SYST 17796

Section : 32045

Group 3 :Deliverable 1

Professor: Dr. Nagma

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|  |  |
| --- | --- |
| SYST 17796 TEAM PROJECT  Team Name: Group 3 |  |

*Please negotiate, sign, scan and include as the first page in your Deliverable 1.*

Team Contract

**Please note that if cheating is discovered in a group assignment each member will be charged with a cheating offense regardless of their involvement in the offense. Each member will receive the appropriate sanction based on their individual academic integrity history.**

**Please ensure that you understand the importance of academic honesty. Each member of the group is responsible to ensure the academic integrity of all the submitted work, not just their own part. Placing your name on a submission indicates that you take responsibility for its content.**

|  |  |  |  |
| --- | --- | --- | --- |
| Team Member Names (Please Print) | Signatures | Initials | Student ID |
| ***Project Leader:*** Jashanpreet Kaur | Jashanpreet kaur | jk | 991708849 |
| Meetkumar Ramnikbhai Radadiya | *Meet* | MR | 991702529 |
| Sojaldeep Singh | Sojaldeep | S.S. | 991704170 |
| Sukan Sundaramoorthi | ***SUKAN SUNDAR*** | S.S.M | 991598890 |

**For further information, read Academic Integrity Policy here:**

By signing this contract, we acknowledge having read the Sheridan Academic Integrity Policy

Responsibilities of the Project Leader include:

* Assigning tasks to other team members, including self, in a fair and equitable manner.
* Ensuring work is completed with accuracy, completeness, and timeliness.
* Planning for task completion to ensure timelines are met.
* Notifying the professor of any issues in a timely manner so that corrective measures can be taken.
* Any other duties as deemed necessary for project completion.

What we will do if . . .

| **Scenario** | **Accepted initials** | **We agree to do the following (Put an X corresponding to your choice in each box)** |
| --- | --- | --- |
| Team member does not regularly attend team meetings and/or does not respond to communications in a timely manner. | * jk\_ * MR * S.S. * S.S.M | Project leader emails the student citing the concerns and cc’s the professor so they are aware of the situation at the very onset \_X\_ (**Mandatory**).  a) \_X\_ In addition to above, the leader/team will (add your own content here):none |
| Team member does not deliver component on time due to severe illness or extreme personal problem. | * jk\_ * MR * S.S. * S.S.M | a) Team absorbs workload temporarily \_ \_X\_  b) Team seeks advice from professor \_ \_X\_  c) Team shifts target date if possible \_ \_X\_ |
| Team members have difficulty delivering component on time due to lack of understanding or ability. | * jk\_ * MR * S.S. * S.S.M | a) Team reassigns component \_ \_X\_  b) Team helps member \_ \_X\_  c) Team member must ask professor  for help \_ \_X\_ |
| Team member does not deliver component on time due to lack of effort. | * jk\_ * MR * S.S. * S.S.M | a) Team absorbs workload \_ \_X\_  b) Team member(s) ask professor to request a Participation Form from all team members. This *may* result in individualized grades being awarded for a deliverable \_ \_X\_  c) Both a. and b. above \_X\_ |
| Team cannot achieve consensus leaving one or more member(s) feeling that their voice(s) is/are not being heard in a decision which affects everyone. | * jk\_ * MR * S.S. * S.S.M | a) Team agrees to abide by majority vote \_ \_X\_  b) Team seeks advice from the professor \_ \_X\_ |
| Team members do not share expectations for the quality of work on a particular deliverable. | * jk\_ * MR * S.S. * S.S.M | a) Team members will draw on each other’s strengths to help bring the quality of the deliverable to a minimal acceptable level \_ \_X\_  b) Team votes on each submission's quality \_ \_X\_  c) Team member(s) ask professor to request a Participation Form from all team members, which may result in individualized grades being awarded for a deliverable \_ \_X\_ |
| Team member behaves in an unprofessional manner, e.g. being rude, uncooperative and/or making one or more member(s) feel uncomfortable. | * jk\_ * MR * S.S. * S.S.M | a) Team agrees to avoid use of all vocabulary inappropriate to a business/college setting \_ \_X\_  b) Team attempts to resolve the issue by airing the problem at a team meeting \_ \_X\_  c) Team requests a meeting with the professor to discuss further \_ \_X\_ |
| There is a dominant team member who insists on making all decisions on the team's behalf leaving some team members feeling like subordinates rather than equal members | * jk\_ * MR * S.S. * S.S.M | a) Team will actively solicit consensus on all decisions which affect project direction by asking for each member's decision and vote \_ \_X\_  b) Team will express subordination feelings and attempt to resolve issue \_ \_X\_  c) Team seeks advice from the professor \_ \_X\_ |
| Team has a member who refuses to participate in decision making but complains to others that s/he wasn't consulted | * jk\_ * MR * S.S. * S.S.M | a) Team forces decision sharing by routinely voting on all issues \_ \_X\_  b) Team routinely checks with each other about perceived roles \_ \_X\_  c) Team discusses the matter at team meeting \_ \_X\_ |

