Object Oriented Programming

Term Project	Stage 03	Marks 100

Instructions

You are required to work on this project **individually**. Absolutely **NO collaboration** is allowed. Any traces of plagiarism would result in an **"F"** grade in this course and possibly **disciplinary action**. You are also **strictly not allowed** to discuss or take help from any of your peer student(s) but taking advice from your **Teacher** and from **Teacher Assistants** will be highly appreciated ☺ ☺ ☺

Due Date and Submission Instructions

Please send the **source code .cpp file only** labeled with your complete roll number at areeba.ilyas@pucit.edu.pk on Sunday, January 21, 2018 till 11:59 PM.

INTRODUCTION

In the previous two stages of your project you develop the game Tic – Tac – Toe for two human players and for the single player. Now you are required to add a new feature through which a player can save the state of the game whenever he/she wants to do that and resume it from where he/she left the game at any instance of time.

The point to remember is that, a player can save the game many times; for example, the user can save it at time 1 followed by time 2 and so on. And when the user wants to play the game again you have to show him all the saved sequences from one of which will be selected by the user and game resume from that particular state. Additionally you should provide a facility to remove any of the already existing game state by giving option to the user.

SAMPLE EXECUTION

Welcome to Tic – Tac – Toe

1. **Load a Saved Game**
2. **Delete a Saved Game**
3. **New Game**

Enter your choice: 1

1. **Game saved at 23/01/2014 06:45:00 PM**
2. **Game saved at 23/01/2014 06:45:05 PM**
3. **Game saved at 23/01/2014 06:45:15 PM**

Which state you want to load: 2

Load Successful

Human: Select a location: 4

X	2	O
4	5	6
7	8	9

Press 'S' to save the game

Human: Select a location: 4

X	2	0
X	5	0
7	8	9

Press 'S' to save the game

Human: Select a location: 7

X	2	0
X	5	0
X	8	9

Human Wins

Want to play again [Y/N]: Y

1. **Load a Saved Game**
2. **Delete a Saved Game**
3. **New Game**

Enter your choice: 3

1. **Single Player (Human vs Computer)**
2. **Two Player (Human vs Human)**

Enter your choice: 1

Select playing grid

1. **3 X 3**
2. **4 X 4**
3. **5 X 5**

Enter your choice: 1

1	2	3
4	5	6
7	8	9

Press 'S' to save the game

Player 1 Select a location: 1

X	2	3
4	5	6
7	8	9

… … …
… … …

Want to play again [Y/N]: Y

1. **Load a Saved Game**
2. **Delete a Saved Game**
3. **New Game**

Enter your choice: 1

1. **Game saved at 23/01/2014 06:45:00 PM**
2. **Game saved at 23/01/2014 06:45:05 PM**

Which state you want to delete: 1

Deleted Successfully

MARKS DISTRIBUTION

Execution	Error Handling	Coding Style	Comments	Total
50	20	20	10	100

NOTE: - No submission will be accepted after the due time of Sunday, 21th January 2018.

B E S T   O F   L U C K