**Bilkent University**

Department of Computer Engineering

CS 319- Object Oriented Software Engineering   
Quantum Chess

Incredible in Thought

**Final Report**

Group 2A

November 4, 2017

Contents

[1. Implementation Done & User Guide 3](#_Toc495173620)

[2. Change In The Design 3](#_Toc495173621)

[3. What to Do Next 5](#_Toc495173626)

[4. Conclusion 7](#_Toc495173630)

# 3. What to Do Next

* **Implementation of players:**

Player class does not included the implementation yet. It is planned to implement the chess game without quantum powerups and players in the first iteration and after implement the parts which are specific to the QuantumChessGame.

* **Implementation of QuantumPowerUps**:

Since the game does not have player at this moment, QuantumPowerUps, which are belonging to players, are not implemented yet. However, movements regarding to the powerups are considered for the implementation. Therefore, powerups are considered at the backend operations but not implemented at the front-end.

* **Game Screens:**

We are currently working on the game screens and their intent with controllers. Main menu, game play menu, help menu and credits menu will be implemented after the first iteration. The most difficult part of the game play menu, board, is implemented in the first iteration.

# 4. Conclusion

What we have learnt:

We choose this project to learn more about Quantum Chess, design it and develop this game for people who are curious about chess game. When we design this game we learn a lot of thing about Object Oriented Software Engineering. As a team what we learnt listed below:

* Our group members understand that group projects can promote important intellectual and social skills and help to prepare us for a work world in which teamwork are increasingly the norm.
* We understand that after graduating what we can do in our field.
* This project was a good chance to improve our Object-Oriented skills and all of the group members benefit from this chance to improve their skills
* We develop program in Intellij Idea it means that we improve our coding and using IDE skills
* We understand the concept behind MVC and the advantages it offers.
* Our group members improved their algorithms when we try to implement “Quantum Tunneling”, “Quantum Superposition” and “Quantum Entanglement”.

What will be changed:

As it is mentioned before there are some significant differences between Quantum Chess and the classic chess. It may be complicated to understand for users who are unfamiliar with the game. So, we give players some detailed knowledge about how to play the game. After clicking “Help” button on the main menu. Users are able to access information about rules of the game on Help page. But, if time requires and we deal with our issues, it is planned to put a visual tutorial. Since, we believe that demonstrating visuals is more easy to comprehend for players. In this tutorial, some instructions will be given to users. Users are desired to click pieces and it will be shown that which locations the pieces can move and how they can use the power-ups. Thanks to tutorial, players will be trained as soon as possible.