**SOFTWARE ENGINEERING G6046**

**APPENDIX A: SPRINT DOCUMENTATION TEMPLATE**

| 1. **Summary data** | |
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| Team number | 35 |
| Sprint technical lead(s) | Eliza Back |
| Sprint start date | 07/03/2022 |
| Sprint end date | 21/03/2022 |

| 1. **Individual key contributions** | |
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| **Team member** | **Key contribution(s)** |
| Dzhan Hasan | Product Design |
| Eliza Back | Development / Project Lead |
| Rie Tse | Development / System Testing |
| Sean Wadsworth | UI Development |

| 1. **User stories/task cards** |
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| * Iterate on the design documentation to resolve issues discovered:   + Create a new Class Diagram   + Create a new Sequence Diagram * Begin development on the main product to include additional core functionality   + A Game State Manager (GSM) to track vital information   + Buying, selling, and mortgaging of properties on the board   + Money system * Develop a User Interface (UI) to activate functionality and display information to the user |

| 1. **Requirements analysis** |
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| | **Functional** | | | | --- | --- | --- | | **Reference** | **Description** | **Mandatory/Desirable** | | F1 | The prototype shall allow for the players to buy properties | Mandatory | | F2 | The prototype shall allow for the players to sell properties | Mandatory | | F3 | The prototype shall allow for the players to mortgage properties | Mandatory | | F4 | The prototype shall have a turn system implemented | Mandatory | | F5 | The prototype shall give players £200 when start is passed | Mandatory | | F6 | The Sequence Diagram shall illustrate key events given by the client by using equivalent classes and methods | Mandatory | | F7 | The Class Diagram shall be iterated upon in line with the outcome of previous team meetings | Mandatory | | F8 | The UI should have buttons to move, buy, sell and mortgage and end the turn | Mandatory | | F9 | The prototype shall double the rent if the player owns all the same colour properties | Mandatory | | F10 | The prototype shall let the player get the half of the value shown on the card from the bank when the property is mortgaged | Mandatory | | F11 | The prototype shall not allow the mortgaged property to be rented | Mandatory | | F12 | The prototype shall allow the mortgaged property to be sold to the bank to half price | Mandatory | | F13 | The prototype shall have tokens as boot, smartphone, cat, hatstand, ship and iron | Mandatory | | F14 | The Game State Manager shall initialise the game, by setting players to the start location, determining turn order, and setting all values to their starting values. | Mandatory | | F15 | The Game State Manager shall allow for turn based gameplay and track the current player at all times | Mandatory | |
| | **Non-Functional** | | | | --- | --- | --- | | **Reference** | **Description** | **Mandatory/Desirable** | | NF1 | The project shall be developed in Unity. The Unity version used shall be 2020.3.26f1. | Mandatory | | NF2 | The project shall be written in C#. The version used shall be Visual Studio 2019, in line with the Unity version used. | Mandatory | | NF3 | The board design should have a similar design to competing products. | Mandatory | | NF4 | The board design shall have a unique design while still retaining the constraints from the requirement NF3. | Desirable | | NF6 | The project shall function without issues on both Apple devices and Windows. | Desirable |  | **Domain** | | | | --- | --- | --- | | **Reference** | **Description** | **Mandatory/Desirable** | | DM1 | The game should be fun have a varied colour palette | Desirable | |

| 1. **Design**   Due to the realisation that the original set of design documentation was inadequate as we applied it during product development, a new, more detailed Class and Sequence diagram had to be produced before further development commenced. |
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| 1. **Test plan and evidence of testing** |
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| Initially, we had planned to conduct thorough unit testing during each sprint, however we came across difficulties in getting this to function. As such we moved onto a new approach of system testing which gave us significantly more success. The results of this can be viewed in the Testing Document Spreadsheet. |

| 1. **Summary of sprint** |
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| All of our objectives this sprint have been achieved, so it is certainly considered to be a successful sprint. The required design documentation has been updated in line with our vision moving forwards.  Furthermore, we have completed design work on the main game assets (i.e. the board and player tokens). These have now been added to the game files and we have replaced the temporary board and player assets with the new models.  Regarding the product, significant progress has been made, hitting all our requirements, and resulting in a very basic form of the final product. The Game State Manager is now fully operational and keeps track of all the other data and functions within the game, allowing for a game to be played with five players. Said players can now purchase property spaces, which can then be sold or mortgaged.  As all requirements are met, we have no tasks which need to be carried over to the next sprint, as such we will continue to focus primarily on development and testing. |