**Project Plan: 4-to-Connect**

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| **Goal** |  | |
| **Stakeholders** | Professors and teaching assistants marking the project will be interested in 4-to-Connect. | |
| **Requirements** | **Functional**  Start page/view (show rules, how to play).  Piece can be placed into board.  Pieces can be placed beside or on top of each other.  Game is able to identify the winner.  A 6x5 board. | |
| **Non-Functional**  **Game is running smoothly.** | |
| **Deliverables** | **External Deliverables**  Project plan  GUI visual design, shows board  Player input slots on pygame work  Player input affects the board  External deliverables will be submitted to Markus by Gen. | |
| **Internal Deliverables**  Class Diagram  Case Diagram  Game Controller class  Game application class (uses players and board, accesses board methods)  Game player class (contains information about a player object)  Game Board print and piece abilities class (makes changes to board, hard)  Test file that checks possible cases | |
| **Scope** | **Must-Have**  2 players,  GUI,  Start game and restart game buttons, | |
| **Good-to-Have**  **A com player easy level** | |
| **Out-of-Scope**  **Different levels of com players,**  **Animated connect 4 moves,**  **Recommend move by computer,** | |
| **Milestones** | October 14th, 2019 | There will be a completed project plan detailing what each member will do and how they will accomplish it in the required time based on our goal. The plan will also contain an explanation of our means of communication and challenges we may encounter when working on the project. Additionally, the plan will outline requirements and the scope of our project as well as contain a description of deliverables, milestones and stakeholders. Finally, there will be a work-breakdown-structure and addendums page. |
| October 21st, 2019 | The classes to be implemented and their relationships will be known along with the specific design patterns we will use. Furthermore, all UML diagrams representing the project will be finished. Finally, our design review presentation will be complete. |
| October 27th, 2019 | All code for the game will be completed. The code will be intelligible and associated with clear commit messages. |
| November 10th, 2019 | Documentation for the game will be complete and the game will be fully implemented to stakeholder standards. |
| November 22nd, 2019 | The project repository will contain an interesting and well-worded README. A description and visual examples of the game along with its rules will be in the README. How to install the game and its required hardware and software will be in the project repository as well. Final presentation slides will be completed to the best of our abilities. |
| **Risks** | Some of us have potentially conflicting schedules. As a result, our team may encounter challenges when scheduling meetings. However, this risk can be minimized by using social media to contact those who missed a meeting. | |
| **Means of Communication** | Each team member will communicate through the mobile application “WhatsApp”. If a team member is experiencing difficulties and requires help, they are free to request assistance in the group chat. On top of this, Gen will be responsible for checking if team members need help.  Communication will not be exclusively done through “WhatsApp”. Our team will also schedule in-person meetings once a week to discuss topics that may be inappropriate for a medium like “WhatsApp”. | |

**Work Break Down Structure**

**Addendums**