Media Computation (COMP10003) Personal Project 2019

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Simple Black Jack Game:

Plan and outline:

A key component of this game will be images of the 52 cards of the playing deck and an image of the back of the deck. These will be represented as instances of an Image() class. All 53 images will be located in the same folder as the source code and the directory of each image will be saved in a list of strings.

Another critical part of the program will be replicating a real deck by randomly drawing cards, and removing them from the deck when drawn! This will be done by creating an image, where the location of the image is decided by the 'random.choice()' method. This will randomly pick one of the card's directories from the list, then that entry will be deleted from the list.

Clicking of the deck will result in the random card being drawn, this will require a user defined function that checks if the mouse click is in the x and y bounds of the deck image. Mouse clicks will need to be detected with the checkMouse() method. Once the card is drawn it will need to displayed and moved with draw() and move(,). The value of the card, which is contained in the directory string of the card will need to be extracted and stored as an integer to determine the players total score. The game will need to be in a while loop, when it is the players turn to get check each click that the user performs.

If the players total score goes over 21 then the player is bust and they lose that round. The dealer doesn't even have to play! If the player decides to press hold, there total value is stored and the dealer begins to draw cards in a while loop, until either the dealer beats the players score, draws, or goes bust! If statements will need to be used within this loop to check how the players score compares to the dealers score so the appropriate action can be taken, all this information will need to be draw in text objects notifying the user what is happening. Depending on who wins, text will be displayed and a score will be kept and displayed on how many wins the player and dealer each have. The game will be played in a best of five rounds format and after five games a winner will be decided and the program will exit.

In summary, data types such as lists, strings, integers, text objects, image objects, point objects and Booleans will be required to construct this project. All of the user interaction will be through mouse clicks and information will be given back to the user strictly through the graphical window, not the console.

The project will require open source card images, and the use of the graphics.py library alongside some standard python libraries.

To fully complete this task will be quite complex however I think a protype will some functionality is very achievable. I should complete most parts of the project in the available time, although some features such as a restart button may be excluded due to time constraints. All features of black jack are not intended to be implemented such as 'double down' or multiple players. This is out of the scope of this project and would be very complex to implement.