**Software Requirements and Design Document**

**For**

**Group 4**

Version 1.0

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# Overview (5 points)

*“Project Deck”, is a mainly single player focused Poker recreation that allows a user to play against Bots. The Menu User Interface allows the user to go through a tutorial and read up on how the game is played and everything they will need to do to succeed in Practice Deck. Given that, the game is tailored for beginners to Poker allowing them a good environment to learn the game and have fun!*

# Functional Requirements (10 points)

***High Priority***

1. *Single Player Functionality*
   1. *Player Action: Raise*
   2. *Player Action: Call*
   3. *Player Action: Fold*
   4. *Card Rankings*
   5. *End Game Indicator + Winner Screen*

***Medium Priority***

1. *Single Player Functionality*
   1. *Dynamically update turn indicator (who’s turn it is)*
   2. *Add Blinds*

***Low Priority***

1. *Audio Management*
   1. *Add Button Sounds*
   2. *Add Background Music*
2. *User Interface*
   1. *Make more aesthetically pleasing once functionality complete*

# Non-functional Requirements (10 points)

*Reliability: Ensure the game doesn’t crash and that you are able to go from Single Player to Menu Screen with zero faults.*

*Usability: The game should be intuitive and should advise the player of what is going on (Showdown, Turn Indication, etc.)*

# Use Case Diagram (10 points)

A diagram of a device

Description automatically generated

***User & Bot:***

*Fold: Give up hand and chance to win the pot.*

*Raise: Raise the current bet.*

*Call: Match the current bet to continue into the next round.*

***Deck Management System:***

*Deal Initial Cards: Deal cards to both bot and player.*

*Collect Bets: Update the UI with the new bets each round + update pot.*

*Determine Winner: Determine the winner at the end of the round given their card rankings.*

*Distribute Pot: Distribute the pot to the winner of the round.*

*Start New Round: Start a new round after establishing the winner.*

*Reveal Community Cards: Reveal community cards to go with the two cards each user has.*

# Class Diagram and/or Sequence Diagrams (15 points)

A diagram of a game

Description automatically generated

# Operating Environment (5 points)

*The software will operate in the following operating systems:*

* *Windows*
* *Mac*

*In the following platforms:*

* *Desktop*
* *Laptop*

*The software created will be capable of coexisting with all other software applications as it does not require external cooperation.*

# Assumptions and Dependencies (5 points)

*Assumes that the development team will be able to provide the full, downsized scope of the project upon the final due date.*

* *The project, as it currently stands, does not require a Multiplayer option.*