Blackjack Game

GROUP: GATE

Date: 2/6/2020

Group members:

Eric Nogueira – 991436785

Tristen Hubert - 991590613

Gonzalo Jurado - 991303719

Amandeep Kaur 991576115

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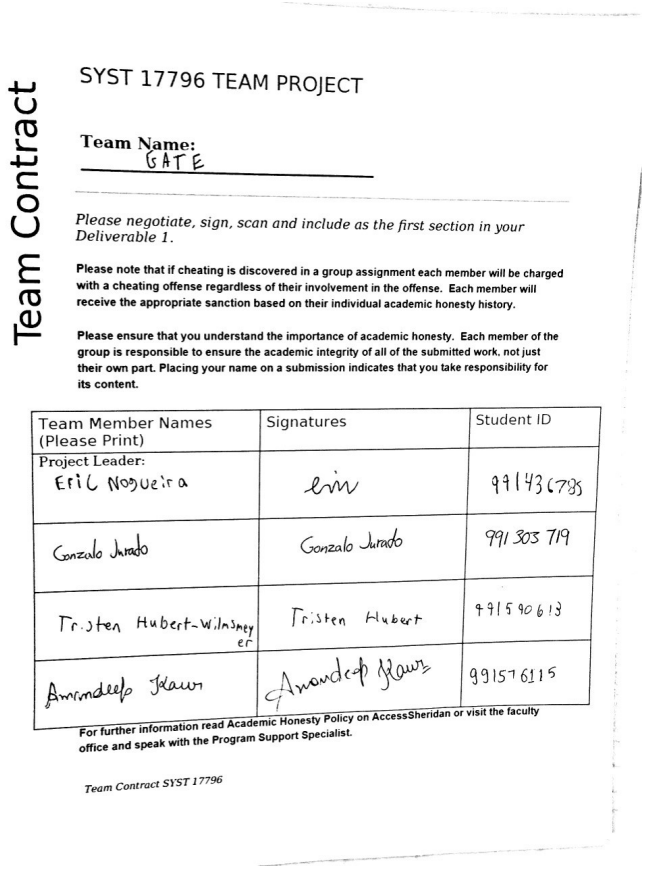

Team Contract

SYST 17796 TEAM PROJECT

Team Name: GATE

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

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 honesty 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 of 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	Student ID
Project Leader: Eric Nogueira	Eric	991436783
Gonzalo Jurado	Gonzalo Jurado	991 303 719
Tristen Hubert-Wilsney er	Tristen Hubert	991590613
Amrindeep Jhawar	Amrindeep Jhawar	991576115

For further information read Academic Honesty Policy on AccessSheridan or visit the faculty office and speak with the Program Support Specialist.

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What we will do if . . .

Scenario	Accepted Y/N + initial	We agree to do the following
Team member does not deliver component on time due to severe illness or extreme personal problem	EN + Y Y + GJ Y + TH Y + Ab	(a) Team absorbs workload temporarily _ b) Team seeks advice from professor _ c) Team shifts target date if possible _ d) Other:
Team member cannot deliver component on time due to lack of ability	Y + EN Y + GJ Y + TH Y + Ab	a) Team reassigns component _ (b) Team helps member _ c) Team member must ask professor for reference material _ d) Other:
Team member does not deliver component	Y + EN	a) Team absorbs workload _

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on time due to lack of effort	Y + GJ Y + TH Y + Ab	b) Team "fires" team member by not permitting his/her name on submission _ (c) Other: group absorbs work and seeks advice from professor

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Scenario	Accepted Y/N + initial	We agree to do the following
Team member does not attend team meeting	Y + EN Y + GJ Y + TH Y + ~~AB~~	(a) Team proceeds without him/her and will assign work to the absent member __ b) Team doesn't proceed and records team member's absence __ c) Team proceeds for that meeting but "fires" member after __ occurrences __
A piece of production equipment fails such as a printer, disk drive, or laptop	Y + EN Y + GJ Y + TH Y + ~~AB~~	a) Backup copies will be made and kept in the college __ (b) A locker or "share" directory will be used for joint access __ c) A photocopy and duplicate disk of all deliverables will be made __ d) Other:
An unforeseen constraint occurs after the deliverable has been allocated and scheduled (a surprise test or assignment)	Y + EN Y + GJ Y + TH Y + ~~AB~~	(a) Team meets and reschedules deliverable __ b) Team will cope with constraint __ c) Other:

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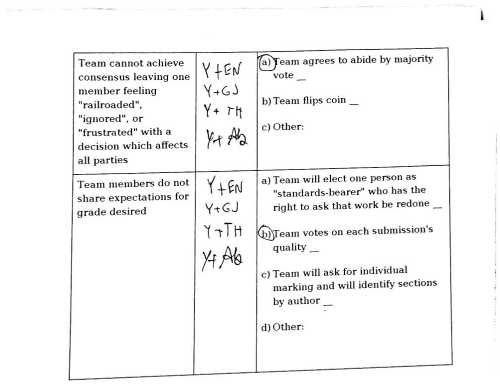

