Requirements and Analysis Document for Trivial Pursuit - Around the World

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This version overrides all previous versions.

1 Introduction

1.1 Purpose of application

The project aims to create a game that is mainly tended for entertainment. It is a computer based version of the board game Trivial Pursuit. Though with it's own look and functions. The game is suitable for people from an age where they can answer questions up to an age where they don't get entertained of this anymore.

1.2 General characteristics of application

The application will be a multiplayer application for desktop. The GUI will be adaptable for both Mac and Windows platforms. Trivial Pursuit is a parlour game, hence a turn based game. The player must end his or her turn in order for the next player to play. Which player's turn it is, is automatically ordered after the players are created and before the game starts. In order to win the game you must answer correctly to a question from each continent. More details about the game itself are described under *User Interface* among with pictures of each view.

1.3 Scope of application

The application does not comprise single-player mode since it does not include computer-player ability. Neither players nor games can be saved, and statistics cannot be collected (such as high scores). The game will also be non-networked, which means that it only will be a desktop, standalone game.

1.4 Objectives and success criteria of the project

It should be possible to play a full game where up to six players can be created. In order to play the game, the players should be able to throw the dice and move left or right the number of steps that the dice show. The player should thereafter receive a question with four alternatives. If the player answers correct on the question, they collect a symbol of the continent that they are located at and then gets to throw the dice again. If the player would give a wrong answer it is the next player's turn and this continues on until someone wins.

1.5 Definitions, acronyms and abbreviations

- GUI, graphical user interface.
- Java, independent programming language.
- JRE, java runtime environment.
- TP, the application (Trivial Pursuit)
- Players, the users controlling the game.
- Host, the computer the game will be played on.
- Round, when every player has had their turn.

2 Requirements

2.1 Functional requirements

The player should be able to:

1) Start the game
2) Create the number of players.

   a) Write the name of each player.

3) For each player, select in which continent to start.
4) Do a turn. During this, the player can

   a) Throw the dice.

   b) Choose to move left or right.

   c) Receive question.

   d) Answer the question by selecting between four alternatives.

   e) If the answer is correct, the player gets a symbol of the continent.

   f) Repeat from a) until the player gives an incorrect answer.

   g) End turn and then it is next player's turn.

5) Win the game by collecting all continents and all categories in Europe.
6) View settings from gameboard.

   a) Change player names.

   b) Put on/off music.

   c) Change the volume of the music.

7) View the rules of the game from game board.
8) End the game.

2.2 Non-functional requirements

2.2.1 Usability

This is a 2D multiplayer game for two to six players. Anyone who is capable of reading can play the game.

2.2.2 Performance

The action performed by a player should not take more than 2-3 seconds, in worst case.

2.2.3 Supportability

In order to make the game board suitable for any platform, the GUI has been implemented in such a way that the board has a specified size from the beginning. This in order for the game board not to exceed the size of the screen, and also so that the game board does not become too small.

2.2.4 Implementation

The application uses Java environment in order to get platform independence, therefore the host needs to have JRE installed. Maven is used as building tool and the host therefore also needs to have this installed.

2.2.5 Packaging and installation

The application can be cloned from the Git-repository with the link:
https://github.com/eminah/TrivialPursuit.git

2.3 Application models

2.3.1 Use case model

UC	User	Program
End Game	Start the program and click *End Game*	The program quits
Start Game	Click *Start Game*	ChoosePlayerView appears
Create Players	Choose number of players	Correct number of textfields is available
	Write names and click *Done*	ChooseTravelView appears
Throw Dice	Choose where to start and click *Done*	DiceView appears
	Click *Throw Dice*	GameBoardView appears
Move Player	Click *Go Left* or *Go Right*	The player moves to the new spot
Receive Question	If the player lands on a colored spot	CardView appears and a question is received
Answer Question	Click on an alternative on the question card	The answer is marked green (right) or red (wrong), then DiceView appears again
Settings	Click on *Settings*	SettingsView appears
Rules	Click on *Rules*	RulesView appears

2.3.2 Use cases priority

1. Create Players
2. Start Game
3. Throw Dice
4. Receive Question
5. Answer Question
6. Move Player (automatically)
7. End Game
8. Settings
9. Rules

