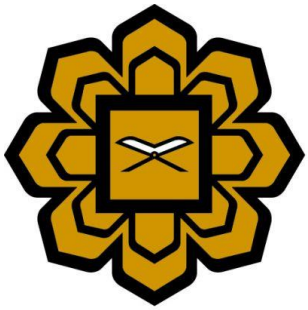

الجامعة الإسلامية العالمية ماليزيا
INTERNATIONAL ISLAMIC UNIVERSITY MALAYSIA
يونيورسيتي إسلام انتارابغسا ملايسيا

KULLIYAH OF INFORMATION AND COMMUNICATION TECHNOLOGY

CSC 1100 ELEMENTS OF PROGRAMMING

SEMESTER 1, 2017/2018

SECTION 4

GUESSING GAME : MASTERMIND

GROUP NAME : IBN AL-NAFIS

PREPARED BY:

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DUE

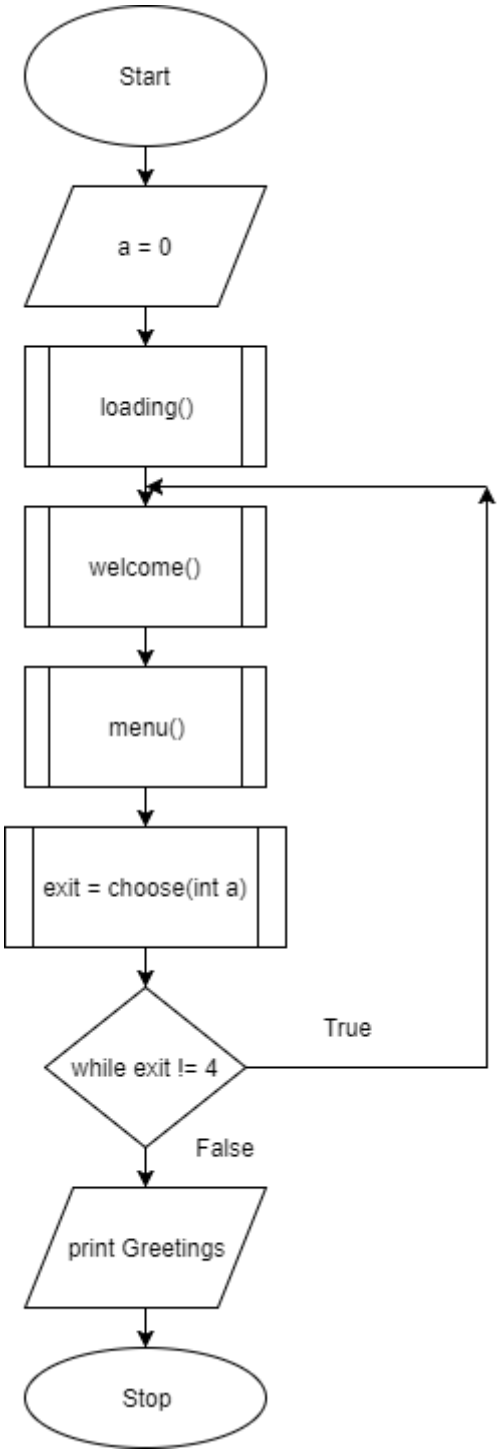
25 DECEMBER 2017

INTRODUCTION

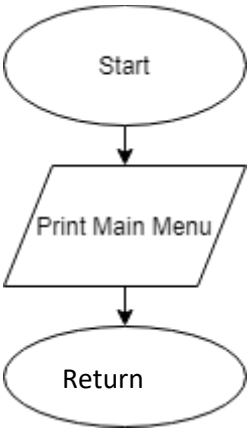
The project that we had done is developing a program that brings the board game Mastermind into an interactive program on the computer. The program developed is called Guessing Game: Mastermind. The only difference between the original board game and the program is the board game requires two players who are the code maker and the code breaker while the program only requires a code breaker because the code is designed by the program itself. Basically the game gives the player ten turns to guess the four correct colours ordered by the program. Moreover, the program gives hints to the player during the game. The hints are the number of correct colours in the right position and the number of correct colours in the wrong position. In order to win the game, the player must guess the correct colours in the correct positions for ten tries or less. The score for the player is calculated referring to the number of turns used.

