# CSC290 Project Plan

## Overview

| | |
|---|---|
| Project Name | Connect Four Project |
| Last Revision | Oct 13th 2019 |
| Submitter Name | Gen Tomita |
| Begin Date | Oct 2nd 2019 |
| Expected End Date | Nov 22nd 2019 |

## Details

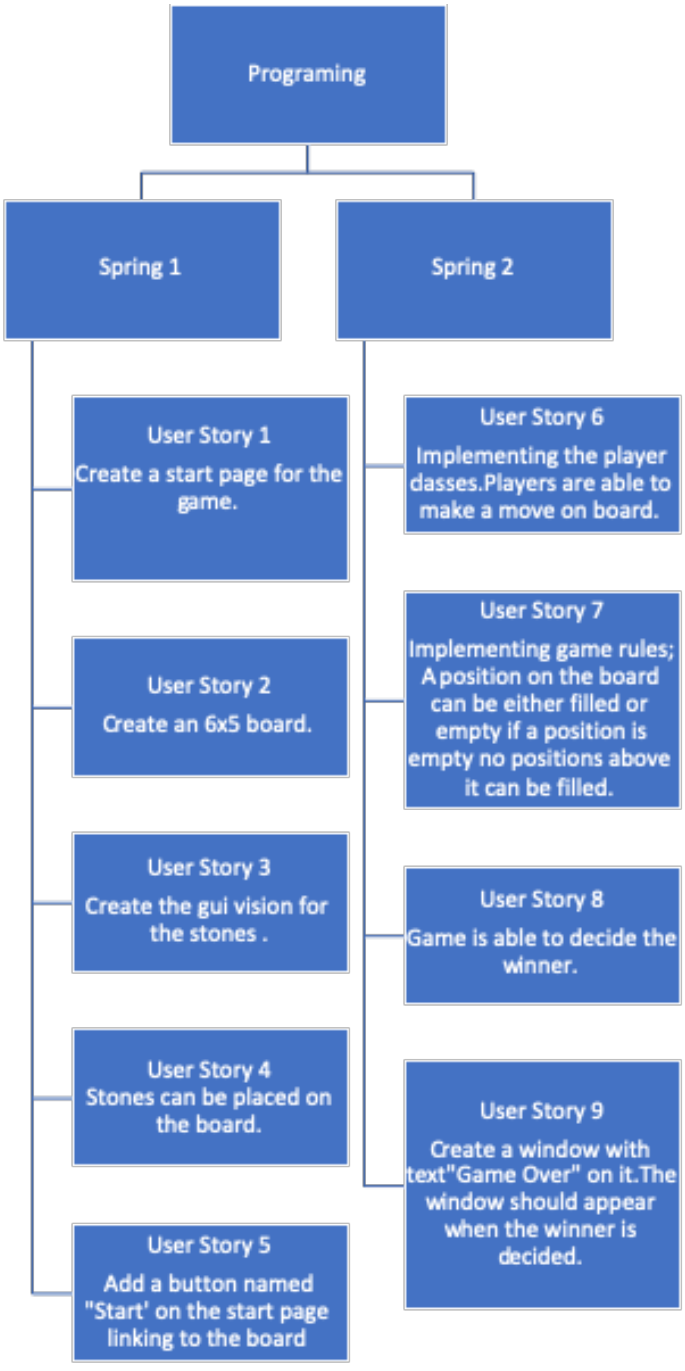
| | |
|---|---|
| Project Goal | Creating Connect Four Project by Pygame |
| Project Scope | Must-Have<br>• GUI control with pointer and clicks<br>• 2 Players PvP<br>Good-to-Have<br>• CPU vs Player<br>• Pages explaining how to play<br>Out-of-Scope<br>• CPU with different strength<br>• Animated moves of stones |
| Risks | Someone drops course, scheduling conflict, internal problem in implementation |
| Main communication platform | What's app, Github documents |
| Deliverables | Details of our deliverables are stated in its section. |
| Stake Holders | Professors and TA's marking the project. |
| Requirements | Functional<br>• Start page/view<br>• Piece can be placed into board<br>• Pieces can be placed at proper position with mouse<br>Non-Functional<br>• Satisfactory user experience<br>• Smooth GUI |
| Assumptions | All members have regular skills in<br>• Python 3<br>• GitHub |
| Dependencies | Our deliverables are working necessarily with<br>• Python 3<br>• Pygame |
| Team Members | • Gen Tomita.<br>• *Ilija Zivkovic*<br>• *Hafsah Moalim*<br>• *Calvin Vadivelu*<br>• *Yao Yang* |

# Work Breakdown

Our game consists of 4 main classes

1. Main class
2. Board class
3. Player class
4. GUI models and controllers class

- Since the team consists of 5 members, each member is responsible to a single class and one member will be the project manager who is responsible for checking the delay in developing and the dependency of each class, and cleaning code smells.
- Below is the expected relations between each class.
- Designing of each class are done by whole group so that dependency and naming conventions are consistent. Project manager will be responsible for checking those after coding is started.
- If one class became too large and one's work load gets unfair amount, we will discuss the extraction of responsibility of the class and other member will help implementation of it.



