

*Institute of Technology Carlow*

4<sup>th</sup> Year Project

*E- Scratch Cards*

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**Functional Specification**

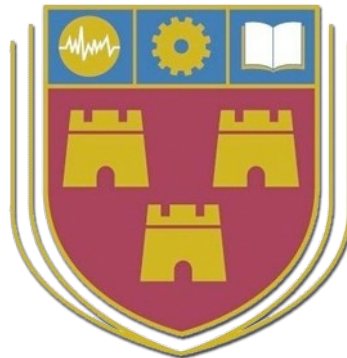
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### 1. Introduction

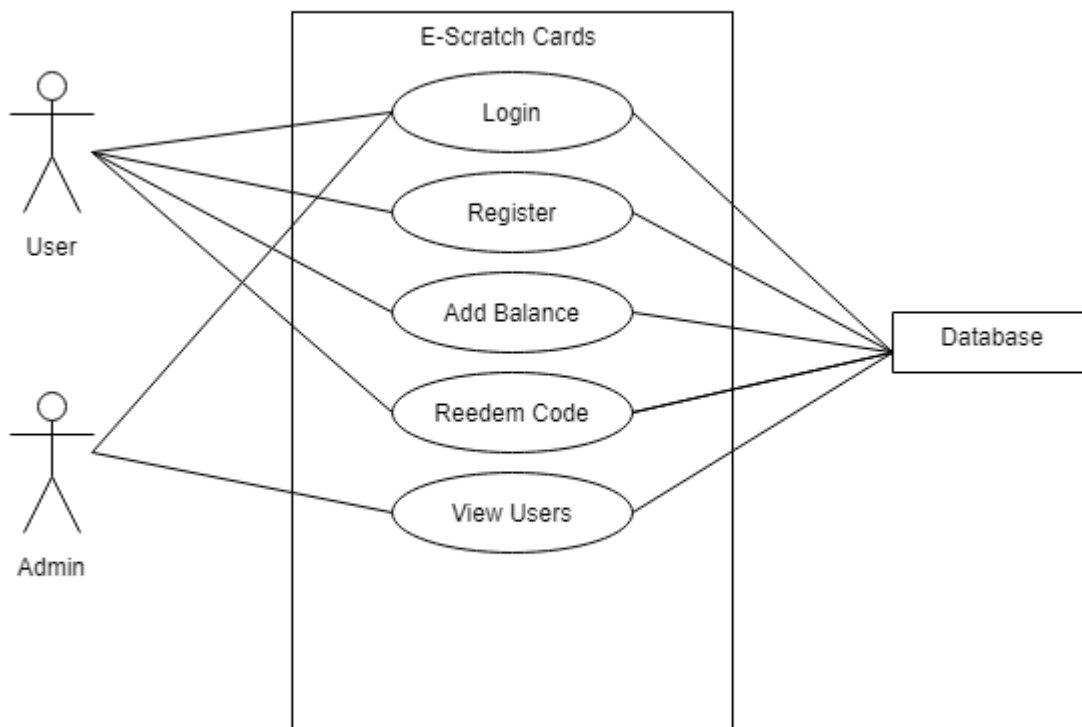
The main purpose of this document is to provide the functional specifications for E- scratch cards. Throughout this document will

describe the following; system architecture, project plan and the user interface design. This document will also provide an Iteration plan for the project detailing the expected deliverables for each of the three iterations.

## 2. Overview of Project

As described in my research document the main purpose of this project is to provide customers to have the opportunity to purchase an Electronic scratch card which allows the customer the prospect of playing scratch card in the convenience and comfort of their home. The project will provide the customer the ability to play and purchase scratch cards from a variety of gaming types where they can use their winnings to continue on playing or they can redeem their winnings and have them directly transferred to their own personal banking account.

## 3. Use Case Diagram



#### 4. Target Market

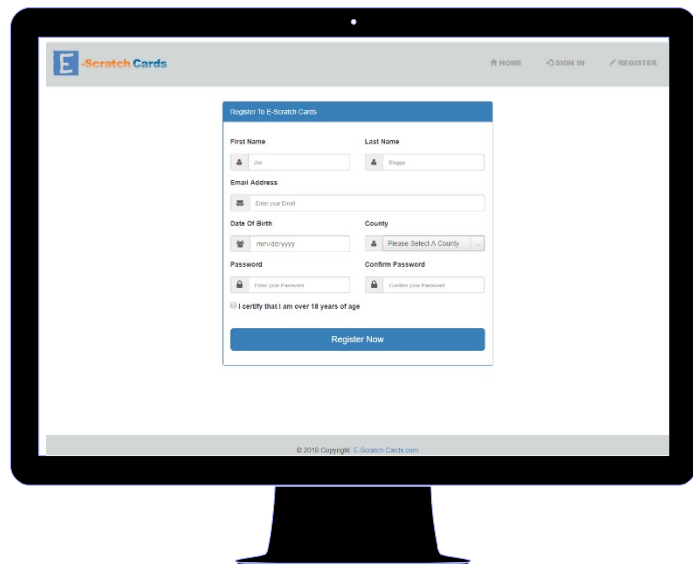
The target market for this project is people that have an interest in purchasing scratch cards. With completing this application I intend to give these users the comfort of purchasing scratch cards on the go. I also will also focus on making the application user friendly, for people that aren't as familiar with latest technologies as others.