FLOWCHART OF THE PROGRAM

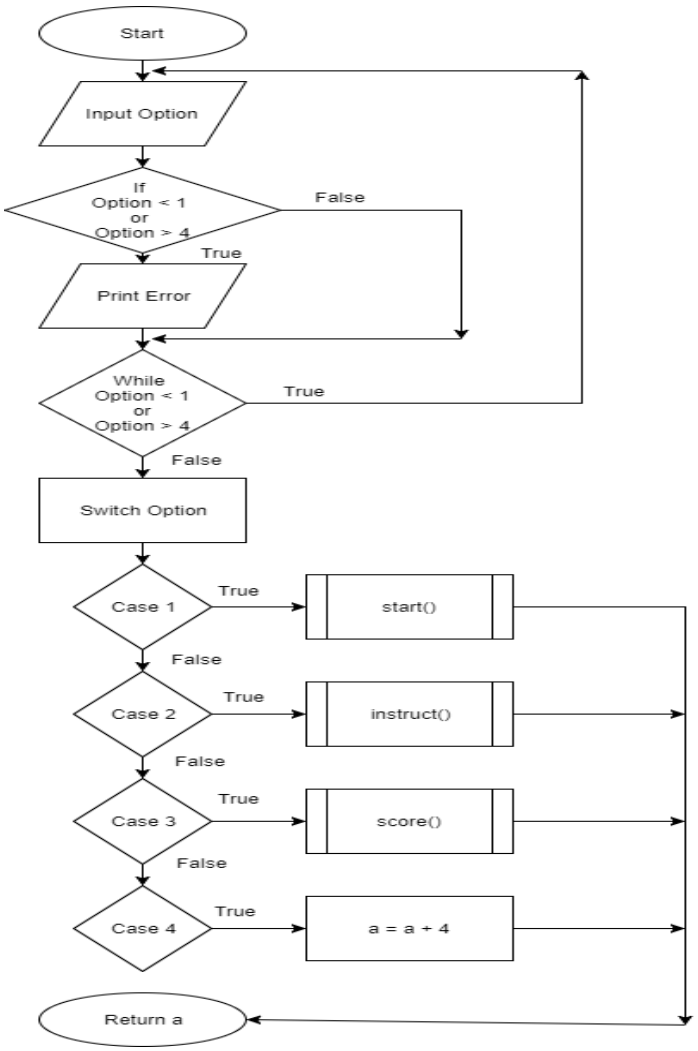
main()



