Project Management Plan

for

Go Fish

Version 1.2 draft 1

Prepared by Chandler Fletcher and Alexander Hannen

CS492

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1. Overview

This project will convert the Go Fish card game into a software version.. The required resources for developing this project are Java and an IDE that can run the Java Swing library. This project must be done by May 05, 2022. This project currently has no budget as specified in section 3.3.4.

Milestone	Description	Date
Phase 1: Project Management Plan	CS492	02/20/2022
Phase 2: Implementation #1	CS492	03/20/2022
Phase 2.5: Implementation #2	CS492	04/09/2022
Phase 3: Testing	CS492	05/02/2022

1.1. Project Purpose, Objectives, and Success Criteria

The objective of this project is to provide a Go Fish card game in an application. Stakeholders involved in this project can judge the project based on if needs were met and the application is satisfactory.

1.2. Project Deliverables

Deliverable	Recipients	Delivery Date	Delivery Method	Comments
SRS Document	CS491	12/06/21	Western Online	N/A
Go Fish	CS492	05/02/22	Western Online	N/A

1.3. Assumptions, Dependencies, and Constraints

- **AS-1**
  - The developers have all of the required skills to complete this project.
- **DE-2**
  - Java is required to complete this project
- **DE-3**
  - An IDE capable of running Java and using the Swing library is required
- **CO-4**
  - There will only be two developers working on this project
- **CO-5**
  - The project must be completed within the deadline.

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1.4. References

https://en.wikipedia.org/wiki/Go_Fish

1.5. Definitions and Acronyms

Go Fish - A card game that can be usually played by two to four players.
AS - Assumptions
DE - Dependency
CO - Constraints

1.6. Evolution of the Plan

This project management plan will be updated after every milestone specified in 1.3 of this Project Management Plan is completed if needed. If any future revisions are made to this project management plan, then it will be stated on the revision history at the end of this document.

2. Project Organization

This section will list those involved in this project and how they are involved. It will also describe the structure and roles of each party involved and how communication will be held between those involved.

2.1. External Interfaces

Communication between the parties involved in this project, the ones working on this project, and the one overseeing this project will happen via google mail or google hangout at undefined times. There will also be various face-to-face communications at undefined times

2.2. Internal Structure

The parties working on this project, Alex Hannen and Chandler Fletcher, will be equal in terms of authority, responsibility, and position in this project.

2.3. Roles and Responsibilities

- Student 1 - Alex Hannen
- Student 2 - Chandler Fletcher

Current project stakeholders include Professor Russel Glaue. The stakeholder role in this project will be to judge the current state of the project after each milestone. The schedule of these will be conjoint with the schedule of each milestone completion listed in section 1 of this document.

3. Managerial Process Plans

This section will provide information on different plans that include the project and staff.

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3.1. Start-Up Plans

We first created a Software Requirements Specification (SRS) document to help determine what this project will require. Use Cases, class diagrams, sequence diagrams will also be created to help with this process. These diagrams can be found in the SRS diagram. After completion of these tasks, the project will move into the development phase which is more explained through the gantt charts.

3.1.1 Estimation Plan

To better understand the resources, project size, effort, cost and scheduling and any other requirements that our project would be subjected to, we decided to use the Function Point Estimation tool to help us better understand how taxing this project would be.. We also incorporated the Constructive Cost Model (COCOMO) to better understand the effort and schedule that would be required of us.

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COCOMO II - Constructive Cost Model

Software Size Sizing Method: Function Points

Unadjusted Function Points: 22.12 Language: Java

Software Scale Drivers

Precedentedness	Nominal	Architecture / Risk Resolution	Very Low	Process Maturity	Nominal
Development Flexibility	Extra High	Team Cohesion	Extra High		

Software Cost Drivers

Product		Personnel		Platform	
Required Software Reliability	Low	Analyst Capability	Nominal	Time Constraint	Nominal
Data Base Size	Low	Programmer Capability	High	Storage Constraint	Nominal
Product Complexity	Low	Personnel Continuity	High	Platform Volatility	Nominal
Developed for Reusability	Nominal	Application Experience	Nominal	**Project**	
Documentation Match to Lifecycle Needs	Very Low	Platform Experience	High	Use of Software Tools	Very Low
		Language and Toolset Experience	High	Multisite Development	Very Low
				Required Development Schedule	Low

Maintenance Off

Software Labor Rates

Cost per Person-Month (Dollars): 4000

Calculate

Results

Software Development (Elaboration and Construction)

Effort = 2.2 Person-months
Schedule = 3.8 Months
Cost = $8674

Total Equivalent Size = 1172 SLOC
Effort Adjustment Factor (EAF) = 0.62

Staffing Profile

Your project is too small to display a staffing profile due to truncation.

