**Team 3 Project Plan  
  
Introduction**  
Team 3’s project will create an executable to play checkers locally or with a bot at three levels of difficulty. The levels of difficulty will include the common trope of an “easy”, “medium”, and “hard” difficulty. If the team is able to get the project finished sooner than available we will be adding sound effects, and a soundtrack to the project.

Also David, our designer, created a [project design prototype](https://www.figma.com/proto/rUMMfdIkJUp8yJeDB0GZP8/Checkers?page-id=0%3A1&node-id=1-16&node-type=frame&viewport=-3097%2C163%2C0.6&t=Plq1M6Lycs6dazCq-1&scaling=scale-down&content-scaling=fixed&starting-point-node-id=1%3A16). It provides a rough outline visually of the final product.

**Project organization**

| Name | Role | Description |
| --- | --- | --- |
| Nolan Renie | Project Manager | Organizes meetings with the team, and professor. Works on the paperwork of the project. |
| David Lemmons | Designer/Developer | Designs the program and writes code for the program. |
| Joseph Moto | Developer | Writes code for the program. |
| Tristan Shore | Tester | Tests code and analyzes it for flaws. |
| Thomas Woolum | Tester | Tests code and analyzes it for flaws. |
| Maya Robinson |  |  |

**Risk Identification For Checkers Program**

| Risk | Description |
| --- | --- |
| Late Delivery | The project isn't turned in by the due date |
| Cloud Software Equipment Failure | The online services we use, Google Docs and Github, fail |
| Presentation Can’t Be Completed | The presentation isn’t turned in by the due date. |
| Team Members Not Available | One or more team members is unavailable to for on project |
| Project Idea Changes | The team wants to make something that’s not checkers |
| Proper Graphics Aren’t Made | The final project doesn’t contain quality visual graphics. |
| Hardware Equipment Failure | One or many team members’ device fails |
| Coding Becomes Too Much For Allowed Time | Some of the functionality isn’t completed by the due date. |
| Local Software Equipment Failure | The software used to build the project fails with the currently edited files being lost. |
| Can’t Find Time To Meet | The team is unable to find a time to meet together. |
| Debugging Can’t Be Completed | Some of the errors can’t be solved by the due date. |

**Risk Analysis**

| Risk | Probability | Effect |
| --- | --- | --- |
| Late Delivery | Low: The due dates a clear and can’t be misconstrued | Catastrophic: This would likely result in a zero. |
| Cloud Software Equipment Failure | Low: Sites like Github and Google Drive will most likely be secure. | Catastrophic: We will lose all of our files online. |
| Presentation Can’t Be Completed | Low: We should be able to complete the project in time leaving plenty of time for the presentation. | Catastrophic: This would likely result in a 0. |
| Team Members Not Available | Low: Despite the initial struggles, everyone seems available | Serious: This would cause a hiccup in work, and potentially cause a role review. |
| Project Idea Changes | Low: We will most likely stay with Checkers. | Serious: We have to essentially re-do everything. |
| Proper Graphics Aren’t Made | Low: The project is Checkers, it’s not going to be that insane visually. | Tolerable: As long as it looks fine and is playable, we should be fine. |
| Hardware Equipment Failure | Moderate: Our personal devices could malfunction. | Catastrophic-Serious: It depends on the issue, but it has the potential to completely put a device out of commision for days or weeks. |
| Coding Becomes Too Much For Allowed Time | Moderate: There is a possibility that we underestimated how complex coding Checkers would be. | Serious: Depending on what we don’t get finished, this could hurt our grade. |
| Local Software Equipment Failure | Moderate: The files or applications we use might run into an error or stop working. | Tolerable: We’re uploading files for the project to the cloud, so everything can be redownloaded. |
| Can’t Find Time To Meet | Moderate: Technology issues or other plans may lead for the group being unable to meet outside of plans | Tolerable: We can meet on a different date. |
| Debugging Can’t Be Completed | Moderate: We have two developers and testers, so we have a lot of eyes double checking code. | Tolerable: As long as everything game breaking is solved we’re fine. |

**Risk Planning**

Schedule Risk: Team 3 will be having updates every Thursday on what everyone has done so far. We’re aiming to get this completed a week or two before it's due to provide ample breathing room for refining. (make sure to write about schedule)

Technical Risk: Team 3’s Technical Risk has been mitigated. Our reliance on cloud services like Github and Google Docs are our only risks.

Resource Risk: Resources will be allocated based on the project's needs. Monitoring of resources will take place regularly and adjustments will be made to ensure that the project completes successfully.

Scope Risk: Team 3 has kept the scope small to ensure the project will be completed within the given timeframe. We have talked about possible improvements in case we complete the project too quickly, like adding sound effects, and soundtrack.

Financial Risk: All the software Team 3 is using is free so there’s no risk of needing to pay a subscription to keep access to cloud files.

**Hardware and Software Requirements**  
  
Hardware Requirements

* Windows computer
* Monitor
* Mouse and keyboard

Software Requirements

* Windows OS
* The game executable (provided in .zip)

**Work Breakdown and Project Schedule**  
  
Week 3: 8x8 board that you can move a pawn on  
  
Week 4: Turn system works for players, pawns can capture each other, pawns can be kinged

Week 5: Score tracks on side, get a dumb bot working

Week 6: Get training loop for bot to give it a “brain”

Week 7: Have varying levels of bot difficulty

Week 8: Ensure game quality and bot difficulty feels right.

Each week will be dependent on the last and it will be critical to the success of the project to complete them in a timely manner.

**Monitoring and Reporting Mechanisms**

We will be using Discord to communicate and schedule, and we’ll be using Google Docs and Github to collaborate. The team is familiar with these tools and can use them well. We will be posting a work update each Thursday/Friday of what we have done