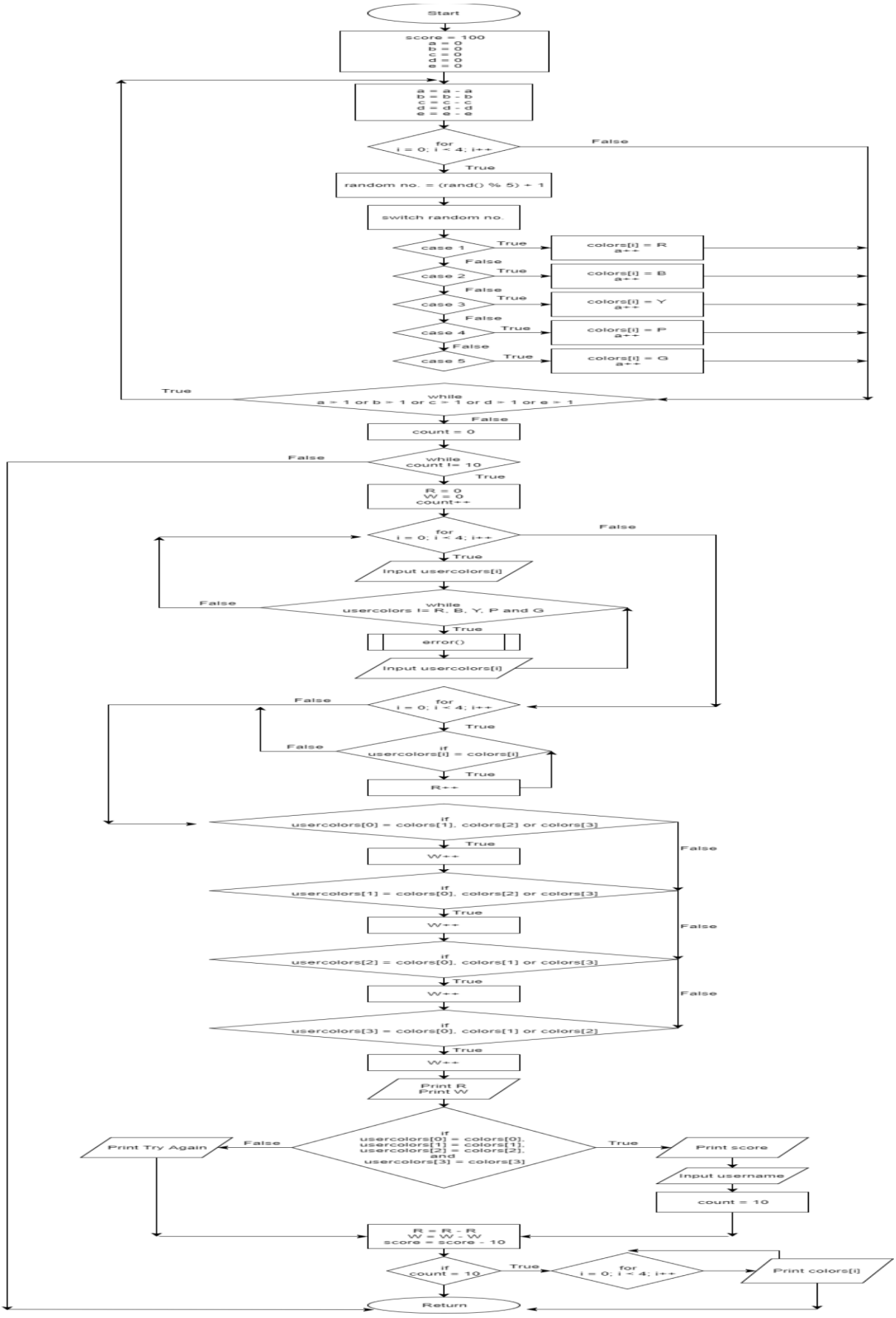
menu()


Start
Print Main Menu
Return

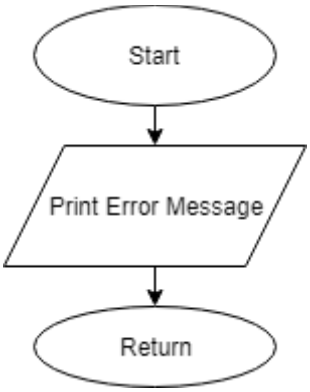
choose()


Start
Input Option
If
Option < 1
or
Option > 4
False
True
Print Error
While
Option < 1
or
Option > 4
True
False
Switch Option
Case 1
True
start()
False
Case 2
True
instruct()
False
Case 3
True
score()
False
Case 4
True
a = a + 4
Return a

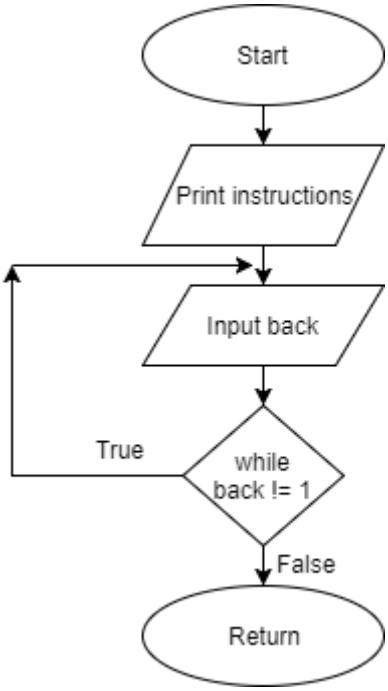
start()


