Project Proposal

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The Big Idea:

The main idea of the Hangman & Pictionary project is to provide a fun, interactive game that brings additional puzzle components into an original Hangman guessing element. A supplementary piece to be added to this game is Pictionary, in which an API (or other resources) automatically extract an image of the chosen word to display a fraction of it each time a guess is wrong. Apart from that, the class lecture reviewed on exploring shapes can be utilized to illustrate the body parts of the Hangman each time a guess is wrong. The main idea of this project is to not only introduce an innovative spin to the Hangman game through Pictionary, but also presenting it on a website incorporating HTML, bootstraps, and CSS. In addition to the website, the project is intended to install a database in which accounts can be stored in order to keep track of records and scores to compare and compete with other accounts interactively. The minimum viable product is writing and running a python code that can be transferred and presented into a website, in which additional components can be included. The stretch goal is to incorporate supplementary materials that have not yet been reviewed in class to further innovate the presentation of a creative Hangman game.

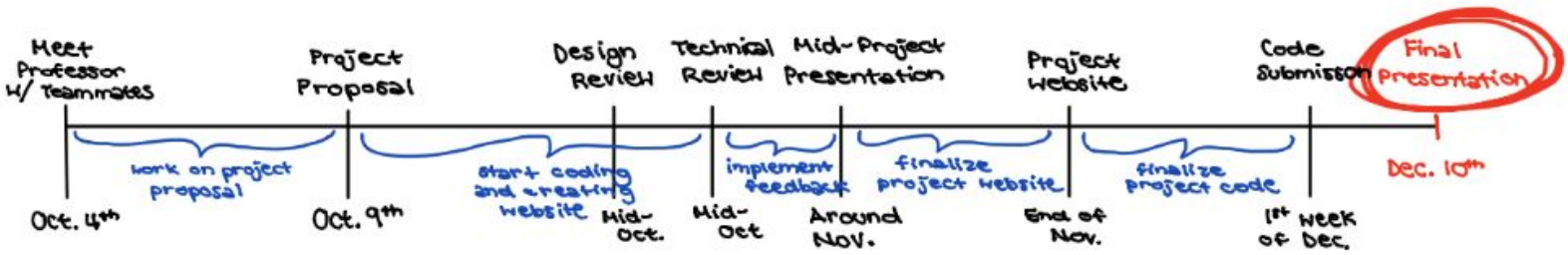
Learning Goals:

This team project will allow for various learning opportunities. First of all, the project proposed can allow for a review and application of a wide range of functions and commands explored thus far in the course to establish a solid foundation of the Hangman game. However, the learning experiences are most valuable when the team has to critically think about which functions are appropriate to structure a seamless running code through organized functions. The team is confident that throughout the process of executing and presenting the project, external research on supplemental Python commands, HTML, CSS, Account Database, and RPI image extractions has to be done to successfully incorporate the innovative aspects of the project.

Implementation Plan:

The project may not refer to specific libraries or frameworks, instead, we will be referring majority to a collection of reviews in the class sessions, exercises, and assignments. The class sessions, exercises, and assignments we plan on referring to will be listed in the additional course content section of this proposal. Additional we will be referring to class sessions from other classes like Web Technologies, as we plan on building our own website where the game can exist online. Furthermore, we will be using internet resources to gain insights on different functions and commands to implement.

Project schedule:



Collaboration plan:

Our team will be adopting the agile methodology and continue to improve on our code. We will first collaborate together to make sure the existence of a working base algorithm, and then we would utilize our team's expertise gained from other classes as well as independent research to further develop it into a website with API integration. In the meantime, a project manager will continuously review the progress of our project and identify areas for improvement for further iterations. Adopting this organization structure will ensure the quality of our deliverables while meeting the deadline.

Risks:

One of the biggest risks our team identified is the use of HTML and CSS, which are programming languages outside of our course content. In order to address this risk, we would conduct more research on top of our existing knowledge and consult the professor when necessary.

Another risk exists within the account management system that we plan to integrate into the website. We need to make sure we have a safe and proper method of storing existing players' information so that they could access it later.

Additional Course Content:

Some topics we covered in class we believe would be helpful for our project are session 5, session 9, session 10. In session 5 we learned about interface design and creating arcs on display. As our project is a game similar to Hangman and Pictionary, we believe we can utilize the arc codes to create the hangman portion of the game. Furthermore, we believe session 9's wordplay.py is going to be very useful when trying to retrieve random words for the players to guess. We want to create a .txt file to compile a list of words used for the game and connect that list into our main game file. Lastly, session 10 about creating lists would be extremely helpful as we plan on creating lists of words for different levels of the game.