#### 5. User Interface Design

The User Interface will be one of the main focusses of the project and will aim to be as simple to use as possible to provide the best experience for all technology inadvance and advance users. Some features that will be implemented in the application that will be supporting a user friendly interface will include.

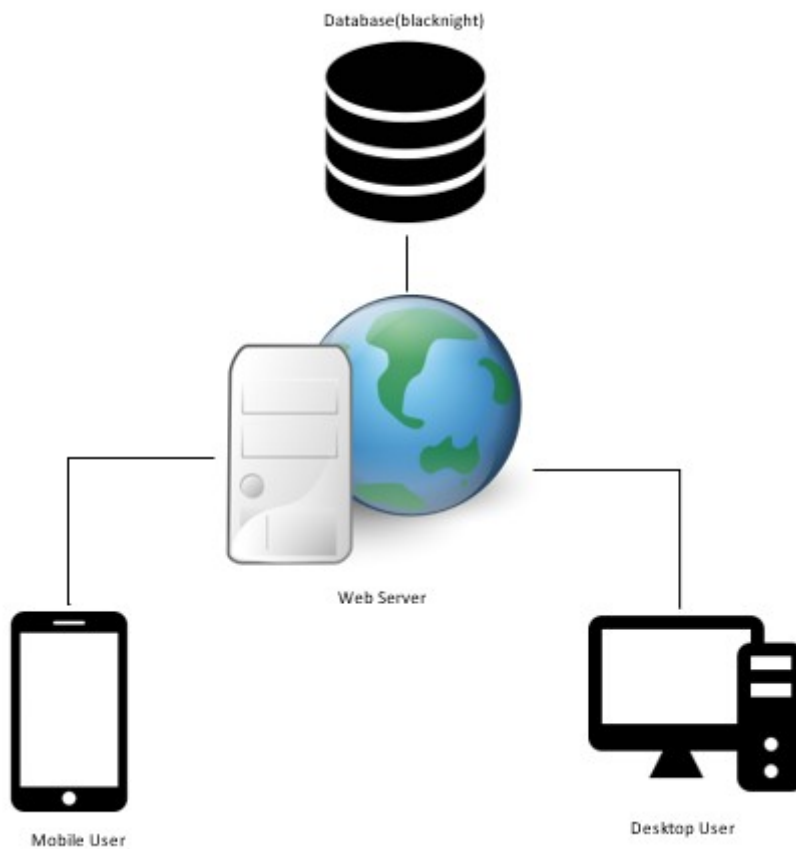
- Providing clear font and accurate font size that can be easily read on any size screen.
- Limiting the amount of functionality per page.
- Providing well labelled buttons.
- Readable error messages.

Below is a diagram of what the application looks like.



## 6. System Architecture

This application will be both a web and mobile application. The web server will receive requests from either the Mobile user or the Desktop user. Once the Web Server has received these requests it will then check the database for the corresponding request and then display the results to the user. For example, if the desktop user wants to view their account information. They will request this from a page on the web server. When the user requests this, the Web Server will check the database for all the information about the user and then display the information to the user.



## **7. Non-Functional Requirements**

### **7.1. Functionality**

- An internet connection will be required to use the application as all user's data will be stored on an online database.
- User data should be encrypted into a database to provide extra security.

### **7.2. Usability**

- A user must register and login to access the application.
- Users should be able to purchase different types of Scratch Cards.
- Users should be able to have access to all their data, and be able to view their current balance.
- A user should be able to win their winnings along with the free scratch cards that they won.
- A redeem code section should allow users to enter a valid code and provide them with a related free scratch card.
- Admins should have access to an admin page.

### **7.3. Reliability**

- Backups of the database must take place on a regular basis.
- Error messages must be displayed to the user when an error occurs on the web application or any errors coming from the sql database.

### **7.4. Performance**

- Scratch card generation should take no longer than 10 seconds.
- Redeeming a code should take no longer than 5 seconds.
- The system should be able to handle a great number of users logged in at the same time and provide a lag free environment
- All error messages should be generated within seconds of the error happening.