Start
score = 100
a = 0
b = 0
c = 0
d = 0
e = 0
a = a - a
b = b - b
c = c - c
d = d - d
e = e - e
for
i = 0; i < 4; i++
False
True
random no. = (rand() % 5) + 1
switch random no.
case 1
True
colors[i] = R
a++
False
case 2
True
colors[i] = B
a++
False
case 3
True
colors[i] = Y
a++
False
case 4
True
colors[i] = P
a++
False
case 5
True
colors[i] = G
a++
True
while
a = 1 or b = 1 or c = 1 or d = 1 or e = 1
False
count = 0
False
while
count != 10
True
R = 0
W = 0
count++
for
i = 0; i < 4; i++
False
True
Input usercolors[i]
False
while
usercolors != R, B, Y, P and G
True
error()
Input usercolors[i]
False
for
i = 0; i < 4; i++
True
False
if
usercolors[i] = colors[i]
True
R++
if
usercolors[0] = colors[1], colors[2] or colors[3]
True
W++
False
if
usercolors[1] = colors[0], colors[2] or colors[3]
True
W++
False
if
usercolors[2] = colors[0], colors[1] or colors[3]
True
W++
False
if
usercolors[3] = colors[0], colors[1] or colors[2]
True
W++
Print R
Print W
if
usercolors[0] = colors[0],
usercolors[1] = colors[1],
usercolors[2] = colors[2],
and
usercolors[3] = colors[3]
False
Print Try Again
True
Print score
Input username
count = 10
R = R - R
W = W - W
score = score - 10
if
count = 10
True
for
i = 0; i < 4; i++
Print colors[i]
Return

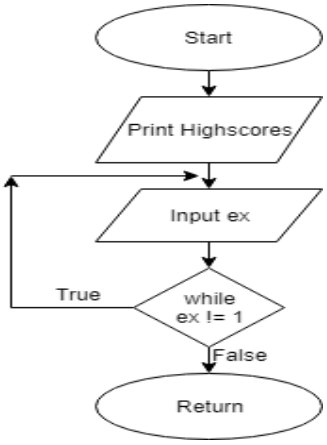
error()



instruct()



score()



LIST OF FUNCTIONS

1. main()

   This function calls the important functions in the program.

2. loading()

   This function shows the loading bar of the program.

3. welcome()

   This function shows the title of the game which is Mastermind.

4. menu()

   This function shows all the options in the main menu.

5. choose()

   This function lets the user choose the options in the main menu before.

6. start()

   This function starts the game which is the main purpose of the program.

7. error()

   This function prints the error message when the user enters the wrong inputs.

8. instruct()

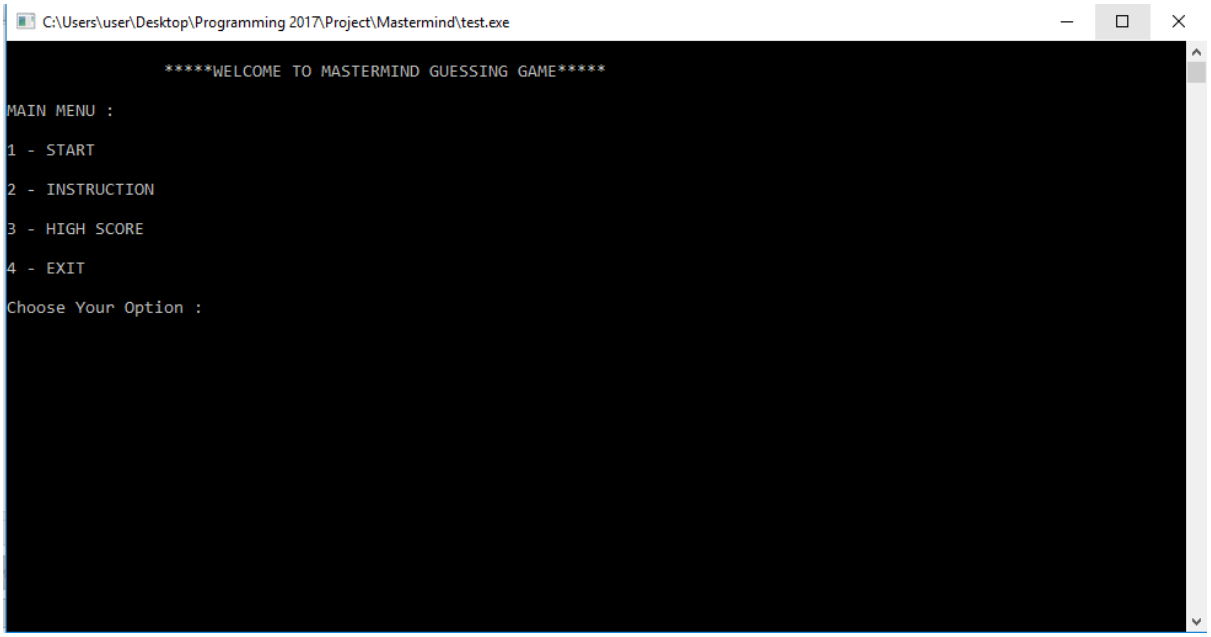
   This function shows the instructions of the game.

