## 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 Math Instant Messenger for Visually Impaired People

Semester & Year Fall 2010

Moderator (Faculty / Industry Sponsor): Patricia Mc-Dermott-Wells/Dr. Peter Clarke

Team Members: Arian Acosta, Carlos Bustamante, Christopher Casanova, Raul Fuentes, Barbara Gonzalez

* All sections refer to the Final Deliverable unless noted otherwise

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

✓ Project utilizes some knowledge of mathematics
Use of Math Type Editor in project, *

✓ Project utilizes some statistical techniques
3.3 Cost of Project

✓ Project utilizes some elements of computational or mathematical logic
10.5 Appendix E (mathematical logic in control structures of code)

✓ Project utilizes some aspects of theoretical computer science (e.g. automata)
6.3 Dynamic model (state machine diagram)

Other * Project is focused on integrating a Math Equation Editor which requires knowledge of math

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

✓ Project demonstrates knowledge of data structures
10.5 Appendix E (code uses List data structure)

✓ Project demonstrates knowledge of algorithm development
6.3 Dynamic Model (Design of algorithm)

✓ Project demonstrates knowledge of programming language concepts
10.5 Appendix E (recursion), 6.3 Dynamic Model (Algorithm from Nemeth to Math use natural semantic)

✓ Project demonstrates knowledge of computer systems
3.1.2 Hardware and Software Resources

Other

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

✓ Project objectives are clearly specified and analyzed
Course syllabus https://online.cis.fiu.edu/portal/mod/resource/view.php?r=

✓ Project evidences consideration of design alternatives
2.2 Description of alternative solutions considered

___ Project utilizes sound implementation techniques

✓ There is evidence that the implementation was tested and/or evaluated
7 System Validation

Other ___

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

✓ Project was implemented using a modern programming language
C#, Javascript, XML, 10.5 Appendix E

✓ Project code is modular and/or reusable and is documented
10.5 Appendix E, 6.4 Code Specification

✓ Project code is reasonably efficient rather than "brute force"
10.5 Appendix E

✓ Project code is understandable and meets specifications
6.4 Code Specification.

Other ___

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

✓ Project documents sources and references
User Guide: 9 References, Deliverable 4: After Cover page

✓ Project identifies and addresses any relevant ethical issues
Same as above

✓ Project identifies and addresses any relevant social issues
Same as above

✓ Project documents anticipated impact on users/clients
Same as above, User Guide: 3 Introduction

Other _____

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

✓ Project evidences equitable participation by team members
Appendix H Diary of meetings

✓ Project team negotiated consensus and/or compromise
Same as above

✓ Project team set out and followed a schedule for timely completion
Same as above

✓ Project team activity is documented
Same as above

Other _____

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

✓ Project presentations captured the essential features of the project
Final Presentation powerpoint

✓ Project artifacts communicate and/or project the project essentials
MIMVIP.plsc file

✓ Project reports are well organized and written
Final Deliverable

✓ Project presenters are able to communicate their ideas to a non-CS audience
Final Presentation powerpoint

Other _____

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

✓ Project utilizes contemporary design tools
Use of Visual Studio 2010, StarUML, Messenger Plus

✓ Project implementation utilized a modern IDE
Visual Studio 2010

___ Project utilized validation/testing tools

✓ Project was demonstrated using appropriate presentation aids
MicroSoft Powerpoint 2007

Other _____

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