Acquisition Phase Distribution

Phase	Effort (Person-months)	Schedule (Months)	Average Staff	Cost (Dollars)
Inception	0.1	0.5	0.3	$520
Elaboration	0.5	1.4	0.4	$2082
Construction	1.6	2.4	0.7	$6592
Transition	0.3	0.5	0.5	$1041

Software Size Sizing Method: Source Lines of Code

	SLOC	% Design Modified	% Code Modified	% Integration Required	Assessment and Assimilation (0% - 8%)	Software Understanding (0% - 50%)	Unfamiliarity (0-1)
New	900						
Reused	0	0	0	0	0		
Modified	272	20	20	22	8	49	0

Software Scale Drivers

Precedentedness	Nominal	Architecture / Risk Resolution	Very Low	Process Maturity	Nominal
Development Flexibility	Extra High	Team Cohesion	Extra High		

Software Cost Drivers

Product		Personnel		Platform	
Required Software Reliability	Very Low	Analyst Capability	Nominal	Time Constraint	Nominal
Data Base Size	Low	Programmer Capability	High	Storage Constraint	Nominal
Product Complexity	Low	Personnel Continuity	High	Platform Volatility	Nominal
Developed for Reusability	High	Application Experience	Nominal	**Project**	
Documentation Match to Lifecycle Needs	Nominal	Platform Experience	High	Use of Software Tools	Very Low
		Language and Toolset Experience	High	Multisite Development	Very Low
				Required Development Schedule	Low

Maintenance Off

Software Labor Rates

Cost per Person-Month (Dollars): 4000

Calculate

Results

Software Development (Elaboration and Construction)

Effort = 2.1 Person-months
Schedule = 3.8 Months
Cost = $8315

Total Equivalent Size = 977 SLOC
Effort Adjustment Factor (EAF) = 0.72

Staffing Profile

Your project is too small to display a staffing profile due to truncation.

Acquisition Phase Distribution

Phase	Effort (Person-months)	Schedule (Months)	Average Staff	Cost (Dollars)
Inception	0.1	0.5	0.3	$499
Elaboration	0.5	1.4	0.4	$1996
Construction	1.6	2.4	0.7	$6320
Transition	0.2	0.5	0.5	$998

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3.1.2 Staffing Plan

Per section 2.3, current staff will only include Alex Hannen and Chandler Fletcher. Each Staff will be needed for 8 months for this project. Both staff will be required to have some basic programming knowledge. Assignments and candidates selected for said assignments will be decided at the date the assignments are announced to the discretion of both staffs.

3.1.3 Staff Training Plan

If any staff involved in the project do not have any programming experience, then they will be required to gain some basic programming knowledge on their own time. No other training will be required.

3.1.4 Resource Acquisition Plan

Two computers capable of running task intensive resources will be required. Computers will be required to have JAVA and an IDE that is capable of using the Swing library. Internet Connection will also be required for communication efforts. Staff listed in Section 2.3 will be required to bring their own resources. Any resources that can not be acquired by the staff own means can be resolved by going to the Computer Lab in STIPES hall.

3.1.5 Project Commitments

Commitment	Made By	Made To	Due Date	Comments
SRS Document	Hannen,Fletcher	CS491	12/06/2021	N/A
Use Case Diagram	Hannen,Fletcher	CS491	12/06/2021	N/A
Activity Diagram	Hannen,Fletcher	CS491	12/06/2021	N/A
Sequence Diagram	Hannen,Fletcher	CS491	12/06/2021	N/A
Class Diagram	Hannen,Fletcher	CS491	12/06/2021	N/A
Project Management Plan	Hannen,Fletcher	CS492	02/20/2022	N/A
Gantt Chart	Hannen,Fletcher	CS492	02/20/2022	N/A
Analysis 1	Hannen,Fletcher	CS492	03/20/2022	N/A
Analysis v2	Hannen,Fletcher	CS492	4/10/2022	N/A

3.2. Work Plan

A more detailed work plan can be seen on the project gantt chart. For the entirety of the project, there will be a fixed amount of staff as specified in Section 2.3. Resources required are detailed in Section 3.1.4 and are unlikely to change. The entire duration of this project is estimated to be about 8 month. As specified in Section 3.3.4, there is no budget for this project and that is unlikely to change.