9. score()

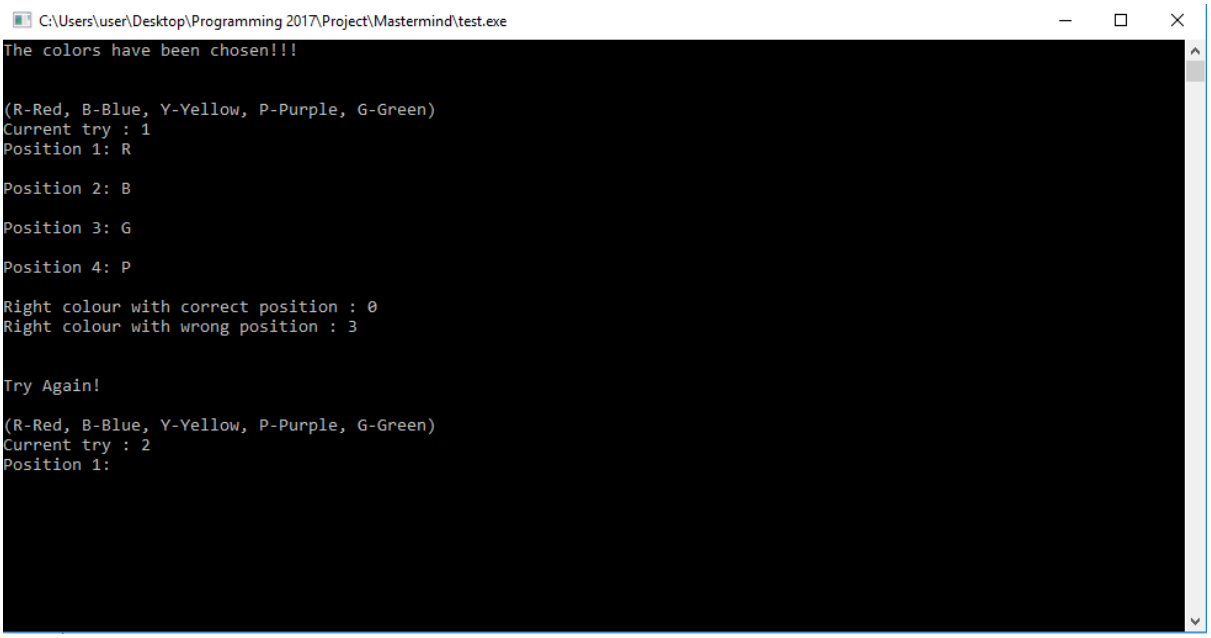
   This function shows the high scores of the players in the game.

