Algonquin College Logo

# SCHOOL OF ADVANCED TECHNOLOGY

### ICT - Applications & Programming

### Computer Engineering Technology – Computing Science



A11

Computer Science Challenge

Lab Professor / Lab Session:

[Daniel Cormier / 302]

Team:

[Hetvi Patel] - Id: [041077850] / [Dhara Patel] - Id: [041081736]

CS Challenge 1: Battleship UI Design

***The use of this template is not required, but should help guide your responses***

|  |  |
| --- | --- |
| **Part**  **1** | **Implementing the UI** |

**Note 1: Read Specification**

*This is only a suggested template. Please check instructions in the A11 specification.*

*If you do use this document, put some care into it. You won't be marked on format, but leaving unneeded or example elements will lead to confusion and risk costing you marks.*

* 1. **Intended UI.**

**What should your UI look like?**

Include a sketch of your UI.

A screenshot of a computer game

Description automatically generated

* 1. **UI Sizing and Colours**

**How is it all put together?**

A breakdown of your UI by component sizes and colours. See section 1.2 in the A11 Specification document.

|  |  |
| --- | --- |
| **COMPONENTS** | **LENGTH AND WIDTH** |
| **Graphical logo** | **126 tall, 480 (42X10) pixels wide** |
| **Squares** | **42X42 pixels** |
| **Background Image** | **480X480 pixels** |
| **Scroll Bar** | **30X70 pixels** |
| **Message Bar (Textfield)** | **680X30 pixels** |
| **Tile Graphics** | **40X40 pixels** |
| **Title Graphic** | **480X126 pixels** |
| **Menu Bar** | **480X30 pixels** |

* 1. **Language**

**In our game model, we are considering our primary language as English language, and the second language will be French. Moreover there is a label in the menu bar called “Language” from which user can change whichever language they want to play in.**

**1.4. Visual Components**

*What components are required for your UI? List each component, where it goes in the UI, and what it's meant to do. A table is helpful. (Consider annotating a diagram of your UI if that helps make things clearer.)*

*We are doing the coding using JAVASWING. There is a brief description given below on how it supposed to work.*

|  |  |
| --- | --- |
| **COMPONENTS** | **DESCRIPTION** |
| **Graphical logo**  **(label)** | **To get the title of the game “BATTLESHIP” JLabel will be used.** |
| **Squares** | **JLabel will fetch the Grid** |
| **Background Image** | **For the outer grid we will use Gridlayout** |
| **Scroll Bar** | **JScrollBar will be used** |
| **Message Bar (Textfield)** | **To display messages in message bar we will use JTextField** |
| **Tile Graphics** | **Allows authors to define page fragments which can be assembled into a complete pages at runtime.Here it will be implemented by JPanels.** |
| **Title Graphic** | **Title graphic will also be implemented by JPanel.** |
| **Menu Bar** | **JMenuBar is used to get the menu bar** |
| **Lifeline (Button)** | **JButton will be used to work on click event.** |
| **Redo (Button)** | **JButton will be used to work on click event.** |
| **Swap (Button)** | **JButton will be used to work on click event.** |

**1.5. UC Diagram and Table**

**UC Diagram** (example in a different context):

French

Game

Language

English

Network

Dimensions

Single

Multiplayer

5X5

File

Help

10X10

12X12

New

Save

**Actors table**:

|  |  |
| --- | --- |
| **Actors** |  |
| Player | This actor represents the person playing the battleship game. |

**UC table**:

|  |  |
| --- | --- |
| **Use Cases** |  |
| Language. | This case describes how the user change the Language. We have English and French. |
| Dimensions. | This use case describes how the user can change the dimensions. We have 3 different kind of measurements followed by: 5X5, 10X10, 12X12 |
| Game. | This setup includes two functions:  The first function starts a new game while keeping the current player.  The second function loads a new game board and begins from the start. |
| Help | It will provide a demonstration on how to play the game with steps. |
| Network | It connects the user and another user like they can play as multiplayer and they can also play from different location. |
| File | This will help to save the current game like pause button. Save and New game. |

**FINAL SUGGESTIONS**

*Here some ideas to think about your implementation....*

* *Try to create an application whose execution can be very intuitive (easy to be played).*
* *Remember that this game will be in fact implemented only in the next assignment. NO CODE IS REQUIRED.*
* *Make sure you remove examples and guidance text from this document. This should contain only your content, and none of mine, apart from headers.*

**References**

*[Include any references used here.]  
  
“Blackbox.io” to understand the concept of the Diagram and it’s implementation.*

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|  | * ***NOTE****: Report all references used. Uncited references are unprofessional, at the minimum.* |

Algonquin College

Summer, 2024