



University of Central Punjab

Faculty of Information Technology

PF
Project

***Maze
Runner***

Project:

You are required to create a program that provides near-complete functionality over the Maze - Runner Game. Users should be given a simple and smooth work flow that implements following details:

Front end:

- ✓ User can enter Game mode personally or through files of their choosing
- ✓ User can get output on console or through files of their choosing
- ✓ Program should not end until users finish their game or wishes to end their task.
- ✓ User can enter in any Game Mode (Easy, Medium, Hard).
- ✓ User can Resume or Restart the game.

Functional Requirements:

- ✓ Regrow (Read data from file by using regrowing technique)
- ✓ Copy (Copy previous data into new and regrow array)
- ✓ Read (After reading the file Print pattern of game using file numbers)
- ✓ Moves (code for command to play game like press __ buttons for UP, LEFT)
- ✓ Valid Command (code to check whether the command that user enters is valid)
- ✓ Ascending (Code to sort the score in ascending order)
- ✓ Print (This function will print the pattern of the game)

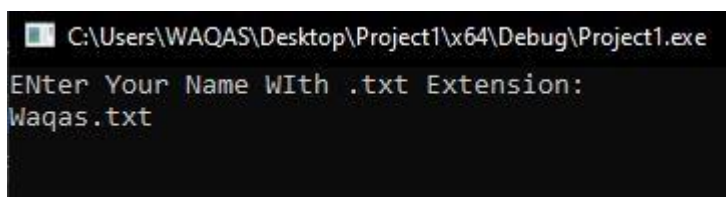
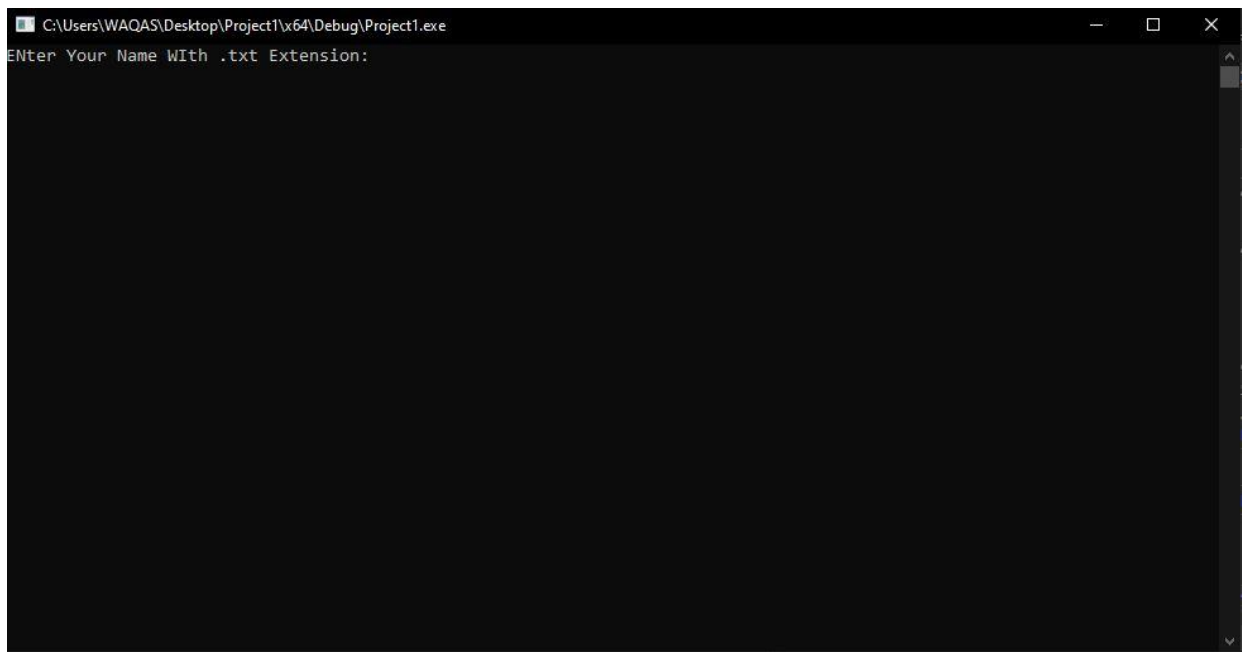
Back end:

- ✓ Use separate function for every task listed above that is controlled by menu function which guides users through the various options
- ✓ Use separate functions for helping tasks such as file input/output

- ✓ Handle any and all sanity checks such as “size < 1”
- ✓ In case there are any operations the program cannot perform, show a proper error message on screen to user to clearly state what is wrong with the input
- ✓ Code should be thoroughly commented with appropriate details
- ✓ There should be no memory leakage at all throughout the program
- ✓ All code must be 100% generic

Console:

Sample Output:



```
C:\Users\WAQAS\Desktop\Project1\Debug\Project1.exe
Enter Your Name With .txt Extension:
Waqas.txt

Enter The Mode Of Game
For Easy Mode Press 1:
For Medium Mode Press 2:
For Hard Mode Press 3:
For Checking The Statics Press 6:
```

```
C:\Users\WAQAS\Desktop\Project1\Debug\Project1.exe
*      *      +      *      *      *
*      |      *      +      *      +
*      *      *      *      *      *
*      |      *      |      *      |
*      *      |      +      *      *
*      |      *      *      +      *

Please Carefully Reads The Instruction.

Press U For Up
Press D For Down
Press L For Left
Press R For Right
The Character * Is Path IS Free To Go:
The Character | Is Blockage In Path
The Character + Is Monster Creature In Path

You Have Only 3 Lives
You Have Only 11 Moves
You Enter 1 Moves
Enter Your Command:
```

```
C:\Users\WAQAS\Desktop\Project1\Debug\Project1.exe

*      *      +      *      *      *
*      |      *      +      *      +
*      *      *      |      *      *
*      |      *      *      *      |
*      *      |      +      *      *
*      |      *      *      +      *

Please Carefully Reads The Instruction.

Press U For Up
Press D For Down
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Press R For Right
The Character * Is Path IS Free To Go:
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The Character + Is Monster Creature In Path

You Have Only 3 Lives
You Have Only 11 Moves
You Enter 1 Moves
Enter Your Command: U
```

As you can see after playing game by using UP DOWN RIGH LEFT Keys you can reach at the end and from where you passed (1) had showed there.

```
C:\Users\WAQAS\Desktop\Project1\Debug\Project1.exe

*      *      +      *      *      *
1      |      *      +      *      +
1      1      1      |      *      *
*      |      1      1      1      |
*      *      |      +      1      1
*      |      *      *      +      *

Enter 2 For Resume From Start:
Enter 3 For Resume The Game Where U Left:
```