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15-112

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TP1

Project Proposal

Project Description – Name: Texas Holdem Probability

- Description: Insert the cards that you have and it will calculate the probability of each hand you can get (i.e. a full house, straight, flush, etc.)

Competitive Analysis –

The only projects that have to do with Texas Holdem have to do with actually playing the game. My project will calculate the probability of getting certain hands based off of what cards you currently have (thanks concepts :,( ). Like other projects the image of the card will be shown. I might have the user be able to play Texas Holdem against the computer or suggest what the user should do as their move depending on how far I am by TP2 and what more I need after my MVP. But overall, my project is different in that its main purpose is to calculate the probability of hands which no other project has done.

Structural Plan – All the cards will be stored as images. The different screens will be functions that will be displayed depending on if the Boolean for the conditional is true or not. To calculate the probability of each hand (full house, straight, etc.) will have its own function and will return a percentage which will be shown to the user. The cards are stores in dictionaries currently but I may also have a list to keep the order of the cards that the user has picked that is in their hand.

Algorithmic Plan – I first am going to calculate how many cards there are of each number or suit for each hand there is. After that I am going to do conditionals based off of how many cards the user has and which are needed and then use combinatorics to calculate the chances of getting the last card that is needed to get a full house for example.

Timeline Plan- I want to get the animation done by Friday, November 22, 2019. I want to have the calculations on paper done by Saturday Night and then actually code this part up by Tuesday.

Version Control Plan- I am going to store my code on my GitHub account in a new repository. Here is my repository.

Module List – Pygame