UML Diagram :

A diagram of a card game

Description automatically generated with medium confidence

syst 17796 Deliverable 1

design document template

Overview

## Project Background and Description

***Describe the project goals and final vision. Include a brief description of how to play the game you have chosen and a reference to the rules of the game you have chosen. Also describe the current starting base code. Use technical terms to describe the code including what language it is written in, any patterns you can see, and any coding conventions used.***

***•    Chosen Game: Go Fish***

A traditional 52-card deck is used to play the card game Go Fish. By requesting cards from other players, the goal is to amass sets of four cards with the same rank. The person with the most sets wins the game when all the cards have been gathered.

*•****Rules of Go Fish:***

1. A hand of cards is handed to each participant.
2. The first player begins by requesting cards of a certain rank from another player.
3. The player who is asked must hand over all cards of that rank if they own any.
4. The requesting player says, "Go Fish," and the asking player pulls a card from the deck, if they don't have any cards of that rank.
5. The player who asked receives another turn if the drawn card matches the requested rank.
6. The next player takes the field if the chosen card does not have the specified rank.
7. A player sets the set-in front of them if they ever gather four cards of the same rank.
8. Once all the cards have been gathered, the game is over.
9. At the end of the game, the player with the most sets of cards wins.

***•    Current Starting Base Code:***

1.    'Card' (Abstract Class):  
•    Represents the base class for a card in a card game.

2.    'PlayingCard' (Class):

•    Extends the Card abstract class.  
•    Represents a playing card in the Go Fish game.

3.    'Rank' (Enum):

•    Represents the ranks of playing cards in the game.  
•    Predefined constants for each rank, such as ACE, TWO, etc.

4.    'Suit' (Enum):

•    Represents the suits of playing cards in the game.  
•    Predefined constants for each suit, such as CLUBS, DIAMONDS, etc.

## Project Scope

***Describe the names and roles of each team member. Describe the technical scope of the project by talking about the interface and how you will know when the project is complete.***

Our team, group 3 consists of four members, in the first phase Meet is tasked with handling the setting up the GitHub repository and ensuring the rest of team has access and are added as collaborators. Sojal is taken to the creation of the UML diagram assisted by the inputs and discussions of the rest of the group. Sukan is tasked with completion of the team contracts by all team members and design document and all parts that entail. The team leader Jashanpreet will be leading the project and is shoulder most of the work when it comes to the logic of the initial base code .

The project is divided in to four phase:

In the first phase requirements and responsibilities are determined. To ensure the group members with their unique skills and knowledge have the appropriate tasks assigned to them a schedule is made to plan and accommodate the duration needed for each taskmeet the current milestone withing the given deadline.

The project’s completion should be attained be Deliverable 3 and so the initial idea of the project’s completion is that if a player can finish their rounds as many times as they desire without any exception’s errors thrown by the program or from the game’s logic or code .