# Milestones

| | |
|---|---|
| Oct 14th | 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. |
| Oct 21st | 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. |
| Oct 27th | All code for the game will be completed. The code will be intelligible and associated with clear commit messages. |
| Nov 10th | Documentation for the game will be complete and the game will be fully implemented to stakeholder standards |
| Nov 22th | 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. |

# Deliverable

| | |
|---|---|
| External Deliverables | Project plan |
| | GUI visual design, shows board |
| | Player input slots on pygame work |
| | Player input affects the board |
| | # Any submissions as a group are made by project manager. |
| | |
| 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 |
| | Python Unit test files |

# Communications

1. All communications regarding the project are expected to be on the Whats app ensuring all team members can see logs in order to prevent the project from communication troubles.
2. Any code changes must be committed to different branches for each member. All pushes should be commented with name.
3. Merging to master branch is allowed if it does not conflict with any other classes that one is not responsible.
4. If a member thinks it is inevitable to modify other class, the project manager must be notified that and check the modification does not influence other classes.
5. If one has trouble in schedule or implementation, they must discuss with project manager as soon as possible

- 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.
- 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, project manager 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”.

# Addendum

*Ilija Zivkovic*

These are my contributions to the project plan. I filled out about half of the rough draft with jot notes. I provided notes for the main stakeholder and means of communication (What's App) as well as Risks, Must-Haves, Internal/External Deliverables and Functional/Non-Functional Requirements. Milestones was done by other group members. Others also added notes and converted them to full sentences for the final. I Discussed with group members on the back-end python class codes, which include: Game Board (board that contains all the spots and abilities to check or add spots), Player (contains information on the player and requests a move), Main Console (runs the game rules with access to player and board classes) and the GUI View (pygame functions to display the game). We decided that I work on the board class and its functions. I have provided some feedback on the layout for the Ideas Work Breakdown but did not write any myself. I have arranged a meet up with the group on Sunday. This is all I did for the development of the Project Plan.

*Hafsah Moalim*

I, Hafsah Moalim, have contributed to the project plan by providing a template for this plan and by making additions along with changes to teammates' work. The template included a rough draft of the project details portion of the assignment and a formatted Work Breakdown Structure. However, the official formatted project plan was not made by me. I made additions to the project details portion of the assignment by writing about the team's milestones and attaching appropriate dates to them. Finally, I edited various other sections of our work to fit the project plan criteria. In particular, I edited some of the project plan details and communication sections to be more grammatically correct.

Gen Tomita

I firstly contributed this project by adjusting members schedules and conducting the meeting. I also became the administrator of the repository for this project. Hence updating readme, checking whether everyone pushed required files, and organizing them are currently my task. As I am updating those info, I am also making the final version of each deliverables such as this project plan pdf. The main flow of our group work is that everyone discuss the ideas and I will reconcile those and putting them into pdf, I believe this gives more coherence to deliverables than editing one product with multiple people. All my works are immediately pushed into GIthub and members are notified by group messages so that anyone can point out mistakes or improvement. This ensures the fairness of everyone's contribution.

Calvin Vadivelu

My contributions to the project plan are very limited as I missed the later meetings we had as a team and my teammates were gracious enough to finish the work. I helped with communications among the team by getting numbers and creating the WhatsApp group which we interact on. I was able to see a rough version of the project plan before the assignment and provide some verbal feedback on it. Honestly however, I did not contribute much to the project plan in it's current form and it was entirely done by my great group members. I have communicated to them that I will make it up to them throughout the future of this project and will be able to pick up the slack later if any of them are overwhelmed with other obligations.

Yao Yang
My first work down in the project plan was to add some additional contents in functional/non-functional requirements and scope. I also created a rough WBS for implementing the game which divides the work into 2 main parts(GUI, Playing) and several sub-parts(Board, Stones, Game Roles, Winning Condition, Players); then, I improved it by dividing the work into 2 Springs and 9 User stories in total. However, I believe there will be more User stories when we are actually implementing the game. I also created a WBS for the design review presentation.