computer Science including mathematics, discrete structures, logic and the theory of algorithms*

x Project utilizes some knowledge of mathematics

Pythagoras and some mathematical functions can be seen in the arc class of the project code.

___ Project utilizes some statistical techniques

___ Project utilizes some elements of computational or mathematical logic

___ Project utilizes some aspects of theoretical computer science (e.g. automata)

Other _____

Student Outcome (b): *Demonstrate proficiency in various areas of Computer Science including data structures and algorithms, concepts of programming languages and computer systems*

x Project demonstrates knowledge of data structures

During the deployment of the project several data structures are used. LinkedList for example is implemented in most of the cases to keep an easy track of the components of the SAM model. Hashmaps are also used many times within the code. Also each component is defined as a data structure within the component.

x Project demonstrates knowledge of algorithm development

The main algorithm of the SAM Gui is defined to delete a component. The algorithm checks every single component before deleting the right one and also deletes every component related.

___ Project demonstrates knowledge of programming language concepts

x Project demonstrates knowledge of computer systems

Before developing the SAM Gui framework, we had to study which systems were able to handle the application. This is done in the hardware and software mapping section of our document.

Other _____

Student Outcome (c): Demonstrate proficiency in problem solving and application of software engineering techniques

x Project objectives are clearly specified and analyzed

The project scope and analysis were clearly defined since the first deliverable. It can be seen in the problem definition and in the feasibility study.

x Project evidences consideration of design alternatives

Alternative solutions in the first deliverable gives a consideration of the different alternatives that can be implemented instead of the SAM Gui.

____ Project utilizes sound implementation techniques

x There is evidence that the implementation was tested and/or evaluated

Testing section in the final deliverable gives a complete description of all the testing made in the SAM Framework.

Other _____

Student Outcome (d): Demonstrate mastery of at least one modern programming language [and proficiency in at least one other]

x Project was implemented using a modern programming language

Java and Java Swing was used to implement the framework.

x Project code is modular and/or reusable and is documented

The project code is well presented and documented.

x Project code is reasonably efficient rather than “brute force”

It is efficient. It uses hashmaps and some data structures that reduces the complexity of the code.

x Project code is understandable and meets specifications

The code is readable and well organized.

Other _____

Student Outcome (e): Demonstrate understanding of the social and ethical concerns of the practicing computer scientist

x Project documents sources and references

All the work referenced for the deployment of the SAM Gui is located in the references page.

___ Project identifies and addresses any relevant ethical issues

___ Project identifies and addresses any relevant social issues

___ Project documents anticipated impact on users/clients

Other

Student Outcome (f): Demonstrate the ability to work cooperatively in teams

x Project evidences equitable participation by team members

Section 3 (Project organization) gives a view of how all the teams participated in the different roles within the development of the SAM Gui.

x Project team negotiated consensus and/or compromise

The diaries (Appendix H) give an overview of how all the team members came into debate and reasoned the ideas for the realization of the project.

x Project team set out and followed a schedule for timely completion

Project schedule and milestones can be seen in section 3.2 of the document. Also a Gantt chart in appendix A gives a complete overview of the schedule of the project.

x Project team activity is documented

Diaries in appendix H gives a quick overview of the activities done during the semester.

Other

Program Outcome (g): *Demonstrate effective communication skills*

x Project presentations captured the essential features of the project

All the 4 presentations of the project during the semester, addressed the basic tasks for each phase and explained in detailed the development progress of the SAM Gui.

x Project artifacts communicate and/or project the project essentials

All the UML diagrams located on the appendix are coherent within the project resources.

x Project reports are well organized and written

All the documentation follows the lineout given.

x Project presenters are able to communicate their ideas to a non-CS audience

Explaining Petri-nets and what the SAM Gui is for was part of the goals during the presentations. At the end all the audience had a pretty clear idea of what this project stands for.

Other _____

Program Outcome (j): *Have experience with contemporary environments and tools necessary for the practice of computing*

x Project utilizes contemporary design tools

Java and last Eclipse version was used for the development of the project.

x Project implementation utilized a modern IDE

Java and Java swing are the main core of the whole implementation.

x Project utilized validation/testing tools

___ Project was demonstrated using appropriate presentation aids

Other _____

Your further observations about of the BS in CS Student Outcomes **evidenced in this project** would be appreciated.