## High-Level Requirements

|  |  |
| --- | --- |
|  | [Describe the high level requirements for the project. For example:] |

* Ability for each player to register with the game.
* Ability for the game to communicate a win or loss.
* Ability for players to know their status (score) at all times.
* Ability to draw more cards by player.
* Ability to play another round of the game.

## Implementation Plan

**Include your Git repository URL here :**

<https://github.com/radadime/CourseProject.git>

**brief description of the expected use (i.e., each developer checks in code at the end of each day/week).**

Each completed milestone will be achieved by using GITHUB, where team members can access and contribute their assigned parts to the project to update the base code. GitHub’s version control will help patch any bugs as each member updates the code to seamless put all the parts together.

Version control documents are also going to be saved and used by developers/ group members to check in on each version of the code and with the specified updates to the code at every milestone and deadline. Word files used are stored to save the team contract, and the Design document in the own separate folder/directory. The team will also be using Visual Paradigm and NetBeans IDE to complete the current phase of this project’s deliverable.

## Design Considerations

The current code demonstrates some adherence to the following object-oriented principles:

***1. Encapsulation:***

•    The properties ('rank' and 'suit') and actions (getters, toString()) associated with a playing card are all included inside the PlayingCard class. Encapsulation and data hiding are ensured by the attributes' declaration as 'private' and their access via public getter methods.

•    The logic necessary to produce a deck of playing cards is included in the 'createDeck()' function. It provides a simple interface to get a deck while hiding the technical implementation details.

*Potential for improvement:*

•    It would be advantageous for the 'PlayingCard' class to provide more behaviour pertaining to card-related activities like testing for equality or card comparisons.  
•    For improved encapsulation and a clearer separation of concerns, it would be advantageous to place the game-related logic and operations in a different class.

***2. Delegation:***

•    The 'PlayingCard' class extends the abstract 'Card' class, which allows it to inherit common behavior and attributes defined in the parent class. This is an example of delegation through inheritance.

•    The 'GoFishGame' class delegates the responsibility of creating a deck to the 'createDeck()' method. It relies on the method to provide a complete deck of playing cards.

*Potential for improvement:*

•    Additionally, several classes that manage the players, turns, and rules of the game, such as the 'Game' class, can be given control over the game logic. Better code separation and organisation would result from this.

***3. Flexibility/Maintainability:***

•    The use of camel case for method and variable names ('createDeck()', 'getRank()', and 'toString()'), for example, makes the code easier to understand and maintain.

•    The card game rules may be easily extended and modified thanks to the usage of enums ('Rank' and 'Suit'). By simply altering the enum values, ranks or suits may be added or changed.

*Potential for improvement:*

•    Design patterns, like the Factory pattern, might be incorporated into the programming to create various card game kinds. This would increase flexibility by making it simple to integrate other game logic and rules without significantly changing the present code.

•    The use of interfaces and polymorphism can provide flexibility by enabling the replacement of various card kinds or game iterations.

## Submission

Please submit **one PDF document per group**. This means that the document should be professionally organized and have a uniform style throughout. It should look as though it came from one team, not 4 separate students. Please note that instructors may choose to run your submission through TurnItIn or compare the submission with other students from other sections for academic integrity purposes. Please take the time to properly cite your sources.

## Final Document Layout

*One PDF with the following sections denoted using page numbers, headers and a table of contents*:

* Team Contract
* UML Diagram
* Design Document Template (note that the work you complete in setting up the Git repository will be referenced here and you will provide information on how to access your Git repository here).

## RUBRIC

| Item | Criteria | Points | Weight |
| --- | --- | --- | --- |
| Team Contract | Completed, signed by each team member and scanned as the first page in the PDF document | 10 | 1 |
| Git Repository | Repository created, all group members have read/write access and instructor is able to view the repository. Repository should be complete (contain all base code) | 10 | 4 |
| Class Diagram | Proper syntax is used and the diagram is complete and is created using a Computer Assisted Software Engineering (CASE) tool such as Visual Paradigm. | 10 | 3 |
| Design Document Template | All sections of the template are complete. The design choices described represent the principles of OO Design studied in class and are well articulated and presented. | 10 | 2 |