Scope Plan - Crazy Eights

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**Part 1: Description of Problem and Needs Assessment**

Project background:

Our goal is to create a program that allows the user to play the classic card game Crazy Eights. Functionally, it will be as similar as possible to the actual game: players will start out with eight cards and take turns playing their cards with the goal of depleting their hand. As the game has been around for a relatively long time, many versions of the game have certainly been created digitally. To differentiate our own, we may pick a lesser known variant or mix in some special rules to keep the old game interesting for a modern day audience, and create a smooth and appealing interface. This program may also implement network features to allow multiplayer between multiple people instead of just AI opponents.

Needs assessment:

The majority of the prospective users of this program will be the players of the game, running the program for entertainment purposes. Because of this, the program should focus on ease of use and have a well designed graphic interface to optimize the gaming experience of users. Other users of the game may include other software developers (including classmates) who may want to learn more about an aspect of code used in this program. Thus, the code should be well documented and commented to ensure maximum comprehension for these users.

**Part 2: Vision of Solution**

Vision statement:

All the standard features of Crazy Eights should be implemented in this program. This means the graphic user interface should display the cards the player is holding, the deck, the discard pile, as well as the various actions that can be performed by the user in the form of buttons. Since the base game of Crazy Eights is not very complex, there are plenty of features that may be developed on top of the base game to enhance the user experience to meet the needs of the game audience. The mandatory features to be developed will be completed first, then the features that may be developed will be worked on. It is likely that most of these will be implemented in the final version of the game.

Features to be developed:

* Instructions and strategy guide
* Imported deck of cards to be smoothly implemented as graphics for the program
* AI, as the game is multiplayer so computer opponents must be added
* Integration of loops, GUI, arrays, classes
* Key Listeners (for keyboard shortcuts)
* Pop-Up Windows (ex. instructions pop-up)
* Menu Screen (before the game starts)

Features that may be developed:

* Mouse functionality without buttons
* Multiple levels of AI (easy, medium hard)
* An user help option that highlights playable cards or gives recommended actions to the player
* Animation with respect to dealing cards
* Multiplayer functionality over the internet or LAN connection
* Extensions to Crazy Eight’s Rules
* Easter Eggs

Features not to be developed:

* 3D graphics or 3D animation of cards
* Optimized window resizing
* Customizable user interface