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KULLIYAH OF INFORMATION & COMMUNICATION TECHNOLOGY

**CSC 1100 ELEMENTS OF PROGRAMMING
SEMESTER 1, 2018/2019
SECTION <3>**

Project Title: Scrabble game

Group Name - Motivators

Group Members :

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Introduction

We are developing a game named Scrabble game where 4 players will compete against each other. The first player to score 100 will win.

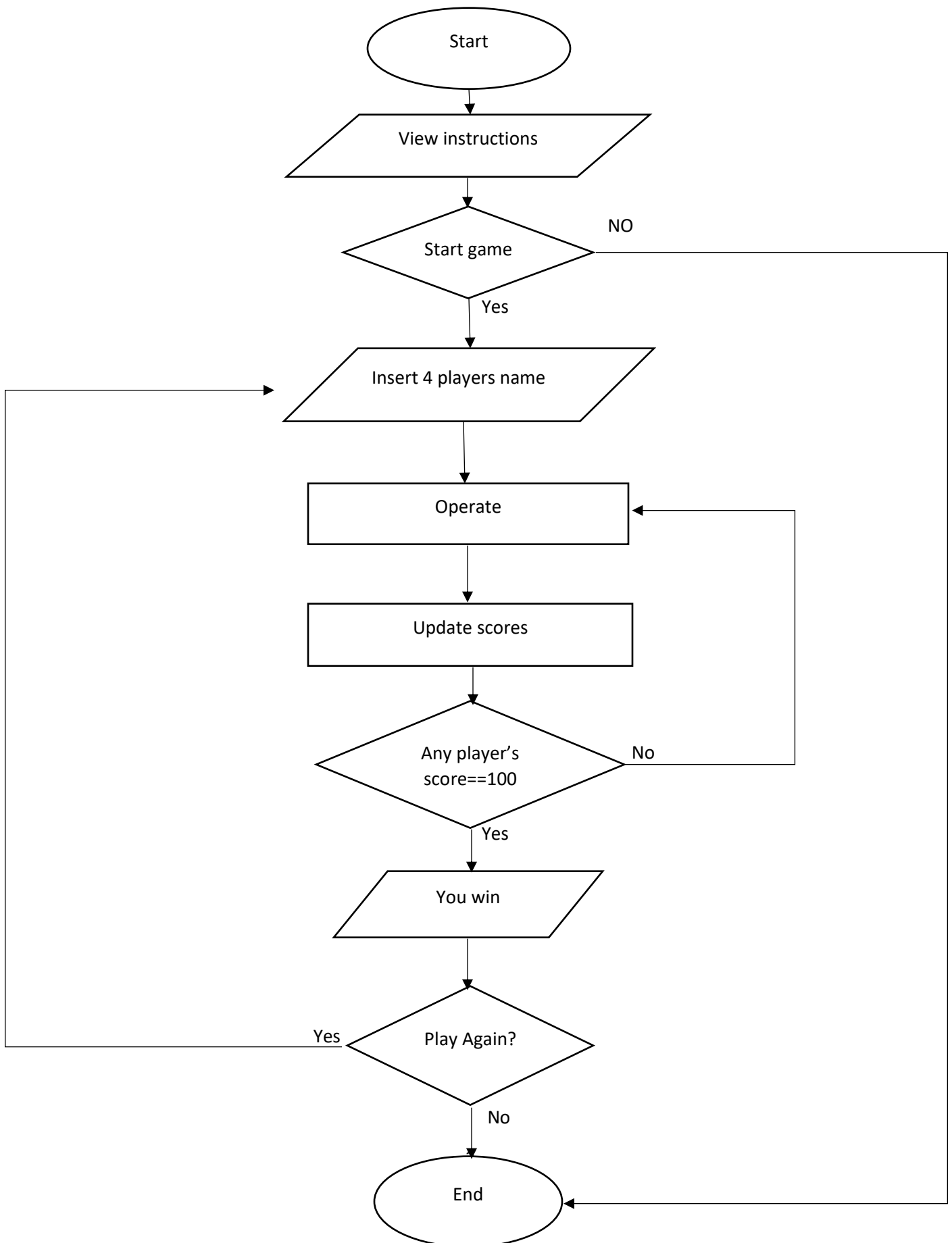
Players will insert their names before starting the game. After every turn their scores will be updated and displayed. We will randomly generate five letters and let players guess the longest possible word from them. Players have to type the longest possible word by using at least TWO of those random letters. If a player writes a word that does not matches with at least 2 letters of the random letters, his point will not be counted.

