

**Programming 1 (PRG1)**

Year 1 (2019/20), Semester 1

**SCHOOL OF INFOCOMM TECHNOLOGY**

Diploma in Financial Informatics

Diploma in Cyber Security & Forensics

Diploma in Information Technology

Diploma in Common ICT Programme

# ASSIGNMENT CHECKLIST

**Due on 5 August 2019 (Monday), 8.30 am**

**Individual/Team/Both:** Individual

**Format:** Completion Statuses

Additional Features

Validation Statuses

Function Descriptions

There are a total of 7 pages (including this page) in this handout.

**Submission: You are to submit this checklist together with the source code for the assignment in a .zip file via MEL.**

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| --- |
| ***WARNING***  ***If a student is found to have submitted work not done by him/her, he/she will not be awarded any marks for this assignment. Disciplinary action will also be taken.***  ***Similar action will be taken for the student who allows other student(s) to copy his/her work.*** |

**1. OBJECTIVE**

This assignment checklist provides the student’s assignment completion statuses of basic and additional features of the assignment.

**2. BACKGROUND**

This assignment checklist is provided to facilitate the tutors’ testing and verification of work done as declared by the student.

**3. SCOPE**

This assignment checklist shall cover all features (both Basic and Advanced requirements) specified in the assignment document.

**4. COMPLETION STATUSES**

The following table shall provide in detail completion statuses for the **Basic** requirements:

|  |  |  |  |
| --- | --- | --- | --- |
| S/NO | Feature | Parts of the feature developed and implemented | Remarks |
| 1. | Display main menu | * a function for display main menu * While True function used * obtain user input * check user input to go to the respective options * continue to ask for user input and end the program if exit option is chosen. | All completed |
| 2. | Read and load maze from file | * A function for reading and loading maze from file * Obtain user input for filename * Use Try and except function * For loop is used with append and list function to change the format of the maze in file to a nested list * Return nested list maze * Print number of lines read | All completed |
| 3. | View maze | * A function to view maze * For loop is used to print out list in the nest list maze | All completed |
| 4. | Play maze game | * Function to play the maze * Nested For loops are used to find the position of A and B * Import copy and deep copy is used to copy maze into another variable so that after users play the maze, they can retrieve the original maze. * Obtain user input for movement * Check user input is it is any movement * If movement is valid, change the variable in the index of A * If function is used to check if the position of A is at the position at B * If Yes, Leaderboard file is open to append name and score. | All completed |

|  |  |  |  |
| --- | --- | --- | --- |
| 5. | Configure current maze | * A function used to configure current maze * Obtain user input to go to the respective option * Obtain user input to select coordinates of items | All completed |
| 6. | Export maze to file | * A function Used to export maze to file * Obtain user input to identify file name | All completed |
| 7. | Create new maze | * A function to create new maze * Obtain confirmation from user * Create maze with loops | All completed |
| 8. | Exit maze | * A if statement to break the while True loop | All completed |

The following table shall provide in detail completion statuses for the **Advanced** requirements:

|  |  |  |  |
| --- | --- | --- | --- |
| S/NO | Feature | Parts of the feature developed and implemented | Remarks |
| 1. | Play maze using SenseHAT | * Import time for time taken to complete the maze * Obtain maze and set the pixels * Set a try and except for python version so it won’t break the program | All completed |
| 2. | Validation | * Change all input to strings so that user can input integer and characters * If else statement change the variable to strings * Try and except for functions that are required to open and load file or SenseHat. * When creating new file or exporting, the if statement will change if user input ends with .txt or .csv | All completed |
| 3. | View leaderboard | * Append all the scores to a list to reverse sort it * Check if there are repeated scores * While loops and append | All completed |

The following table shall list all the functions delivered:

**Function Descriptions**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| S/No | Function name | Description | Input Parameter(s) | Expected output |
| 1 | Menu\_option | Option menu |  |  |
| 2 | Current\_maze | Print current maze in variable maze | maze |  |
| 3 | Read\_load\_maze\_file | Load the maze from a file |  | maze |
| 4 | View\_maze | Prints option[2] which is a bit different from function 2 | maze |  |
| 5 | Play\_maze | Copies current maze to a play maze and allows user to play/move the position of the character in the maze | maze |  |
| 6 | Config\_current\_maze | Give user options to configure the maze | maze |  |
| 7 | Export\_maze\_to\_file | Export current maze to a file | maze |  |
| 8 | Create\_maze | Allows user to have the option to create their own new maze | maze |  |
| 9 | Play\_maze\_w\_sensehat | Allow user to play maze with sensehat | Maze |  |
| 10 | Leaderboard | Shows user the top players from the leaderboard |  |  |
|  |  |  |  |  |
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**Note:**

* ***You are expected to declare upfront on the actual statuses.***
* ***The functions declared shall be exact to the ones presented at the time of the presentation.***
* ***You are required to show your solution code to your tutor during the presentation. Your tutor will go through solution code with the student to verify and assess your understanding of your work. Your tutor may ask you to implement some change requirements to the assignment.***
* ***NO MARKS will be awarded for the advanced features if all the basic features have NOT been fully implemented (and fully working).***
* ***Marks will be deducted if you are not able to show your understanding of the program, both basic and advanced features (if applicable), during the presentation.***
* ***Additional features delivered should be in alignment to the objective of the original assignment’s intent.***