Casino - Android

TECHNICAL MANUAL

November 20, 2018

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Contents

Bug Report

There are no known bugs.

Description of data structures/classes

The data structures used in the game are mostly standard C++ data structures which

include vector, set and string. The game makes use of one custom data structure

which is Move.

Move is a class with three member variables:

- The first is the action to be performed which can be any of the five actions

  possible i.e. build, multi build, extend build, capture, and trail. It is stored as

  a string.

- The second is the hand card involved in the move. This is a string as well

  and should be two characters long, the first representing the suit and the

  second representing the value.

- The third is the loose cards involved in the move. This is a vector of strings

  where every element is either a build or a loose card involved in the move.

  This class also provides member function for accessing or assigning and

  printing the move results in a human readable way.

Classes:

    1. Deck

This class hold the cards for the game life time. It also has functionality to

       randomly shuffle the deck when it is auto generated by the class. The

       deck can also be initialized through a space separated string containing

       the cards or from a text file where every card in the deck in on a new line.

    2. Player

The game uses two objects of class player, one for the human and the other for

       the computer. There is a 'is_human' flag in the class which differentiates

       the human user from the computer user. This class also holds the player's

       hand cards, captured cards and the tournament score.

    3. Game

This is the main entry point of the game as the name suggests. This class asks

       the user if they want to start a new game or load a game. Then it proceeds

       to load a game state as per chosen by the user. It then prints a menu for

       the user and proceeds with the game. This class creates objects of the

       Deck, Player, Logic, Build, and Move classes. Both the round and the

       tournament is being dealt with through this one class.

    4. Move

This is a basic structure class to hold the Move data structure that has member

variables: action, hand card and loose cards.

5. Logic

This is the brains behind the game. When a user asks for help or the computer

needs to calculate its next move, this class provides member functions

that check if an input move is valid and also generates the best possible

move regardless of who is playing.

6. Build

One object of this class is declared per round. This object holds the builds in the

current game, their owners, their sums and various other member

functions that allow creation and maintenance of builds.

Activity Classes:

1. MainActivity:

This is the welcome screen. Has three buttons, one to lead to to the

help activity, the other to start a new game and the third to load a game from

a text file.

2. HelpActivity:

Pressing the help button on the main activity leads to this screen. Has

a text box containing the general rules of the game.
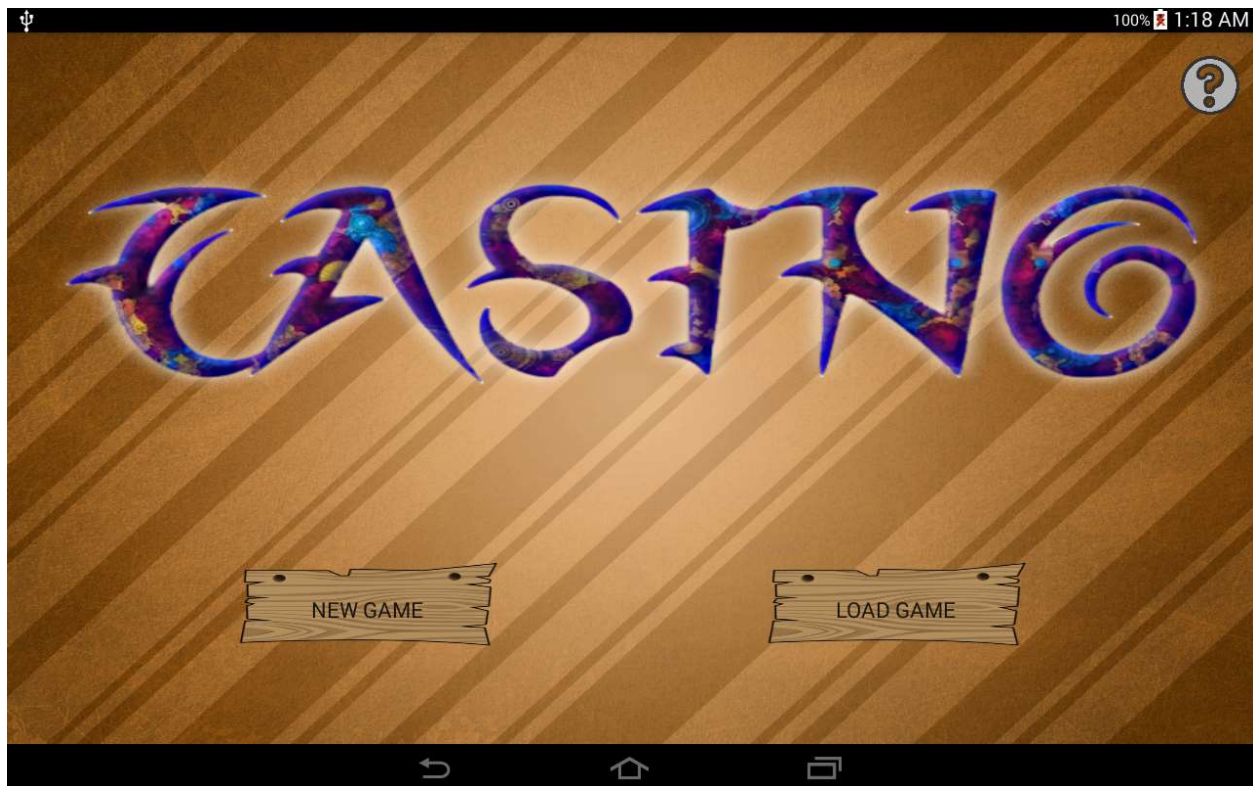
3. GameActivity:

