**CS 5551 Team Project**

**Sprint 0: Up-front Planning**

**Objective:**

Lay a solid foundation for the project by defining the programming environment, tools, standards, and initial design ideas.

**Action Items:**

Team Setup

Choose a team name suitable for public representation. “Diamond Incorporated” is the current team name. Change if team has other preferences.

Designate a team coordinator. “Alex will fill this role”. If a team has other preferences please speak up.

Define the roles and responsibilities of each team member. For instance:

Game Logic Developer: Responsible for implementing the game rules and mechanics.

UI Designer: In charge of creating the user interface design.

AI Developer (if needed): Works on implementing AI opponents.

Testing and Quality Assurance: Ensures the game works as expected and performs testing.

Communicate team details (team name, coordinator, and member details) to the instructor via email.

Understanding the Game

Make sure every member understands the rules and logic of the Nine Men's Morris game.

Play the game online if necessary, e.g., at toytheater to get a feel.

Discuss game variations like Six Men's Morris and Twelve Men's Morris.

Decide Technical Details

Choose the programming language. Finalize the decision of using Python unless the team has other preferences.

Determine the development environment and IDE. For Python, popular choices include PyCharm, VSCode, and Jupyter Notebooks. Personally I like VSCode.\*

Decide on a GUI library for Python. Options include Tkinter\*, PyQt, and wxPython. Tkinter is my preference because it is bundled with most standard Python installations, so no additional installation is necessary and easy to get started with for simple GUI applications. With that said Tkinter is not going to produce a high quality commercial product so if we want to challenge ourselves I’m always supportive!!

Select a unit test framework. For Python, pytest or unittest\* are widely used. Personally I prefer pytest for its simplicity but it requires installation whereas unittest does not.

Adopt a coding standard. I think we should use the Google Python Style Guide. (Using ChatGPT, Github CoPilot, etc. to modify your code to fit the standard is an easy task and can be done later if a team member is struggling to output code that meets the standards. Easy Peezy!!)

Version Control & Collaboration

Set up a project repository on github.com. Ensure all team members have access.

Decide on a branching strategy. Feature branching is a popular choice.

Add a .gitignore file specific to Python projects to keep unwanted files out of your repo.

Initial Design Sketches

Sketch an initial GUI design for the game. Tools like Balsamiq, Figma, or even hand-drawn sketches can be used.

Discuss the basic architecture of the application, ensuring a clear separation of the game logic from the GUI.

Documentation & Reports

Set up a documentation standard. Decide on the tools and formats (e.g., Word, Markdown, Google Docs). I’m partial to Word but Google Docs is a close second.

Start drafting the Sprint 0 report. Document decisions made and rationales.

Communication & Meetings

Decide on a communication platform: Slack, Microsoft Teams, Discord, etc. Currently Discord is the choice obviously. Lol… I prefer Microsoft Teams because of the seamless integration of Microsoft tools ( specifically word for this project) and scheduling assistant.

Set a regular meeting schedule: weekly/bi-weekly. Weekends are probably easiest for scheduling but if in person meetings are chosen by the group (strongly recommended) then it would be smart to try to find a time when everybody is on campus during the week.

Assign a team member to record minutes of each meeting.

Tasks Distribution

Divide the above tasks among team members, ensuring everyone has clear responsibilities.

Set deadlines for each task before the next meeting.

**Deliverables for Sprint 0:**

Project repository on GitHub.

Initial GUI sketches and basic architecture diagram.

Sprint 0 report detailing decisions made during this planning phase.( Due by 9/3/23 )

Meeting schedule(thurs @ 12:00 @ Flarsheim Hall Rm 310 (outside of class)) and communication plan.

Documented coding standards and chosen tools.

Remember, the key to a successful Sprint 0 is ensuring everyone is on the same page and that you have a strong foundation to start building upon in Sprint 1. Communication, documentation, and a clear understanding of the game mechanics will be critical.