Team cannot achieve consensus leaving one member feeling "railroaded", "ignored", or "frustrated" with a decision which affects all parties	Y +EN Y+GJ Y+ TH Y+ AB	(a) Team agrees to abide by majority vote __ b) Team flips coin __ c) Other:
Team members do not share expectations for grade desired	Y+EN Y+GJ Y+TH Y+ AB	a) Team will elect one person as "standards-bearer" who has the right to ask that work be redone __ (b) Team votes on each submission's quality __ c) Team will ask for individual marking and will identify sections by author __ d) Other:

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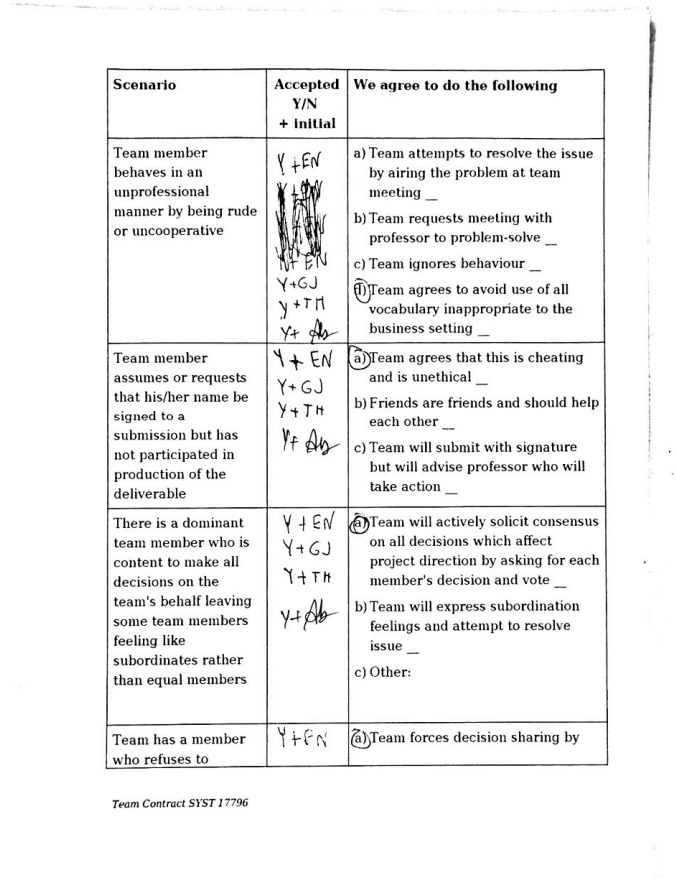

Scenario	Accepted Y/N + initial	We agree to do the following
Team member behaves in an unprofessional manner by being rude or uncooperative	Y +EN Y+EN Y+GJ Y+TH Y+ AB	a) Team attempts to resolve the issue by airing the problem at team meeting __ b) Team requests meeting with professor to problem-solve __ c) Team ignores behaviour __ (d) Team agrees to avoid use of all vocabulary inappropriate to the business setting __
Team member assumes or requests that his/her name be signed to a submission but has not participated in production of the deliverable	Y + EN Y+GJ Y+TH Y+ AB	(a) Team agrees that this is cheating and is unethical __ b) Friends are friends and should help each other __ c) Team will submit with signature but will advise professor who will take action __
There is a dominant team member who is content to make all decisions on the team's behalf leaving some team members feeling like subordinates rather than equal members	Y + EN Y+GJ Y+TH Y+ AB	(a) Team will actively solicit consensus on all decisions which affect project direction by asking for each member's decision and vote __ b) Team will express subordination feelings and attempt to resolve issue __ c) Other:
Team has a member who refuses to	Y+EN	(a) Team forces decision sharing by