2.3.3 Domain model
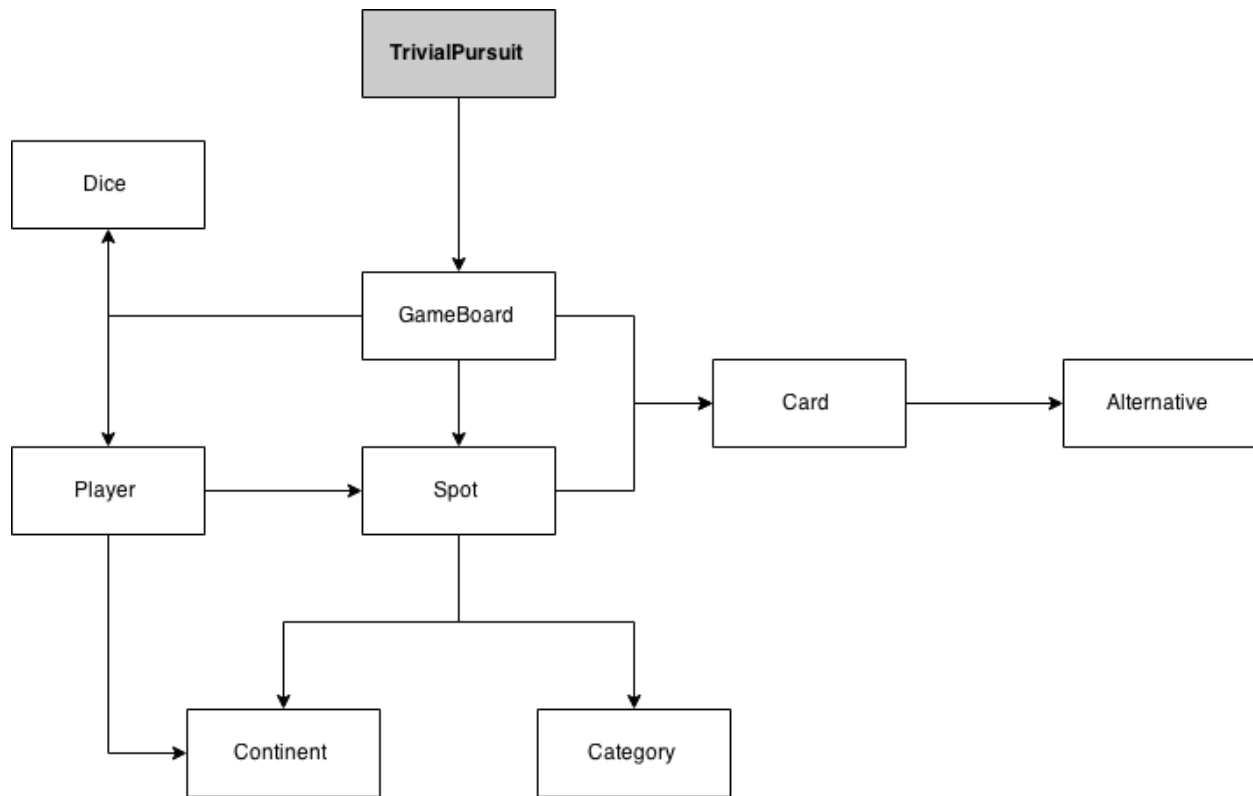
2.3.4 User interface

The user interface is based on many different views as may seen below. When the game starts the user first gets two alternatives; start the game or end it. If the Start button is pressed the user gets to create players by choosing the number of players and then naming them. After creating the players the players has to choose where to begin their travels and cannot proceed otherwise.
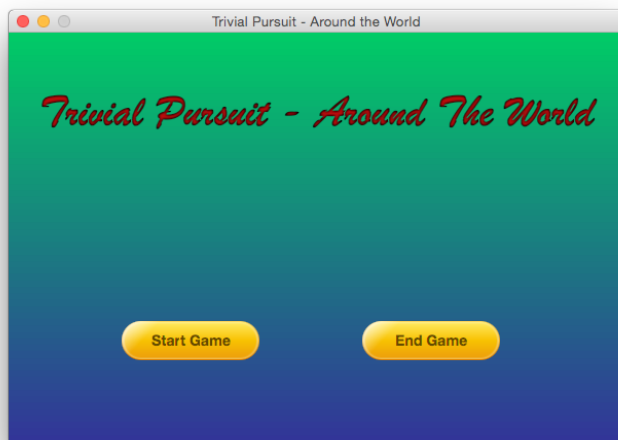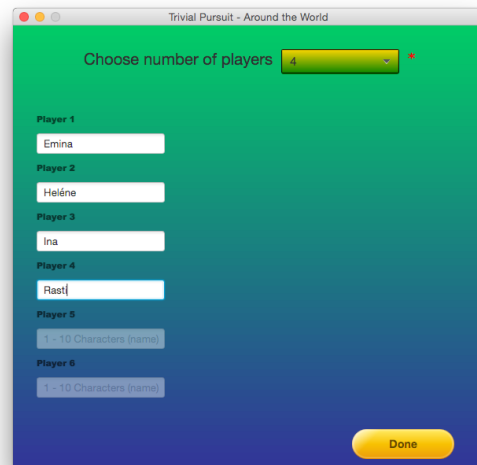
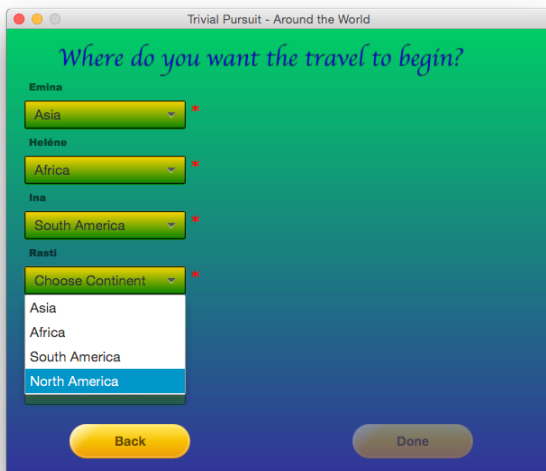Image 1: StartView

Image 2: ChoosePlayerView

Image 3 and 4: ChooseTravelView