### **7.5. Supportability**

- All user details must be kept private for security reasons.
- The application should work and look to a professional standard on both mobile and web platforms.
- The system should be able to handle large amount of data being added and deleted by users.

## **8. Project Plan**

One of the most important points with working on an application is project planning. This year's projects were allocated on the 9th of October and the submission date is the 6th of April, that is a total of 26 weeks to complete the project. The time frame will be broken up with three Iterations, with each iteration lasting approximately 7 to 8 weeks. The different iterations will focus on different aspects of the project, which include research of existing similar applications, different technologies that will be used, writing documentation of the project and coding.

### **8.1. Iteration 1**

This is the first iteration and also the beginning of the project. This iteration began on the 27th of November and ended on the 8th of January. In this iteration I completed my research document that in return gave me a better understanding on the similar applications that were on the internet and also gave me a clear picture of what technologies and programming languages that I was going to use for the project. Knowing that my application is going to be a web based application I found Blacknight Solutions as my hosting platform.

I also worked with how the Authentication methods would work. This includes the registration, login and logout for the application. At this stage, I created a very basic interface for testing purposes to make sure that the authentication can differentiate between users and also to test that a connection to the online host can be achieved.

At the end of this iteration I found that I was ahead of myself and going at a steady progress with having my first document completed and a start of my application. I found that I had spend more time with coding, that doing more research for the Research Document so it return it might lead to more work at a late stage updating the document

### **8.2. Iteration 2**

This iteration began 15th of January and ended on the 19th of February. In this iteration I had the main design of the website completed and also worked with Bootstrap. This was my first time dealing with Bootstrap, so it took some time to become familiar with it. Working with Bootstrap it allowed my application to work on not only on the web but also on the mobile platform so by wasting time

learning how to use it, it also became an advantage by saving time having to write code for a mobile application.

I also completed the main functionality of the application by allowing users to purchase and win different amount of scratch cards. With this I also have completed other functionalities working that include, users being able to add cards to their account, updating balance and allowing them to view their current balance. At the end of the iteration I felt that I was very behind schedule, having spent a lot of time on getting the design of the application looking to a better standard it took my attention away from the more important principles of the project. With this it leads a lot of work to be completed in the next iteration.

### **8.3. Iteration 3**

This iteration began on the 26th of February and is the final iteration of the project. With iteration not being as productive as I hoped for, it left me in a very pressured situation to get the rest of the work completed. In this iteration I plan to complete the rest of the project in terms of coding and get all the functionality of application working without any bugs.

I also need to go update any of the previous documentation that I completed in the previous iterations and complete the final report. The final part of this iteration would be testing. This is vital part of the project as without testing it could lead my application with a lot of errors and cause any potential users issues when using the application.



#### 8.4. Breakdown of Deadlines

<b>Term 1</b>		
<b>Month:</b>	<b>Date:</b>	<b>Tasks completed:</b>
September	11 Sep 2017	
	18 Sep 2017	
	25 Sep 2017	
October	02 Oct 2017	
	09 Oct 2017	Projects Decided
	16 Oct 2017	
	23 Oct 2017	
	30 Oct 2017	
November	06 Nov 2017	Research Document
	13 Nov 2017	Functional Spec
	20 Nov 2017	Design Docs
	27 Nov 2017	Iteration 1 Start
December	04 Dec 2017	
	11 Dec 2017	
<b>Term 2</b>		
January	08 Jan 2018	Iteration 1 End/Presentation
	15 Jan 2018	Iteration 2 Start
	22 Jan 2018	
	29 Jan 2018	
February	05 Feb 2018	
	12 Feb 2018	
	19 Feb 2018	Iteration 2 End/Presentation
	26 Feb 2018	Iteration 3 Start
March	05 Mar 2018	
	12 Mar 2018	
	19 Mar 2018	

<b>Term 3</b>		
April	09 Apr 2018	
	16 Apr 2018	
	23 Apr 2018	
	24 Apr 2018	FYP Submission and Industry Showcase
May	01 May 2018	
	08 May 2018	

### 9. References

[http://csis.pace.edu/~marchese/SE616\\_New/Samples/Example%20%20Supplementary%20Specification.htm](http://csis.pace.edu/~marchese/SE616_New/Samples/Example%20%20Supplementary%20Specification.htm)

images

[https://www.google.com/search?](https://www.google.com/search?q=images&hl=en&source=lnms&tbn=isch&sa=X&ved=0ahUKEwj4jIO6-b_aAhXqJsAKHRcBBRkQ_AUICigB&biw=1280&bih=844)

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