**Project Management Plan**

**for**

**Poker [5 Card Draw]**

**Version 2.0 Final**

**Prepared by Sam Kline and Nick Simpson**

**Western Illinois University**

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# **Overview**

The project is to design and implement a poker game (5 Card Draw) within a timeframe of the current semester. No budget has been allocated for the project.

## **Project Purpose, Objectives, and Success Criteria**

The purpose of this project is to create a functional poker game (5 Card Draw) for users to enjoy and play casually. The only resources that will be shared throughout the program will be the definitions of cards and the shared data (like the input username and the count variable for the game being shared across frames) Some of the major milestones include: formation of the card class, completion of the count variable and proper display of it throughout frames, testing of the logic for the game confirming the proper winner of the round.

## **Project Deliverables**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Deliverable** | **Recipients** | **Delivery Date** | **Delivery Method** | **Comments** |
| Project Iteration 1 | CS 492 | Oct 13 | W.O. |  |
| Project Iteration 2 | CS 492 | Nov 3 | W.O. |  |
| Project Iteration 3 | CS 492 | Dec 1 | W.O. |  |

## 

Full list of project deliverables to be included as project work plan is completed.

## **Assumptions, Dependencies, and Constraints**

*Note: All listed dependencies are internal.*

AS-1: Both developers are capable and experienced with Java development and Git.

AS-2: Project is capable of being started and completed within a single semester.

AS-3: WIU Gitlab server remains available to all students over the course of the Project.

DE-1: Project Help Document cannot be completed until Project is completed

DE-2: Project GUI testing cannot be completed until Engine development is complete.

DE-3: Project AI testing cannot be started until Engine Development is complete.

DE-4: Engine cannot be started until data representation is complete.

CO-1: Additional development resources are not available.

CO-2: The Project must be completed by December.

CO-3: The Project must not exit with a RuntimeException or Error due to user action.

CO-4: No funds are available for development of the Project

CO-5: Development resources are restricted to free/open-source or WIU provided

Key Success Drivers:

* Quality

Areas of flexibility:

* Features

## **References**

<https://www.partypoker.com/en/how-to-play/hand-rankings> (Reference for hand Rankings)

<http://pokermistery.com/five-card-draw-rules> (Reference for the specific differences in the poker variation, 5 Card Draw)

## **Definitions and Acronyms**

TBD: To Be Determined- To signify that something will be defined in detail at a later date.

## **Evolution of the Plan**

**Iteration 1:**

Evaluation of the project plan will be done after each iteration of the project has been completed.

**Iteration 2:**

The plan is still mostly the same at this point in time. The focus has shifted slightly from just poker in general to a subset of poker, Texas Hold Em specifically. The SRS has been updated to reflect this all throughout including the title itself. This change was specifically made as both developers feel this will allow for the both of us to better apply our skills resulting in a better finished product. Since the change is not overly drastic, we still are using the same elements, methods, and card comparisons that we’ve been using but with slight alterations.

**Iteration 2.1:**

The plan is still mostly the same at this point in time. The focus has shifted slightly from just poker in general to a subset of poker, Texas Hold Em and now that a prototype for it has been created we want to try to bump up the game to see if we can do 5 Card Draw utilizing an engine specifically. The SRS has been updated in the evolution of the plan as we are not sure how far we can get by then but we have started using this iteration to attempt a 5 Card Draw game potentially as another mode. Since the change is not overly drastic, we still are using the same elements, methods, and card comparisons that we’ve been using but with slight alterations. We plan on separating a lot of the GUI and actual code in a couple ways as well as improving on the AI and betting system.

**Iteration 3:**

While the general plan timeline for development has remained the same, like mentioned in the previous iteration we did switch from Texas Hold Em to 5 Card Draw poker. This was the direction we chose to go in based on the material from the first submission as the engine and AI have both had some tweaks made to them due to our testing and bug fixes. When we evaluated what wh had in regards to our backend, it was easier for us to go ahead and convert the 2nd iteration’s simple design and logic to what we started initially in the 1st iteration’s backend. The both of us liked the way the AI and game logic worked so we changed directions. This let us separate the UI and the back end which was a goal of ours from the last time. The betting system saw some minor tweaks but overall we still decided to restrict the betting to increments of 5 in order to keep the logic simple as well. Unit testing proved to yield very helpful for change to 5 Card Draw.

# **Project Organization**

## **External Interfaces**

No external entities are relevant for the development of the Project.