Then the dice appears and the first player gets to throw them to get to the game board. The player can thereafter choose to go left or right on the game board. If the player comes to a colored spot a question will appear depending on which continent the player is at. If the player answers correctly a symbol of the continent will be collected and the player gets to throw the dice again and keep on going. Otherwise the player has to stay on the same spot until next round and the turn is handed over to the next player.
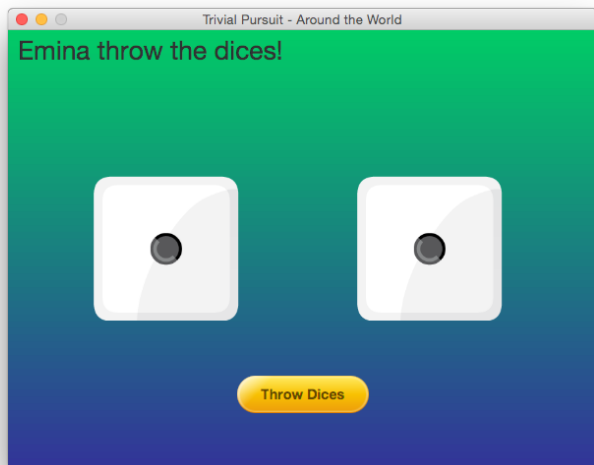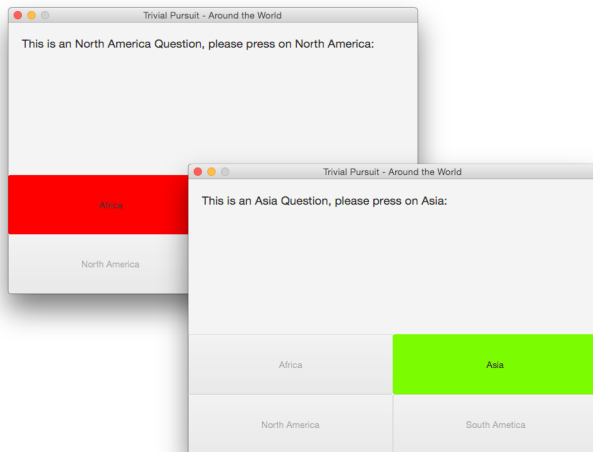
Image 5: DiceView

Image 6: GameBoardView

Image 7: CardView

Image 8: GameBoardView

3 References

http://sv.wikipedia.org/wiki/Trivial_Pursuit