**Final Summative Semester - ICS3U – Grade 11 Computer Science**

**Objective:** To demonstrate all programming concepts taught in the ICS3U course in a final programming project.

**Details:** Use the following listed steps as your guide through this summative. There will be 6 parts due in this summative. It is your groups’ responsibility to make sure they are completed and submitted properly on time. **Failure to do so will result in a mark of zero**. The excuse that “*my partner has the work”* will not be accepted (as a result using Floobits is strongly suggested). Everyone in the group must have a current copy of all parts of the project with them at all times.

STEPS:

1. Determine who you will work with. Groups of up to 3 people are allowed. Write their names in the boxes provided above the marking table (see the end of this document).
2. With your group, brainstorm ideas for your project. You can create a JQUERY GUI based application, a Javascript Phaser based game or any other project using any programming language (make sure to get your teacher’s approval first). Make sure to take into account your skill level and those of your group members when deciding.
3. Erase your class website. When your group has come to a consensus on what it will do, your next step will be to create a new homepage on your class server space where you will outline your project to me. Include the following:
4. The title of your project.
5. Below that include the names of all members in your group.
6. Next write a paragraph describing the basic premise of the project.
7. Below the paragraph include a heading titled “Work Distribution” and describe how the work will be evenly divided among the members of the group i.e. who will be doing what?
8. Insert another heading titled “Possible Challenges” and explain how you plan on implementing some of the more challenging requirements. At a minimum explain how you will make use of bubble sorting and arrays.
9. Your next heading is “Screens”. Describe what screens will included in the program i.e. help, scores, menu etc.
10. Add the heading “Concerns” and write about what might be your greatest challenge(s) in completing the project.
11. Finally, add a list of links that will take visitors to the other parts of your project (read on to see what these will be).
12. The initial project homepage will need to be completed and available by the end of day on **Friday May 31, 2019.**
13. Create a rough sketch of each screen in your program. Do this by hand and then “snapshot” it and upload as pics via your cell phone or use an online tool. Label the names of all objects that will be accessed through your code. Write a short paragraph describing the role of each screen in your program. Add a link to this information on your summative website homepage by the end of **Monday June 3, 2019.**
14. Design an IPO, flowchart and pseudocode for the *core* problems in your program (you do not have to outline every single detail….just enough to show the general logic behind your problem). Make sure your problem includes data processing, decision making and loops. Add a link to this information on your summative website homepage by the end of **Wednesday June 5, 2019.**
15. Next, write the code. Make sure you thoroughly document as you code. Every file must include the four basic comments at the top (name, date, title, description). Highlight, with commented boxed asterisks, evidence of functions, with and without parameters, with and without return values, string functions, arrays and bubble sorting. A homepage link to your single text file containing the code is due by the end of class  **Thursday June 13, 2019.**
16. By the end of class on **Friday June 14, 2019** you must include a help page with screenshots where you explain how to use your project in detail.
17. Your final project is due by the start of class on **Monday June 17, 2019**.
18. On **Tuesday June 18, 2019** your peers will evaluate your summative project. They will rank the projects from best to worst. This is completely voluntary. Based on your standing you will be awarded up to 10 extra marks on top of your final mark

**Reminder**: Failure to hand in any part of the summative on the due dates listed will result in a mark of zero for that component. Exceptions will require a written and signed note by the parent/guardian of all members in the group.

**Marking Scheme[ ] [ ] [ ]**

|  |  |  |  |
| --- | --- | --- | --- |
| Category | Description | Value | Mark |
| Introduction/Homepage | Planning | 10 |  |
| Sketches/Written Plan | Planning | 10 |  |
| IPO | Algorithm Design | 10 |  |
| Flowchart | Algorithm Design | 10 |  |
| Pseudocode | Algorithm Design | 10 |  |
| Documentation | Code | 10 |  |
| Formatting | Code | 10 |  |
| Naming | Code | 10 |  |
| Scope | Code | 10 |  |
| Selection | Code | 10 |  |
| 2 Functions without Parameters (1 with return value) | Code | 10 |  |
| 2 Functions with Parameters(1 with return value) | Code | 10 |  |
| 2 String Functions | Code | 5 |  |
| 1 Arrays | Code | 5 |  |
| 1 Sorting | Code | 5 |  |
| GUI | Project | 10 |  |
| Functionality | Project | 30 |  |
| Complexity | Project | 30 |  |
| Purpose | Project | 10 |  |
| Help Page | Project | 35 |  |
| TOTAL |  | 250 |  |
|  |  |  |
| Peer Evaluation | 10 |  |
| FINAL TOTAL |  | |
| Percentage |  |  | |

The summative is worth 15% of your final mark. The exam is worth the other 15%. There will not be a formal review for your exam. Completing this assignment is adequate preparation for the programming component of the exam. You are allowed a single 8x11 double sided support sheet to help you with the remainder of the exam.