## **Internal Structure**

Due to small size, the Project will be a co-developed monolith.

## **Roles and Responsibilities**

* Sam Kline; Developer
* Nicholas Simpson; Developer

# **Managerial Process Plans**

## **Start-Up Plans**

### **Estimation Plan**

Estimations to be done using COCOMO II Model.

* Estimated ~5k Lines Of Code with low confidence and high potential variation due to few similar projects and no developer metrics for comparison.

### **Staffing Plan**

Both developers will be working on the project in its entirety due to the small scale of the project.

### **Staff Training Plan**

Further training is largely unnecessary. Individuals will self-teach any elements necessary for completion of the project that are not covered in class.

### **Resource Acquisition Plan**

All resources required by the project are publicly available to all students of WIU, as well as

### **Project Commitments**

No commitments made to external parties.

## **Work Plan**

Work will be split on an ad-hoc basis as issues are found.

## **Control Plan**

### **Data Control Plan**

The project source code will be maintained on the WIU gitlab repository. Project documents will be stored on Google Documents and shared between developers. Security will be offloaded to WIU and the Central Sign On system.

### **Requirements Control Plan**

Project requirements are not projected to change. Changes in requirements will be notated in this document with date stamps, as well as updates being sent to the developers.

### **Schedule Control Plan**

Schedule Control Plan and Gantt Chart are located in the lower pages of this document.

### **Budget Control Plan**

No Budget Control Plan is required.

### **Communication, Tracking, and Reporting Plan**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type of Communication** | **Communication Schedule** | **Typical Communication Mechanism** | **Who Initiates** | **Recipient** |
| Progress Update | weekly | email | Developer | Developers |
| Projection/Planning | Friday | face to face | Developer | Developers |
| Project Review | monthly | face to face | Developer | Developers |
| Requirement Changes | as changes are deemed necessary | email and gitlab | Developer | Affected Developers |

### **Metrics Collection Plan**

Metrics will be gathered via automated collection, organization, and display using Gitlab integrated features.

## **Risk Management Plan**

Project is isolated and as a result a risk management plan is surplus to requirements.

## **Issue Resolution Plan**

Technical issues will be resolved via Git Issue Tracking. Personnel issues will be resolved via email.

## **Project Close-Out Plan**

Project Close-Out Plan unnecessary.

# **Technical Process Plans**

## **Process Model**

Product will be developed using Waterfall model due to static and clearly defined requirements.

## **Methods, Tools, and Techniques**

* Windows running the Java Runtime Environment and a modern chipset and at least 8 GB RAM will be sufficient for all stages of development, testing, and usage.
* Git will be used for source control, while document version control will be done through google documents. Netbeans will be used as the primary IDE. New features will be developed on separate branches before being merged into the main product.
* Development will be done in Java according to the Google Java Style guide found here: <https://google.github.io/styleguide/javaguide.html>
* Unit tests of individual modules will be written and used to maintain project stability. Full automated integration tests will be limited due to random elements within the Project.

## **Configuration Management Plan**

Project is to be a single release with no further update or support, and no further versioning is planned. As a result of the project’s extremely short life, a Configuration Management Plan is considered surplus to requirements at this time.

## **Quality Assurance Plan**

Developers will write and implement unit tests at the time of feature integration, and will perform integration tests as modules are added to the Project.

## **Documentation Plan**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Document** | **Template or Standard** | **Created By** | **Reviewed By** | **Target Date** | **Distribution** |
| Installation Guide | Readme.md | TBA |  | 2019-11-01 | Git |
|  |  |  |  |  |  |

User help guide is to be integrated into the Project itself.

## **Process Improvement Plan**

The Project will target the improved use of Git Version Management, in particular the use of multiple branches for use of simultaneous isolated development of multiple features able to be merged back in (I.e. avoidance of development on functioning, if incomplete, code).

Use of Git Branches expected to greatly expedite development rates due to a reduction in conflicts, easier version tracking, and better isolation of features. Penalties are expected to be minimal due and largely a small development process change.

**Revision History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Name** | **Date** | **Reason for Changes** | **Version** |
| <Initial> | 2019-9-15 | Initial Draft | 1.0 draft 1 |
| Sam & Nick | 2019-10-13 | Second Draft (Updates) | 1.1 draft 2 |
| Sam & Nick | 2019-11-15 | Revised Second Draft (1.2 Updates) | 1.2 draft 3 |
| Sam & Nick | 2019-11-30 | Final Draft | 2.0 draft 4 |