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3.3. Control Plan

This document and the control plans below should be reassessed and updated with each weekly meeting for the project.

3.3.1 Data Control Plan

Github Link:
https://github.com/cf-eli/go-fish

The project will be Managed using Git and uploaded to GitHub in a shared repository.

1. Project files will be managed within this repository.
2. Project plans and management documentation will be included in this repository.

3.3.2 Requirements Control Plan

Requirements will be evaluated on each team meeting and a decision will be made if the team is meeting the requirements for each phase of the project. If a requirement is changed and needs to be conveyed immediately, the discord group should be notified asap.

3.3.3 Schedule Control Plan

Gantt chart link:
https://prod.teamgantt.com/gantt/schedule/?ids=2980548#&ids=2980548&user=&custom=&company=&hide_completed=false&date_filter=&color_filter=

The project will be using a gantt chart to track and monitor the progress of the software. If progress falls behind on scheduled time restraints, schedules will be reevaluated and updated promptly with a notification to the group discord.

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3.3.4 Budget Control Plan

There is currently no budget to be monitored for Go Fish.

3.3.5 Communication, Tracking, and Reporting Plan

Communication between members will primarily be through the weekly team meetings, and interpersonally thorough discord. If sufficient changes need to be made that need to be discussed immediately , they should be communicated with thoughts and notes through that channel,

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Type of Communication	Communication Schedule	Typical Communication Mechanism	Who Initiates	Recipient
Status Report	every Friday	team meeting	scheduled	everyone
Schedule and Effort Tracking Report	weekly	discord	Hannen	Fletcher
Project Review	monthly	During team meeting	scheduled	everyone
Risk Mitigation Status	as mitigation actions are completed	discord	responsible team member	everyone
Requirement Changes	as changes are approved	discord/email and change control tool	Hannen	affected Project Participants

3.3.6 Metrics Collection Plan

Metrics should be collected with Netbeans IDE and stored in the proper location in the project folder

3.4. Risk Management Plan

Risk will be assessed and managed as needed, with discord as a medium for communication on which risk mitigation actions have been completed.

3.5. Issue Resolution Plan

Issues should be identified and reported in the discord so that we may address them together.

3.6. Project Close-Out Plan

Go Fish should be completed and ready to be presented before the final presentation date (5-2-22) The repository for the project will remain available on github, for future reference if needed.

4. Technical Process Plans

4.1. Process Model

Go Fish will use an Agile development process model.

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4.2. Methods, Tools, and Techniques

Java will be used as the programming language, with a preference for Netbeans as an IDE. Git will be used as a version control system, which should be paired with github as the host of the repository. Swing will be used to auto generate the framework of the GUI. Testing will be performed with Junit.

4.3. Configuration Management Plan

Schedule changes made to the gantt schedule should go through both parties and be approved before changes should be made, as well as changes to this PMP document and SRS. All other factors do not need to follow this plan.

4.4. Quality Assurance Plan

QA will be managed by Hannen, and the whole team will be responsible for working through the tasks presented. There will be specific time allotted leading up to the completion of the project.

4.5. Documentation Plan

Readme.md will be used to provide installation/running instructions to the end user.
Srs document will be used to provide detailed specifications of the software
PMP will be used to provide the basis for the management of the project.

Document	Template or Standard	Created By	Reviewed By	Target Date	Distribution
readme	Standard	Hannen	Fletcher	TBD	TBD
SRS	Template	Fletcher	Hannen	2-21	TBD
PMP	Template	Fletcher	Hannen	2-21	TBD
Analysis Document	Standard	Hannen	Fletcher	3/20	TBD
Analysis Document v2	Standard	Hannen	Fletcher	4/10	TBD

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4.6. Process Improvement Plan

BASELINE - Improvements will be made to the systems once the original goal of such is met:

- Easy mode –DONE
- One Ai player –DONE
- Game working optimally - DONE but has bugs

STRETCH GOALS - Stretch goals are of the nature that **should not** affect the baseline of the game. If they are added, they are extra features that are not needed for the game to function:

- Condensing game windows for easier game flow –DONE
- increased AI difficulty(normal/hard)
- More AI players at once

Stretch goals are to only be attempted once the baseline is deemed complete. Stretch goals should be handled in a way that does not disrupt the baseline.

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Revision History

Name	Date	Reason for Changes	Version
Fletcher, Hannen	2/21/22	initial draft	1.0 draft 1
Fletcher, Hannen	3/20/2022	Iteration 1 review	1.1 draft 1
Fletcher, Hannen	4/10/2022	Iteration 2 review	1.2 draft 1

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