Type Team Member Names here

*Team JEHB (4)*

*Pyramid Solitaire* Requirements Document

# Introduction (BD)

The purpose of this document is to summarize the system requirements for the functions of the Pyramid app. Within this document is the synopsis of the many functions found within our solitaire Pyramid app which you will find in our Description Model. The Class Diagram that follows the description model will review the various objects within our app. Following that, the Use Case Diagram will go over all of the uses of the system. The Use Case Scenarios will go over activity events with any pre or post conditions and exceptions. Finally, the Systems Sequence Charts will show sequence diagrams for each Use Case Scenario that has been outlined in the Use Case Scenarios section.

# Description Model (BD)

1. Requirements for Pyramid  
   Pyramid is expected to have functionality with tablets phones and any other smart devices that can access the Apple/Play store. A device that has Pyramid on it should also have some extra storage space on it to locally store all the stats and themes onto the device.
2. App Security  
   Pyramid will keep all data local on the device with a direct link to the Google Play and Apple Store accounts. This will allow the user to keep their data in the event of a transfer via the Google play / Apple store accounts and foregoes the need of a username and password system and login screen. This allows the user to click on the app and immediately start playing without having to worry about having to log in.
3. Functions
   1. Mode Selection
      1. After hitting the “Start Playing” button on the Pyramid app the user will be brough to a new screen with the options for the different modes of solitaire on it. The modes listed will include Klondike, Spyder, Pyramid and FreeCell. Klondike will start off as being the only mode to be unlocked by default however as the user levels up they will quickly unlock the other types of solitaire.
   2. Difficulty Selection
      1. After the user selects which mode they would like to play they will be brought to a difficulty selection page with the options of Tutorial, Easy, Medium and Hard. Once again, there is only one option unlocked by default and that is the Tutorial mode. Once the user finishes the Tutorial mode Easy will unlock and be playable. Each mode following that will be unlocked by subsequent completions of the previous difficulty (Easy unlocks Medium, Medium unlocks Hard).
   3. Daily Challenges
      1. On the home screen of the app the user has the option to pull the daily challenges “board” over from the right-hand side. This will display one or two daily challenges that must be completed which will reward the user with some experience or a theme depending on the difficulty of the challenge. This will give the user something to strive for when playing the game if they want to unlock a certain theme or just progress through the levels to unlock themes as they go.
   4. Themes
      1. Included in the daily challenges board mentioned above is the option to select your theme which has a scroll bar on the bottom of the page to view all of the themes. The one that is currently selected will have a yellow bar across it displaying that it is currently the selected theme. This function allows each user to decide what they want the app to look and feel like. Themes change the look of the main backgrounds and modify the look of the card backs.
   5. Move Assist
      1. The move assist function is intended to be helpful for the user which will, when activated, automatically move tapped cards to their legal spot. For example if an Ace comes up in the Stock Pile and the user taps the card it will jump to it’s spot at the top of the board in the Foundations. If a black 8 is sitting uncovered and a red 7 comes up in the stock pile, the user can automatically send that red 7 to cover the black 8 with a tap of their finger on the card. In addition to this, if the user decides to drag a card and holds it over a location the location will display a red border if the card is not placeable and a green outline if the card is placeable.
   6. Tracked Stats
      1. This function will allow the user to view their all-time stats on the game. This is found by going to Settings and then clicking on View Stats. From here the user will be able to view their total Play Time which will display actual time spent playing a game of solitaire and will not track when in menus. Wins and Losses will be tracked in addition to games played. The final stat that will be tracked will be the fastest win time made by the user. This will allow them to strive to get better and better if they wish by finishing games faster and faster.
   7. Play Solitaire
      1. This final function is how the user accesses the apps gameplay. This is found by clicking on the “Play” button and selecting difficulty and game mode. From here the user can toggle move assist on and off to assist with the gameplay. Move assist will help the user by automatically moving cards to a spot it can go to legally. In addition to this move assist will automatically win the game once there are no more hidden cards. In addition to move assist, a timer is displayed at the top of the screen that keeps track of how long the current game has been going on for which can be useful if the user is trying to win a daily challenge to win in a certain amount of time. Also stored in this function is whether the user wins and loses which involves the game checking if there are any legal moves to make that can progress the game, if there are none then the game is unwinnable, and the user loses that game. Finally, there is a pause option that will allow you to go back to the main menu and choose different game modes, or difficulty options for a new game which will overwrite your current game and will count as a loss. When you go to resume your game instead of “Play” the button will change to “Resume”.

# Class Diagram (JV)

# Use Case Diagram (HP)

# Use Case Scenarios (HP)

# System Sequence Charts (ALL)