

Functional Requirements

3rd year Project 2012-2013

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| Project Name: |
| Development of a Card Game Management Application within a Real & Virtual Environment |

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| Authors: |
| * Andréi BROUSSILLON * Bastien CARRE * Boris LENG * Lyvia LOUISIUS |

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| Supervising Professors: |
| * Catherine MARECHAL * Elizabeth COLIN * Lamine BOUGUEROUA |

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# INTRODUCTION

This paper provides the functional specifications for the 3rd year project “Development of a Card Game Management Application within a Real & Virtual Environment”. This document desribes all the functionalities of the final product elaborated for this project. This includes the main characteristics, the detailed functionalities of each component of the product, and the guidelines to run the final program. This project is held by two pairs of students working on the two main parts of the project; an electronic part which includes the RFID detection of cards and a development part which includes the game interface and architecture. The main goal of this project is to mix a real and a virtual environment within a card game context. As a matter of fact, the purpose is to enable real and *virtual players*[[1]](#footnote-1) to play the same card game together.

# Overview

The working title of our product is **Blue Weasel** so far. The final product’s name will be determined before the production process.

Four players real or virtual are required to play this game but at least one of them must be a real player. The following section describes a sequence of actions putting forward an example about how to play the game.

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|  | Steps | Description |
| 1 | **Signing in** | Four players subscribe to the game application.    -Subscribe as a real player  -Subscribe as a virtual player  D:\ESIGETEL\projet2013\reports\img\Computer.png  D:\ESIGETEL\projet2013\reports\img\1vplayer.pngD:\ESIGETEL\projet2013\reports\img\4players.png |
| 2 | **Beginning** | Real players around a game table can create a game room, then virtual players via their tablet/computer can join to meet the required number of players for the chosen card game.  D:\ESIGETEL\projet2013\reports\img\Computer.png  D:\ESIGETEL\projet2013\reports\img\1vplayer.pngD:\ESIGETEL\projet2013\reports\img\1vplayer.png |
| 3 | **Scanning** | Every card of each player is scanned during the dealing. |
| 4 | **http://www.nfc-webshop.com/media/catalog/product/cache/3/image/b80e4747214187c15c9b11aa9dfd2c61/6/1/614_0.jpghttp://www.nfc-webshop.com/media/catalog/product/cache/3/image/b80e4747214187c15c9b11aa9dfd2c61/6/1/614_0.jpghttp://www.nfc-webshop.com/media/catalog/product/cache/3/image/b80e4747214187c15c9b11aa9dfd2c61/6/1/614_0.jpgPlaying**  Card reader | To play a card, the real player has to scan it whereas the virtual player selects the card from the game application. Then all the cards are shown on a screen located in the middle of the game table and on the virtual player’s tablet as well.      http://www.poker-en-ligne-france.eu/wp-content/uploads/2010/03/7-jeu-de-cartes-300x225.jpghttp://www.poker-en-ligne-france.eu/wp-content/uploads/2010/03/7-jeu-de-cartes-300x225.jpghttp://www.poker-en-ligne-france.eu/wp-content/uploads/2010/03/7-jeu-de-cartes-300x225.jpg |
| 5 | **Ending** | The score is automatically calculated and is displayed at the end of every round, and at the end of the game |

# Detailed functionalities

This section provides the detailed functionalities of the following parts: Signing in, Beginning, Scanning, Playing, Ending and Data Acquisition.

### Signing in

* Every virtual player and the real player who starts the Game Application, has to create a Blue Weasel account through a Web Application
  + Providing a unique nickname
  + Proving a correct email address
  + Providing a secure password
* A player can cancel his account at anytime
* A player can retrieve his password if it has been lost
* A member can recommend the game to a friend

### Beginning

* A virtual player can access the list of current games.
* He can access the list of games awaiting players.
* A real player can create a new game:
  + He can set some parameters such as the winning score
  + He can give a name to the game session

### Scanning

* The Game Application gives instructions to process correctly the dealing
* A real player can deal the cards scanning them on the card reader.
  + He must respect the number of cards and the game order, both indicated by the game Application
  + Whilst dealing the cards, he must wait for the Application alert and beep before switching from a player to another one.

### Playing

* A real player can play a card during the game process by scanning it away.
  + The player can take a look at the Game Application in order to check whether he is to play a card.
  + When a card has been scanned for the second and last time, the Game Application will consider this card as played by the current player.
  + The player can play some special cards which represent the usual spoken decisions such as “I take” and “I pass”.

### Ending

* The score of the teams is displayed as long as the game is running and is recalculated at the end of each round.

# Ergonomics

# Case of the Belote Game

It has been decided to choose “The Belote” game for this project. This section goes through the game progress for real and virtual players. In this scenario, there will be three real players and one virtual player. The scenario with two real players and two virtual players is almost similar to the former one.

## Beginning

* Once all 4 players have joined the game, the “Belote” game can begin.
* A real player can deal the cards
  + This concerned deals 3 cards to each player scanning them on the reader.
  + The dealing order is set by the game application, thus the dealing player must

1. We call a virtual player someone who plays the game remotely via a tablet or a personal computer. This is not to be confused with Artificial Intelligence which is not part of this project. [↑](#footnote-ref-1)