Contrasting Chess

Agile Tracking Sheet

Troy Neubauer

Date 3/31/2021

CS 225, Spring 2021

Embry-Riddle Aeronautical University

Daytona Beach campus

1 Aerospace Boulevard

Daytona Beach, FL 32114

**Table 1: User Story Summary**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **User**  **Story ID** | **User**  **Story** | **Completeness**  **Criteria** | **Effort**  **Estimate**  **(hours)** | **Priority** | **Worked in**  **Sprint**  **(Estimated)** |
| U1 | As a player I want to see an window with an empty board | A JavaFX window opens with an empty 10x10 board | 2 | 1 | 1 |
| U2 | As a player I want pieces to display on the board | The 6 different piece types are read from image files and drawn on the board | 2 | 2 | 2 |
| U3 | As a player I to move pieces | Pieces can move anywhere | 1 | 3 | 1 |
| U4 | As a developer I want to be able to load a Rust library from a .dll file | Rust hello world compiles to dynamic library and is invokable via JNI | 3 | 3 | 2 |
| U5 | As a user I want the software to jump to a chess position a FEN and PGN file | FGN and PNG files can be read from disk and the rendered | 1 | 3 |  |
| U6 | As a user I want non check moves to be checked for legality | Generate the list of all valid moves in a position and allow only these moves to be played (except for checks) | 4 | 4 |  |
| U7 | As a user I want to play against an AI that plays random legal moves (illegal checks remain) | Each turn the AI will generate all legal moves in the position and pick a random one | 1 | 5 |  |
| U8 | As a user I want to only be able to play only legal moves (no illegal moves while in check) | Make sure all edge cases with regards to checks are tested and working | 4 | 4 |  |
| U9 | As a user I want to play against an AI that plays better than random moves | Use the minimax algorithm with a piece-value heuristic to pick better than random moves | 2 | 6 |  |
| U10 | As a user I want the AI to be stronger at the game | Spend time improving move generation and evaluation performance to increase the AI’s strength | 2 | 7 |  |
| U11 | As a user I want to be able to run a chess server and play games with anyone in the world | Implement network based games. (optional) | 6 | 8 |  |
| U12 | As a user I want to be able to run the application in my web browser without having to download anything | Write a rust frontend for the web and compile the project to webassembly for use in website embedding. (optional) | 8 | 9 |  |

**Table 2: Sprint Work Summary**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sprint** | **Backlog** | **In Work**  **This Sprint** | **Completed**  **This Sprint** |
| 1 | U5-U12 | U1-U4 | U1,U3 |
| 2 | U2,U4-U12 | U2,U4-U6 |  |
| 3 |  |  |  |
| 4 |  |  |  |

**Table 3: Remaining Effort Estimate (Burn Down Chart)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Start** | **1 March** | **8 March** | **15 March** | **22 March** | **29 March** | **5 April** | **12 April** |
| Planned |  | 30 | 25 | 21 | 16 | 11 | 6 | 0 |
| Actual |  | 30 |  |  |  |  |  |  |

Extend to the end of the semester