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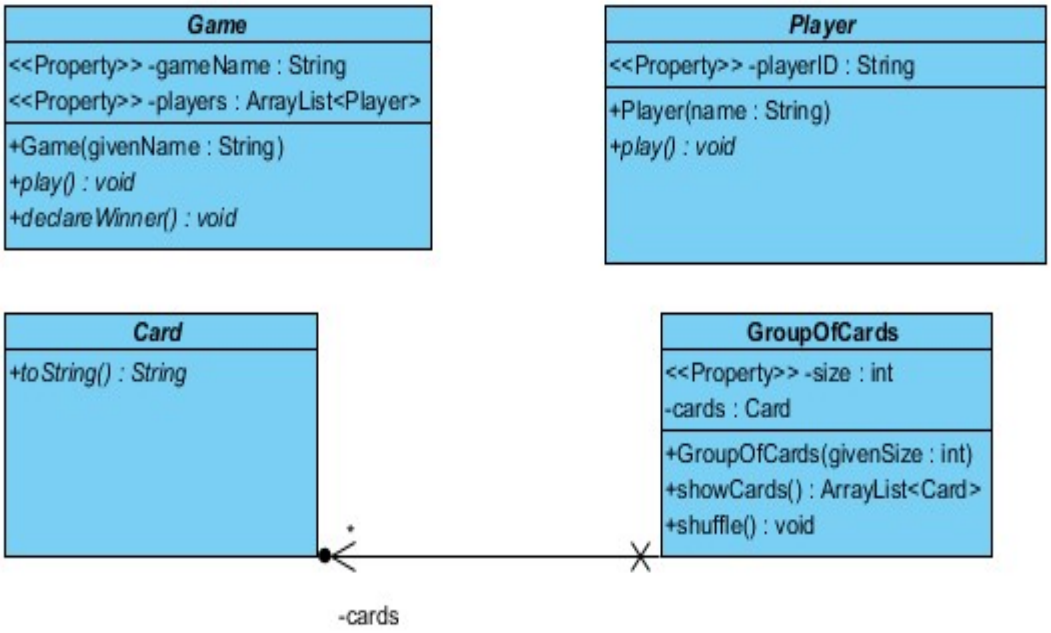
participate in decision making but complains to others that s/he wasn't consulted	Y + GJ Y + TH Y + Ab	routinely voting on all issues __ b) Team routinely checks with each other about perceived roles __ c) Team discusses the matter at team meeting __

UML Class Diagram



Design Document

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.

The goal of the project is to make a simulation of blackjack. Blackjack is a card game where players draw 2 cards and the goal is to get as close to the number 21 with your card values as possible without going over, you can ask for another card but the second you go above 21 you lose. King, Queen and Jack cards are worth 10. Ace can be worth 1 or 11 depending on what the holder desires. An example would be you draw a king and a 2. That is worth 12 however you can ask for another card to increase that value. If you get a king queen or jack however you will go over 21 and lose.

Written in Java

This is used in a MVC type system:

Card class is model

Game class is a model

GroupOfCards class is the controller

Players class is a model

We will later make a class to view the game being played by a user.

Rules: https://www.888casino.com/blog/blackjack-strategy-guide/how-to-play-blackjack

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.

Name: Eric Nogueira

Name: Gonzalo Jurado

Name: Tristen Hubert-Wilmsmeyer

Name: Amandeep Kaur

All members will work on the project where required.

The project will be complete when the program runs correctly without errors and the player can play blackjack

High-Level Requirements

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

The new system must include the following:

- 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

The high-level requirements for our project will be as followed:

- Ability to randomize cards
- Ability to draw cards to playing user
- Ability to calculate if card values exceed or are equal to or are under 21
- Ability to ask user to perform an action
- Action to tell user if they have busted or won
- Ability to discard a card that has been used
- Ability for dealer to shuffle deck
- Ability to play again

Implementation Plan

Include your Git repository URL here and a brief description of the expected use (i.e. each developer checks in code at the end of each day/week). Text files are stored under a separate directory, code, UML diagrams have their own folders etc.

Include information on coding standards you intend to follow and tools you expect to use (VP, NetBeans, eclipse, Junit…)

github repository URL: https://github.com/ericnogueira/BlackjackGame

The expected use of the repository will be that each developer will have their own separate branch connected to the repository and once we have finalized and confirmed changes to the main code we will commit and push it to the master branch to update the main code.

The tools we expect to use is Netbeans to have our local repositories and edit the source code, along with visual paradigm connected to Netbeans to display and visualize class diagrams and use cases.

5. Design Considerations

Talk about how the current code is structured as it relates to the following OO principles. Each principle should have 2 or 3 specific examples from the base code or your intended additional code (i.e. potential for improvement).

- Encapsulation

1. One example for encapsulation in the given code is that in the GroupOfCards class, it creates an arraylist using the Card class which is effectively hiding the code of Card and only using it for the GroupOfCards class.

2. A second example for encapsulation for the given code is assigning the name of each person to the Player array.

- Delegation

1. One example of delegation in the given code is that inside the class GroupOfCards it is importing the Collections library which is being used in that code so it is delegating the source code of the Collection library to the GroupOfCards class.

2. A second example of delegation is inside the Game class the code creates an ArrayList using the object Player as its type so it is delegating its code from the Player class as creating an instance of it as an ArrayList inside of the Game class

- Flexibility/Maintainability

1. An example for flexibility is the fact that we are taking the given code based on just cards and using that code to turn it into our black jack game which keeps the code flexible and can also be done for any card game.

2. A second example of flexibility can be that we can reuse the game class for any given game as the methods included in the class are basic methods that are used for any game.