SCREENSHOTS OF THE PROGRAM

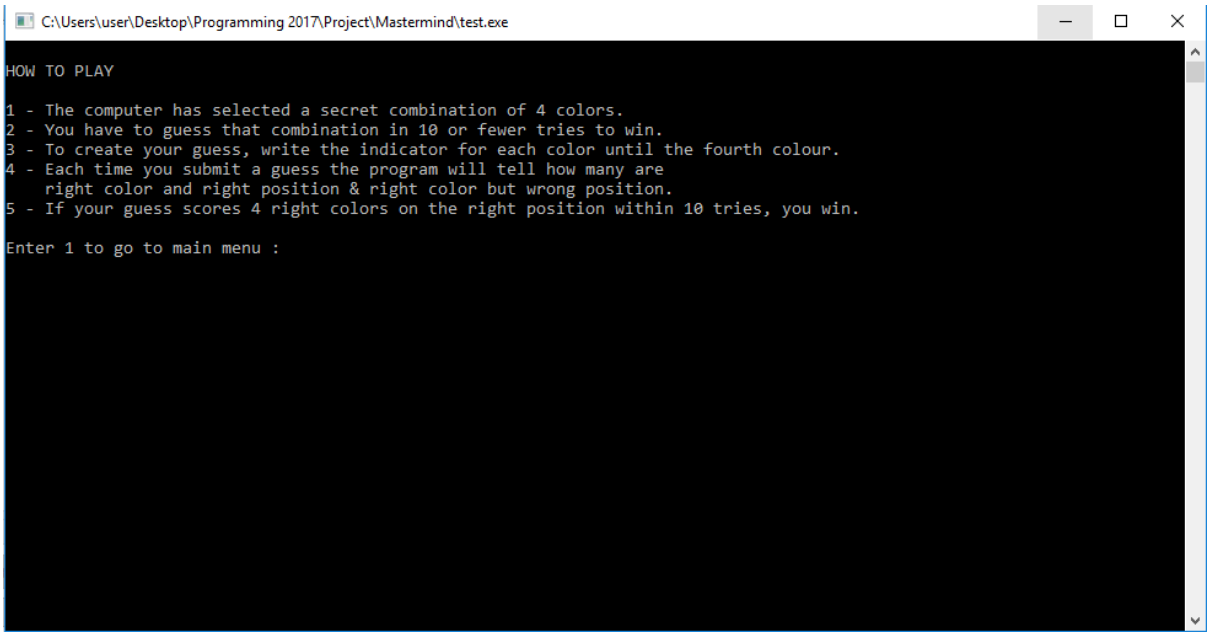
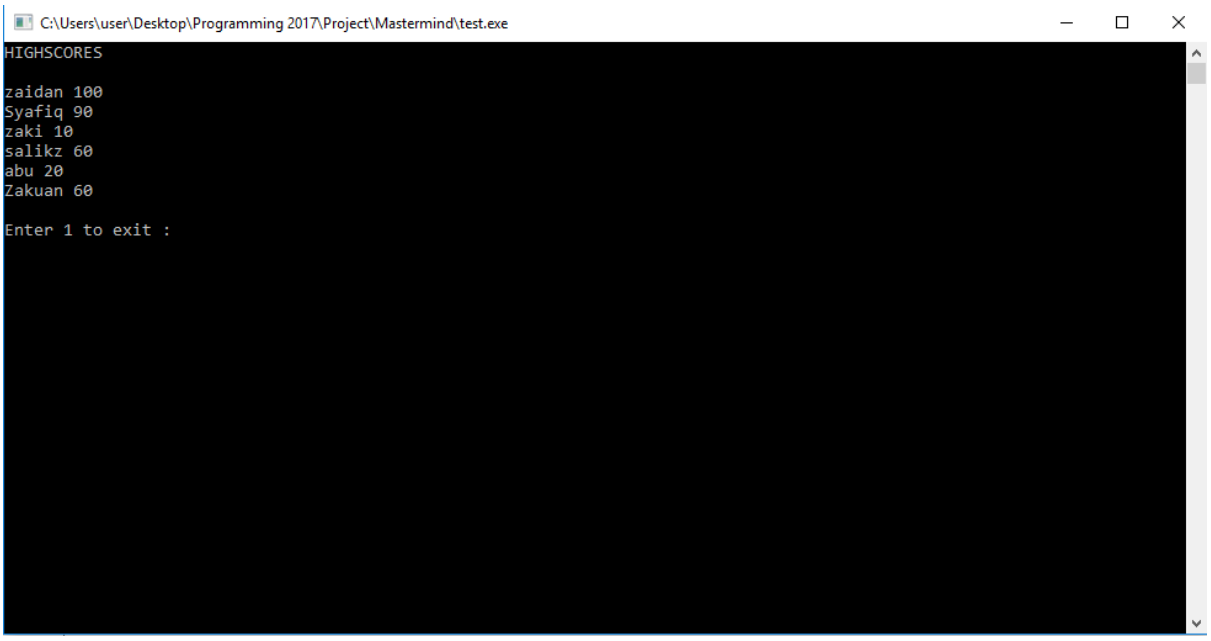
1. Main Menu



2. The game



3. Instruction of the game



4. High scores of the game