   The main game screen. Has the computer's hand, the player's hand, the table cards, a console for stats, the move buttons, a save button, and a current player indicator.
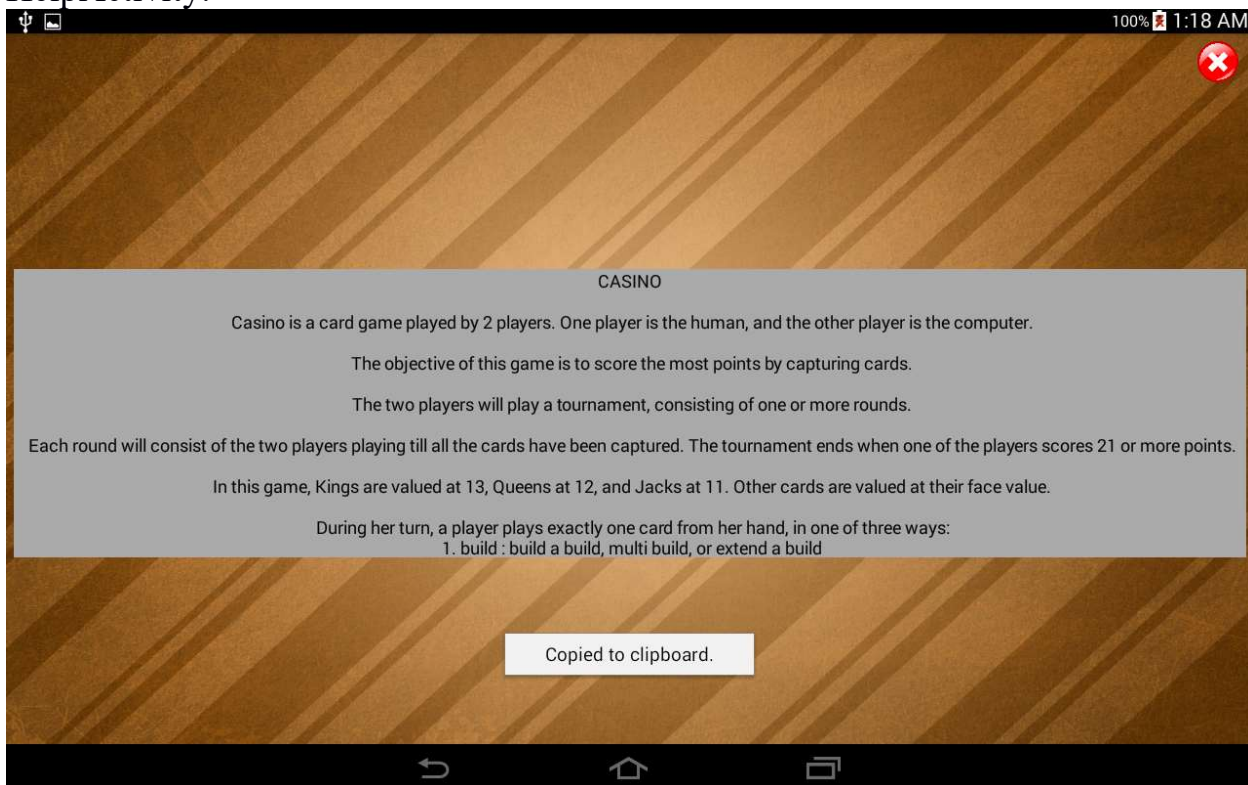
4. FinishActivity:

