**Requirements Analysis Document**

**COMP3000**

**Computing Project**

**2022/2023**

### **Project Title**

ChessAI – A Chess Practice Tool

### **Project Lead Developer / Manager**

Callum Organ

### **Project Supervisor**

Lingfen Sun

### **Links**

Source code:<https://github.com/ORG4N/ChessAI>

Kanban board: <https://trello.com/b/TubtD2KW/chessai>

|  |  |  |  |
| --- | --- | --- | --- |
| Document Revision History | | | |
| **Date** | **Ver.** | **Description** | **Changed by** |
| 01/11/2022 | 1 | Initial Requirements Analysis document. | Callum Organ |
|  |  |  |  |

### **Document Overview**

The purpose of this document is to outline the stakeholders of the project and thereby unearth the requirements of the project. These requirements start as high-level features/functions/tasks and are then decomposed into user stories. This further analysis of requirements enables requirements to be described in relation to a user’s needs and wants. Prioritisation of these user stories provides a value to each of the user’s expectations of the project. The backlog is the formal list of all requirements.

For a greater understanding of the Project’s goals, objectives, and vision see the Project Initiation Document within the GitHub repository.

### **Stakeholders**

|  |  |  |  |
| --- | --- | --- | --- |
| Stakeholder Interest and Impact Table | | | |
| **Stakeholder** | **Interests** | **Estimated Project Impact** | **Estimated Priority** |
| End-users | Use application to improve at chess.  Use application for entertainment. | High +  High + | 1 |
| Project Supervisor(s) | Ensure project is on track.  Provide advice to primary stakeholders. | High +  High + | 5 |
| Project Manager(s) | Improve soft skills.  Expand project management knowledge.  Make sure deadlines are met. | Medium +  Medium +  High ? | 3 |
| Project Owner(s) | Improve soft skills.  Ensure prototypes meet user needs. | Medium +  High + | 4 |
| Project Developer(s) | Improve hard skills, expand technologies.  Expand project portfolio.  Ensure code is not buggy. | Medium +  Low +  High + | 2 |

The project will have many stakeholders and these stakeholders each have different interests within the project, and these may conflict with the interests of other stakeholders. For example, managers want features to be done by a specific date, which puts stress on developers as they are interested in developing bugless code, which consumes extra resources, such as time. Each stakeholder has a different idea of how to make the project successful and therefore it is important to prioritise the needs of each stakeholder and determine the impact that they have within the project.

Within the *Stakeholder Interest and Impact table* it is identified that the end-user is the most important stakeholder – this is because they are the ones that will interact with prototypes throughout the delivery of the project, and they are the target audience for the completed chess application.

### **High Level Requirements**

Functional requirements describe features and system behaviour. The end-user should be able to use these features to perform specific actions. On the other hand, non-functional requirements identify criteria that the system can be judged upon – often to describe a systems capability.

### **Functional Requirements**

|  |  |
| --- | --- |
| **No.** | **Description** |
| 1 | User can play Chess against an AI. |
| 2 | User can choose to start with White or Black pieces. |
| 3 | User can select difficulty range of AI. |
| 4 | User can see win rate against AI. |
| 5 | User can see statistical analysis at the end of each match. |
| 6 | User can select match type (rapid, blitz) |
| 7 | User can play against AI mimicking selected professional player. |
| 8 | User can Abandon or Surrender the game (counts as loss). |
| 9 | AI is trained against a dataset. |
| 10 |  |
| 11 |  |
| 12 |  |

### **Non-Functional Requirements**

### **User Stories**

Convert requirements into user stories

### **Prioritisation**

MOSWCOW prioritisation of user stories

### **Product Backlog**

Finalised list of user stories with prioritisation applied to them