Odd Semester (2022)



**BINUS UNIVERSITY**

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**Assignment Cover Letter**

**(Individual Work)**

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| 1. | | **Alifio** |  | |
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| **Course Code** | **: COMP6335** |  |  | | **Course Name** | | **: Introduction to Programming** | |
| **Class** | **: L1BC** |  |  | | **Name of Lecturer(s)** | | : 1. Monica Hidayat | |
|  |  |  |  | |  | |  | |
| **Major** | **: CS** |  |  | |  | |  | |
| **Title of Assignment**  (if any) | : Tic Tac Toe Game | |  |  | |  | |  | |
| **Type of Assignment**    **Submission Pattern** | **: Final Project** |  |  | |  | |  | |
| **Due Date** | **: 20-11-2018** |  |  | | **Submission Date** | | **: 20-11-2018** | |

The assignment should meet the below requirements.

1. Assignment (hard copy) is required to be submitted on clean paper, and (soft copy) as per lecturer’s instructions.
2. Soft copy assignment also requires the signed (hardcopy) submission of this form, which automatically validates the softcopy submission.
3. The above information is complete and legible.
4. Compiled pages are firmly stapled.
5. Assignment has been copied (soft copy and hard copy) for each student ahead of the submission.

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# Declaration of Originality

By signing this assignment, I understand, accept and consent to BiNus International terms and policy on plagiarism. Herewith I declare that the work contained in this assignment is my own work and has not been submitted for the use of assessment in another course or class, except where this has been notified and accepted in advance.

Signature of Student: (Name of Student)

1. Alifio Rasendriya Rasyid

**Tic Tac Toe**

Name : Alifio Rasendriya Rasyid

ID : 2201798295

**Introduction:**

Tick Tack Toe is played in a 3 by 3 board where the goal of the game is to get either 3 of a player’s own icon (X or O) in a row, either diagonally or vertically. In a classic Tick Tack Toe game, if neither player makes a mistake, the game is drawn and basically both players will have to repeat the game until it a player eventually loses. In this particular version of Tick Tack Toe though there are no draws as the oldest icon in the board would be deleted as soon as all the spaces in the board (for a particular player) are filled, this results in a much more complex gameplay as it now requires the players to simulate and predict the next few moves as well as remembering which of the icons are going to be deleted.

**Discussion:**

**Modules:**

* PyGame is the main module used in this project, all of the screen, images and audio are loaded into Python using this module. Furthermore PyGame was used to detect all the events that are happening; for instance, mouse clicks and collision between “rect” (hit boxes).

**Why a Tic Tac Toe game?**

I decided that I wanted to make a simple casual game after browsing through my phone’s Google Play (app store), many of the top games in the market are super casual games that has interactive yet very simple gameplay; some of these games includes, Flappy Bird, Ludo King, Plato, etc.

The thing is, there are already tons of Tic Tac Toe games available on the market, so how did I differentiate my game from the others?

**Gameplay**

Each icon (X or O) represents the players, X (player 1) will start first followed by O (player 2) and so on. Every time each players insert their 5th icon (X or O) the oldest icon will automatically disappear.

If they wanted to, the players are also able to go back to the main menu anytime by simply clicking on the Tic!Tac!Toe! Logo on the upper left corner.

To quit, players have to simply click on the quit button on the main menu screen or pressing the close button.

**How it Works?**

Firstly pygame.mixer and pygame are initialize and all the object (class) are declared. Next before the main game loop are started func.update\_screen() reads status.menu and automatically start the game in an active mode. While the loop are ongoing, func.check\_events() repeatedly detect any sort of event happening; for instance clicking the quit button would trigger a sys.exit() command which would instantly close the game.

Other functions in the game includes check\_mouse\_click(), check\_box\_clicked() and check\_win(); check\_mouse\_click() essentially controls what to do when a certain thing is clicked (other than the quit button), while check\_box\_click() detects which of the 9 boxes are clicked and updates status.pointer, lastly check\_win() basically goes through the boxes and check if any players wins the game.

In short the game started with an update\_screen() function and then proceed to the loop. Inside the loop, check\_events() function is constantly checking for any sort of event, it includes checking mouse clicks as well as an update\_screen() function at the end of the loop, it also includes a check\_win() function although only when the game is on the in-game screen (while the players are playing the game).

**Evidences**