   This is the final screen of the game. The game is directed here when a tournament ends, i.e. one or both players score more than or equal to 21 points overall
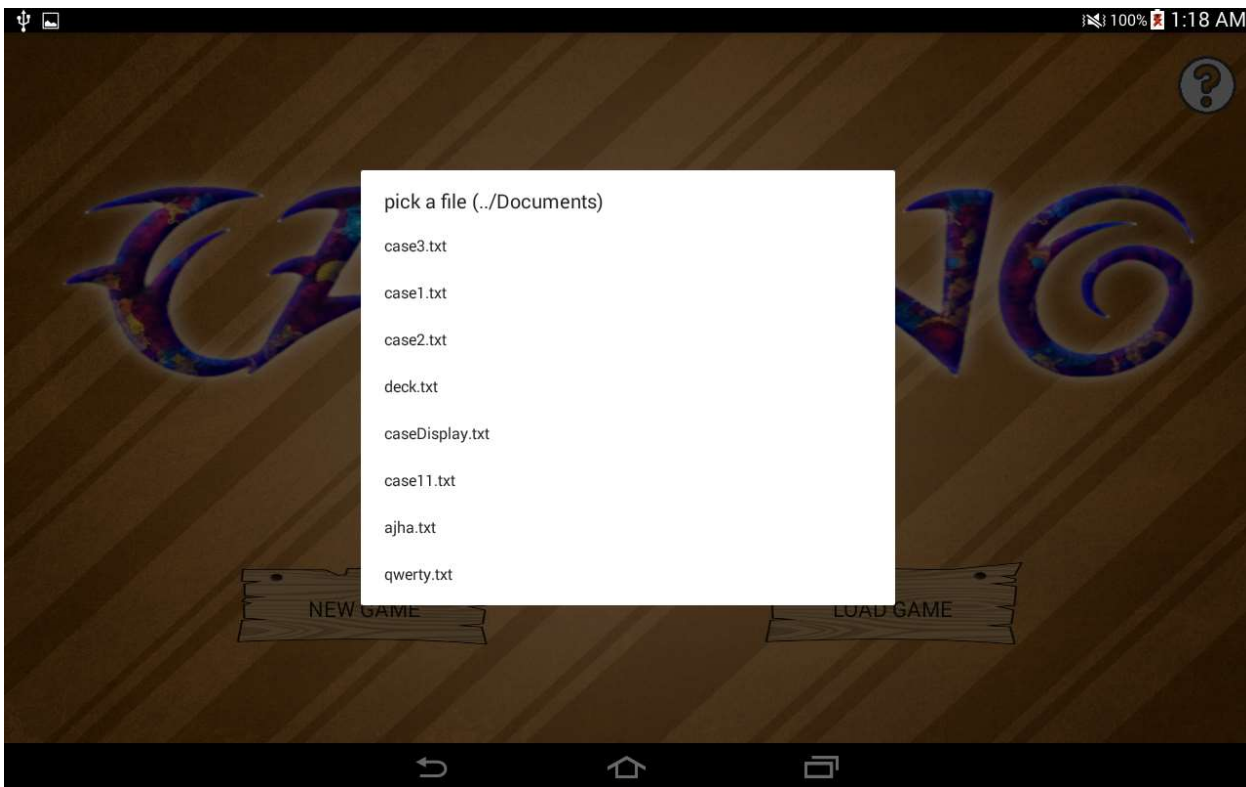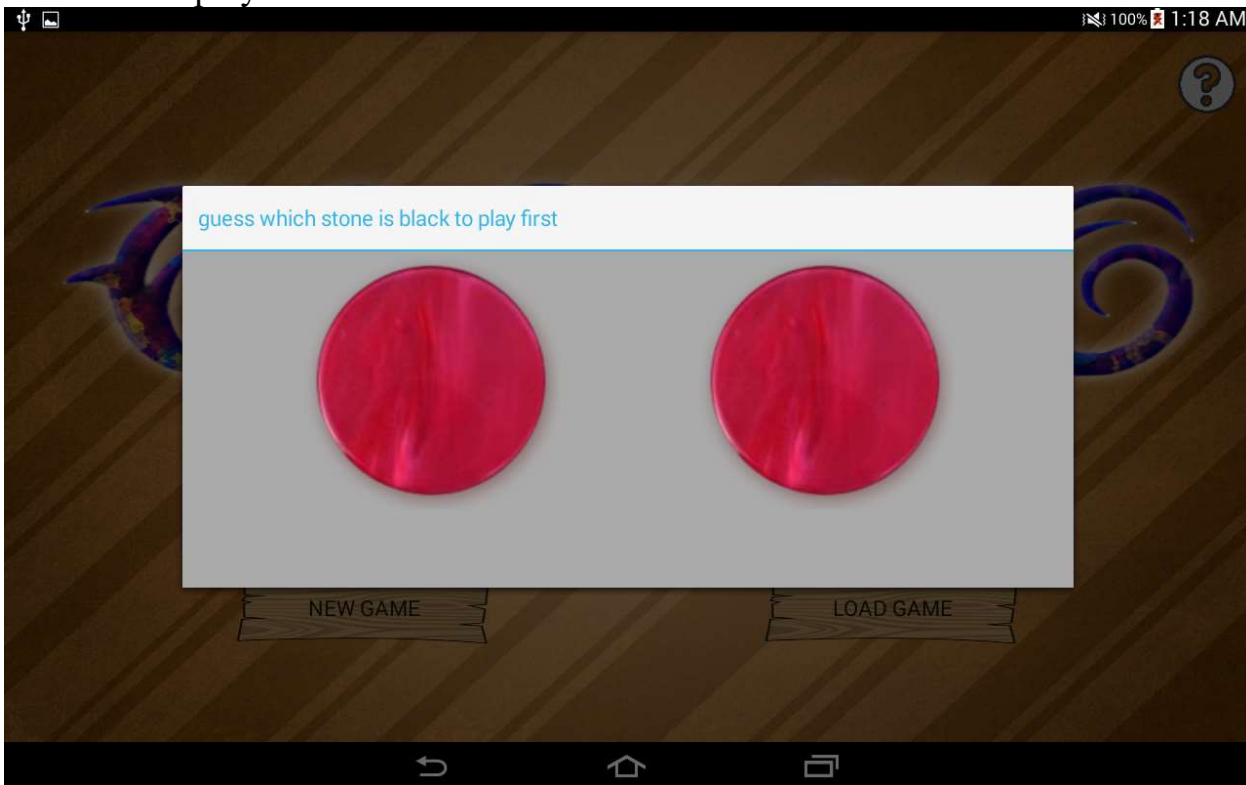
Screen Shots

