6COSC006W – Final Year Project

Project Initiation Document (PID)

Provisional Project Title

Student first and last name (student number)

**Supervisor:** Supervisor Name

BSc (Hons) in XXX

School of Computing & Engineering

University of Westminster

Date

**1. Problem statement**

*200* words

Project introduction and context.

Provide an outline of your project, the background to the problem you intend to solve and the need for the software/application (why it is needed, and what it aims to achieve in both practical and research terms).

The main result of the project I intend to create is to simplify the user journey when completing a transaction in a certain marketing campaign.

Nowadays most of the promotional campaign require the user to follow a certain journey that they can get wrong and then never reach the intended final result.

I stand from the point of view of a customer who has done everything the promotion asked and he is in possession of a voucher to redeem. Most of the time the voucher is in form of a sequence of numbers or displayed as a barcode that the cashier can scan. My solution is to provide an easier alternative for the customer who will just need to “tap” his phone as he was doing a contactless payment.

**2 Aim and objectives**

*400 words*

The **aim(s)** describe, in a few sentences, the overarching purpose(s)/intention(s) of the software/application. What is the point of developing the software/application and what you wish to achieve. (software/prototype/algorithm/interface/requirements/knowledge) will satisfy the initial problem you have identified (e.g. addressing a gap in the market, extending a system, modeling requirements to drive the development of systems)

**Objectives** describe with some detail the individual steps you will take to achieve your aim(s).

The main purpose of this software is to enable a new form of transaction. Although, given my experience gained during my placement year in this field I have understood that many times either the customer or the retailer are not fully taught the steps of the redemption of a voucher therefore there is a lot of dissatisfaction in the service. Therefore my goal will also be to help the customers to redeem what is given in the offer making the entire process more feasible from both parties.

In order to achieve this I will use the NFC (Near Field Communications) technology so that the user will not need to enter anything during the last step of the process. This feature will also address a gap in the market where vouchers are only redeemed through the barcodes or manual input. I will develop an mobile application or web application that using the NFC will try to redeem a voucher in a given shop.

**3. Background**

*250 words*

Include a literature survey in the research topic, discuss existing similar or relevant applications to yours and the result of a review of tools and techniques that are used to tackle projects similar to yours.

1. Existing theories about the topic which are accepted universally.

2. Books written on the topic, both generic and specific.

3. Research done in the field usually in the order of oldest to latest.

4. Challenges being faced and ongoing work, if available.

In terms of contactless technology for transaction there are already services like Google Pay for Android devices and Apple Pay for iOs devices. Both are defined digital wallets where the user can register many different loyalty cards and credit or debit card in order to make contactless payments. Once the users has been registered they will also be able to make payments through the same account for online payments. The feature I am going to develop focuses on the type of loyalty cards whereby the user can make a transaction that needs to be validated but it does not require any contact with a Credit or Debit Card and therefore to a bank institution directly. There are already those type of transaction but all of them involve the cashier or customer to manually enter a code. In the best case scenario, in order to make the user earn points like in a loyalty card, the user will need to scan a barcode at the till, for example the Tesco Clubcard scheme.

At the moment, I cannot find anything that provides the same service as the contactless transaction I intend to develop. The most similar remains the Contactless Payment where the users needs to be registered with a bank account and therefore add the own bank card to Google Pay or Apple Pay in order to process a transaction through NFC.

Other NFC related services that includes transaction are offered by other companies that provides specialised machines similar to POS in order to allow transaction validation.

**4. Prerequisites - tools and skills**

*50* *words*

What technical skills are required to work on the proposed project. Produce a bullet point list (for example, programming languages, databases, development platforms, software, methodologies).

List of skills required for the initial idea of the project:

* Programming language to develop mobile application on Android and/or iOs such as java and swift (?)

List of tools that are going to be used:

* GitHub for version control
* Paymo as project management tracker
* Possible use of Microsoft Azure Cloud in order to develop the software as Web Application
* Visual Studio 2019
* Android Studio
* Dropbox for documentation cross platform in order to work in different places
* Mozilla Thunderbird and Gmail as way to contact supervisor and third parties people involved in the feedback of the project.
* Mozilla Firefox Developer, Mozilla Firefox, Google Chrome
* Microsoft Office

**5. Initial list of requirements**

*300* *words*

Outline a list of existing/or a provisional list of requirements for the proposed application/software

Suggest a methodology that will be followed in order to gather requirements for the project

* User should be able to create an account registered with the service
* User should be able to add a digital voucher by redirect of a webpage
* User should be able to add a voucher manually for later use

**6. Challenges presented by the project**

*150* *words*

Produce a list of the challenges you will be facing working on this project (some examples are listed below):

* extending technical skills;
* developing news skills;
* requirements gathering;
* evaluation;
* technical requirements for the development/deployment/testing of the software/application;
* access to software/development platforms;
* software/application requirements to drive the develop the proposed application.

**7. Expected Learning outcomes**

*150* *words*

Explain how you will be addressing with the proposed project the expected learning outcomes of the final year project (consult the module proforma) in a list form. For example:

1. Select, justify and apply appropriate methods, techniques and tools for tackling the problem related to the project;

*Propose an application/system/algorithm that addresses requirements that have been formed based on empirical research using a platform that offers tools for the effective and economic development of the required functionality of the proposed application/system/algorithm.*

1. Collect and analyse the requirements of the project using appropriate techniques and tools;

*This learning outcome is met by using empirical methods to record users’ direct observations or experiences and select and use appropriate methods to analyse quantitatively or qualitatively extracted data based on which project requirements can be formed.*

1. Develop a project plan that schedules their own activities and time within the given timescale;
2. Research and collate relevant information on a given topic from various sources and critically evaluate the findings;
3. Analyse a complex task and carry out the activities involved in its investigation;
4. Work autonomously to produce the deliverables agreed with the supervisor;
5. Identify and take account of any Legal, Social, Ethical or Professional Issues relevant to the project topic;
6. Produce a well-structured and coherent report which documents and critically evaluates the work carried out, the new skills which have been acquired and the effectiveness of the project plan;
7. Demonstrate and defend their work at a viva voce examination.

**8. Project timeline**

Produce a list with a timeframe outlining major activities and milestones in the project. Do that by consulting the final year project timeline structure considering the formative and summative assessments.

**9. References & bibliography**

Initial list of references & bibliography

Include a list of cited items in your text and/or general reading items (books, papers, websites, etc.). Use Harvard style for the purpose, or any other preferred standard referencing style.