Every letter will be considered as 5 points and if the player types a word of 7 letters or more he will get extra 30 points (bonus). They will also have the option to skip a word by inputting @. To program this game we are going to use C++ functions, input, output, update, pointers, and array.

Gantt chart

[illegible]

Flowchart for Scrabble game



Functions Used in This Program

6 functions were used during creating the program :

Functions	Descripton
Start ()	In this function, the staring / welcome screen will be displayed
View_Data()	In this function, the instructions and methods of playing game will be displayed or viewed by the user
Insert_Data()	In this function, the users or players who will join this game will insert their names before starting the game. Four players must join in order to play the game.
Update_Data()	In this function, the scores of players will be updated and displayed. The scores will keep updating until one of the players exceeds 100 points to win.
Delete_Data()	In this function, the previous attempt of the game data will be removed and it will reset all the vlaues of datatypes and functions for starting the game again.
Randletter()	This function will generate the five random alphabets or letters for the player who will input his word depending on these letters excecuted by this function

Sample of Screenshots

- First of all, the welcome screen with the instructions are displayed and then players will log in with their names

```
#####
#####
### #####
### #####
### #####
### #####
### #####
#####
#####
SCRABBLE GAME

::: WELCOME TO THE SCRABBLE GAME :::

Let's start with the rules ::
1 : First of all the players will login their respective names .
2 : Then each player will be given some random letters by computer .
3 : Players have to type the longest possible word by using at least TWO of those random letters .
4 : Each letter of the word will provide the player with 5 point .
5 : If a player types 7 letters or more in one word,he/she will be given an extra 30 points .
6 : The first player to exceed 100 points will be the winner.

NOTE : All the words entered here should be meaningful and if any player
enters a meaningless word than he will be disqualified !!

PRESS 1 TO CONTINUE ..... 1

::: WELCOME TO THE SCRABBLE GAME :::

Let's log in to play the Game Of Scrambling
Player 1 : mashkur
Player 2 : barkullah
Player 3 : ikram
Player 4 : ashik
```

- Player 1 typed “egg” where letter ‘e’ matches with the random letters but ‘g’ is not matching. So his score will not be counted cause only 1 letter is matched

```

::: WELCOME TO THE SCRABBLE GAME :::

Player 1 : mashkur          Player 2 : barkullah
Score    : 0                Score    : 0
Player 3 : ikram            Player 4 : ashik
Score    : 0                Score    : 0

Player 1 turn
Your letter:
d b i e o
Enter your word(press @ to skip): egg

```

- Player 2 inputs “danger” and there are at least 2 letters in the word that matches with the random letters. So he will get 5 points for each letter.

```

::: WELCOME TO THE SCRABBLE GAME :::

Player 1 : mashkur          Player 2 : barkullah
Score    : 0                Score    : 0
Player 3 : ikram            Player 4 : ashik
Score    : 0                Score    : 0

Player 2 turn
Your letter:
n u e d
Enter your word(press @ to skip): danger

```

- Player 3 inputted “elephant” which is correct and has more than 7 letters. So he will get an extra 30 points for that.

```

::: WELCOME TO THE SCRABBLE GAME :::

Player 1 : mashkur      Player 2 : barkullah
Score    : 0           Score    : 30
Player 3 : ikram       Player 4 : ashik
Score    : 0           Score    : 0

Player 3 turn
Your letter:
i t e e o
Enter your word(press @ to skip): elephant

```

Player 4 skips his turn by inputting '@' sign.....So his score will not be counted

```

::: WELCOME TO THE SCRABBLE GAME :::

Player 1 : mashkur      Player 2 : barkullah
Score    : 0           Score    : 30
Player 3 : ikram       Player 4 : ashik
Score    : 70          Score    : 0

Player 4 turn
Your letter:
w a o h e
Enter your word(press @ to skip): @

```

- At last, player 3 managed to exceed 100 points first. So he wins the game....

```
      :::  WELCOME TO THE SCRABBLE GAME  :::  
  
=====   
          Congratulation ikram  
          You've won the game  
=====
```

- After finishing the game, the program will ask the user to if he wants to play again or not. Typing yes/y will restart the game and no/n will close the program.

```
Do you want to play again? (y=yes/n=no):no
```