MainActivity:

HelpActivity:

CASINO

Casino is a card game played by 2 players. One player is the human, and the other player is the computer.

The objective of this game is to score the most points by capturing cards.

The two players will play a tournament, consisting of one or more rounds.

Each round will consist of the two players playing till all the cards have been captured. The tournament ends when one of the players scores 21 or more points.

In this game, Kings are valued at 13, Queens at 12, and Jacks at 11. Other cards are valued at their face value.

During her turn, a player plays exactly one card from her hand, in one of three ways:
1. build : build a build, multi build, or extend a build

Copied to clipboard.

Load Game:

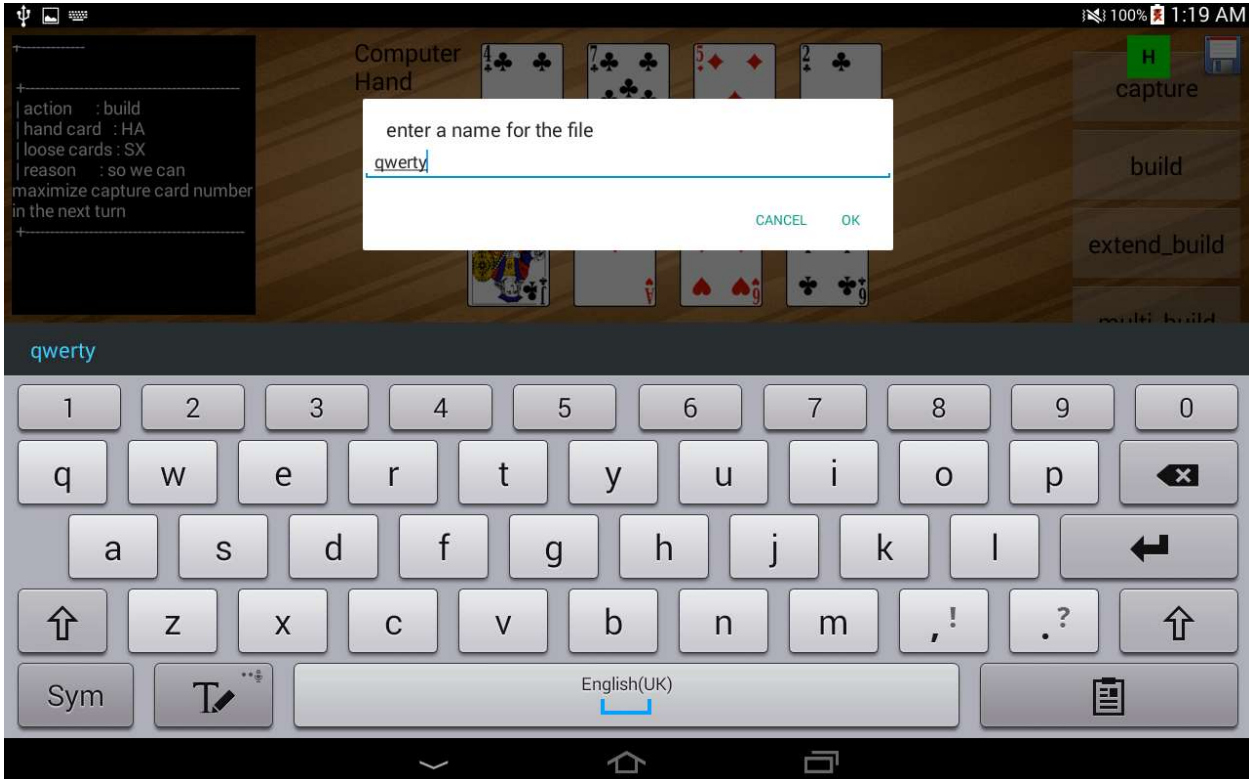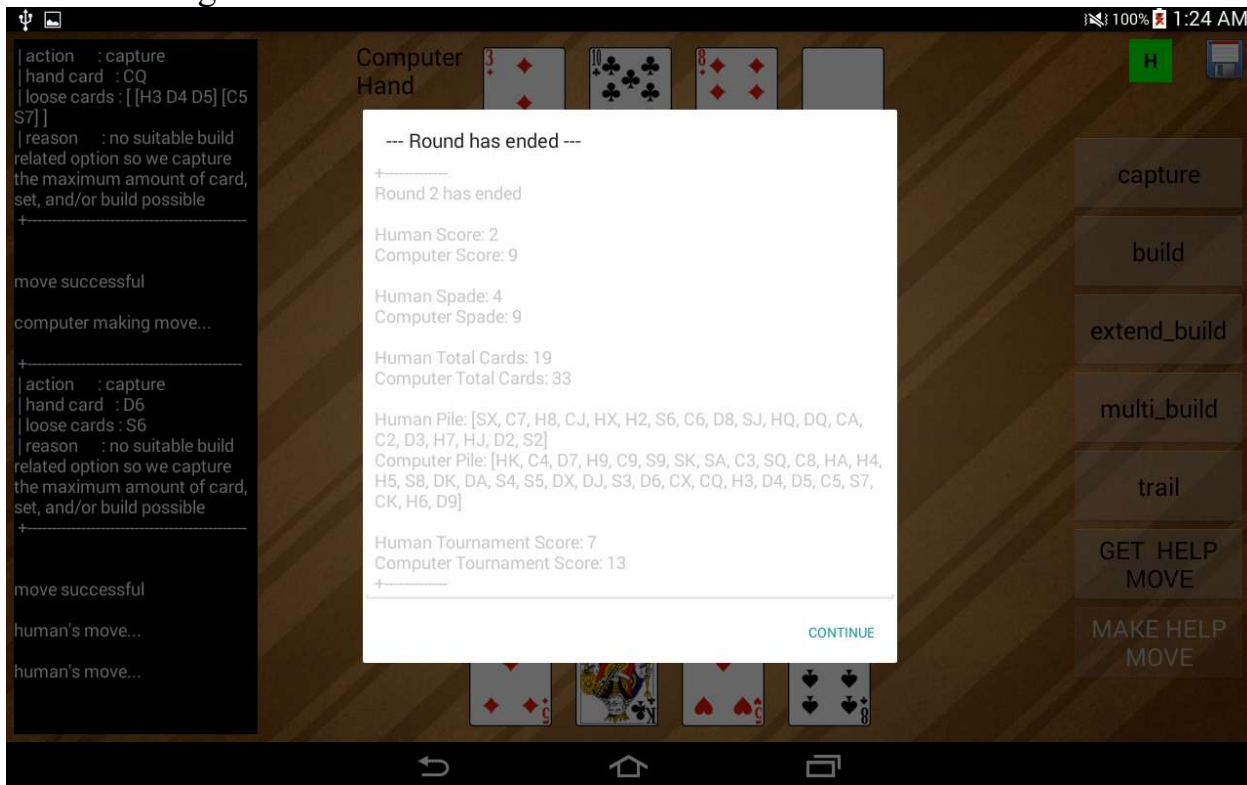Choose first player in New Game:

GameActivity:

Take Move help:

Save Game:

Round ending stats:

Tournament Ending page i.e. FinishActivity: