

Title of project

**Your name Darwin Zapata**

**Your student number n00123456**

Software Project

CA 2 – Develop a PHP shopping cart website

Year 2 2021-22

DL836 BSc (Hons) in Creative Computing

Table of Contents

[1 Introduction 1](#_Toc94698843)

[2 Business Concept 2](#_Toc94698844)

[2.1 Business Idea 2](#_Toc94698845)

[2.2 Business model 2](#_Toc94698846)

[2.3 Market Research 2](#_Toc94698847)

[2.4 Marketing/Advertising 2](#_Toc94698848)

[2.5 Suppliers 2](#_Toc94698849)

[2.6 Competitors 2](#_Toc94698850)

[2.7 Employees 2](#_Toc94698851)

[2.8 Environmental Impact 2](#_Toc94698852)

[3 Requirements 3](#_Toc94698853)

[3.1 Introduction 3](#_Toc94698854)

[3.2 Requirements gathering 3](#_Toc94698855)

[3.2.1 Similar applications 3](#_Toc94698856)

[3.2.2 Interviews 3](#_Toc94698857)

[3.3 Requirements modelling 3](#_Toc94698858)

[3.3.1 Functional requirements 3](#_Toc94698859)

[3.3.2 Non-functional requirements 3](#_Toc94698860)

[3.3.3 Use Case Diagrams 4](#_Toc94698861)

[3.4 Feasibility 5](#_Toc94698862)

[4 Database Design 6](#_Toc94698863)

[4.1 Description 6](#_Toc94698864)

[4.2 Business Reporting Requirements 6](#_Toc94698865)

[4.3 Textual Representation of Data-Set 6](#_Toc94698866)

[4.4 Business Rules 7](#_Toc94698867)

[4.5 Entity Relationship Diagram 7](#_Toc94698868)

[4.6 Tables 8](#_Toc94698869)

[4.7 Database Dictionary 9](#_Toc94698870)

[5 System Design/ Architecture Overview 10](#_Toc94698871)

[5.1 Introduction 10](#_Toc94698872)

[5.2 Model View Controller 10](#_Toc94698873)

[5.3 User Authenticaion 10](#_Toc94698874)

[5.4 Routing 10](#_Toc94698875)

[5.5 Templating 10](#_Toc94698876)

[6 Testing 11](#_Toc94698877)

[6.1 Introduction 11](#_Toc94698878)

[6.2 Functional Testing 11](#_Toc94698879)

[6.2.1 Login/Registration 12](#_Toc94698880)

[6.2.2 Navigation 12](#_Toc94698881)

[6.2.3 Calculation 12](#_Toc94698882)

[6.2.4 CRUD 12](#_Toc94698883)

[6.3 Discussion of Functional Testing Results 13](#_Toc94698884)

[6.4 User Testing 13](#_Toc94698885)

[6.5 Conclusion 13](#_Toc94698886)

[7 Project Management 14](#_Toc94698887)

[7.1 Introduction 14](#_Toc94698888)

[7.2 Project Phases 14](#_Toc94698889)

[7.2.1 Requirements 14](#_Toc94698890)

[7.2.2 Design 14](#_Toc94698891)

[7.2.3 Implementation 14](#_Toc94698892)

[7.2.4 Testing 14](#_Toc94698893)

[7.3 SCRUM Methodology 14](#_Toc94698894)

[7.4 Project Management Tools 15](#_Toc94698895)

[7.4.1 Github Project 15](#_Toc94698896)

[7.4.2 GitHub 15](#_Toc94698897)

[8 Reflection 16](#_Toc94698898)

[8.1 Your views on the project 16](#_Toc94698899)

[8.2 How could the project could be developed further? 16](#_Toc94698900)

[8.3 Assessment of your learning. 16](#_Toc94698901)

[8.4 Completing a large software development project 16](#_Toc94698902)

[8.5 Technical skills 16](#_Toc94698903)

[8.6 Further competencies and skills 16](#_Toc94698904)

# Introduction

Overall aim

Application area

Technologies

PHP, MySQL, Bootstrap, CSS, Vanilla

Tools

IDE, phpMyAdmin, Miro

Project management

GitHub

Business Concept

Requirements

Design

Implementation

Testing

Reflection

# Business Concept

## Business Idea

Describe the business idea of your project.

## Business model

## Market Research

Market for Product/Service

Customers - Demographics, Profile

## Marketing/Advertising

## Suppliers

## Competitors

## Employees

## Environmental Impact

# Requirements

## Introduction

My project about sell drones and parts of drone that what the users need to buy. My website show in sell drones, images, and prices which the users can look for drone, click it to buy them or click as delete them or click as add product.

## Requirements gathering

### Graphical user interface, website Description automatically generatedSimilar applications

(Fig.1)

Graphical user interface, website

Description automatically generated

(Fig.2)

**Descripions**

Fig 1 and Fig 2 are very similar in website but they are different in layouts, colours, and other.

**Advantages**

Fig 1 and Fig 2 are good website because they shown in nice spaces, layouts, images, and easy to read the details.

**Disadvantages**

Fig 2 didn’t have menu of product category on top nav because if the user need to search the drone.

### Interviews

Conduct interviews with 2 or 3 users to find out what the important features for them for the app are. There may be various issues that arise in multiple interviews. These can be grouped together into a number of themes.

## Requirements modelling

### Functional requirements

Create a numbered list of what the application should be able to do. Start with the most important feature.

### Non-functional requirements

These are requirements which if not met do not stop the application from working, but which mean that the application is not working as well as it should. They are usually based on issues such as:

* Usability
* Performance
* Security

### Use Case Diagrams

Diagram

Description automatically generated

­­­­­­­

## Feasibility

This section describes which technologies are planned to be used in the development of the application. It then explains if there are any issues in terms of the technical feasibility of the project, for example, if there are two different types of software which may have compatibility issues.

# Web application Design

## Layout

Describe the layout of your web application. Does this depend on a framework like bootstrap? Is it repsonsive?

I use bootstrap for my web appliacteion which I use css and html.

## Interaction

What are the navigation elements, form elements. How does the user interact with the application?

????

## Colour schemes

I use red and black for my website because it’s clear to read the website Graphical user interface, application

Description automatically generated

I use online for colours palette called “palettegenerator.com”

## Font choices

Roboto is a neo-grotesque sans-serif typeface family designed by Google,

A picture containing text, indoor, screenshot

Description automatically generated

## Treemap chart Description automatically generatedWireframes

Whiteboard

Description automatically generated with low confidence

**Homepage Product list Page**

**Chart, treemap chart

Description automatically generated**

**Chart, treemap chart

Description automatically generated**

**Product page Checkout page**

# Database Design

## Description

A company has a website where they sell drones in various parts. They'd need a database for all of their drones and order locations. They would need the games purchased, the total price, the date of the order. The database must keep track of every drone that is sold. Customers must enter their information when creating an account. Customers will also be required to enter their credit card information when paying for their order.

## Business Reporting Requirements

Substitute in here the information the users of your application will want to be able to view.

1. Organisers need to be able to create, read, update, and delete: drones, and genres.
2. Users will need to be able to find all drone ordered by their start date.
3. Users need to find all drones using a list of genres.

## Textual Representation of Data-Set

Substitute in here the tables for your database

**PRODUCT** (title, description, price, category, image\_id(fk)

**USER** ( email(pk), password)

**IMAGE** (id, filename)

**CARTITEM** (quantity, price, cart\_id(FK), product\_id(fk), totalPrice)

**CUSTOMER** (id(pk), firstName, lastName, cart\_id(fk), shippingAddressId(FK) )

**SHIPPINGADDRESS** (id(pk), address, eircode)

**SALESORDER** (id(pk), cart\_id(FK), customer\_id(FK), shippingAddress\_id(fk) )

## Business Rules

Substitute in here the business rules for your database

 A **Product** has many **CartItem**. (one to many)

 A **CartItem** can have a single **Customer**. (many to one)

 A **Customer** can have a single **User**. (one to one)

 A **Customer** is performed on one **ShippingAdrdress**. (one to one)

 A **Product** can have a single **Image**. (one to one)

 A **ShippingAdrdress** can belong to many **SalesOrder**. (one to many)

 A **CartItem** can belong to many **SalesOrder**. (many to many)

 A **SalesOrder** can belong to many **Customer**. (many to one)

 A **Customer** can belong to many **CartItem**. (one to many)

## Entity Relationship Diagram

Diagram

Description automatically generated

## Tables

Diagram

Description automatically generated

## Database Dictionary

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Table** | **Column name** | **Datatype** | **Description** | **Required** | **PK/FK** | **FK Ref Table** |
| Product | id  title  description  price  category  image\_id | Int  Varchar(20)  Varchar(20)  Mediumint(64)  Varchar(20)  Varbinary(64) | Primary key  Name of product  Explain of product  Cost  Choices product  Photos of product | Yes  Yes  Yes  Yes  Yes  Yes | PK  FK |  |
| CartItem | Id  quantity  price  cart\_id  product\_id | Int  Smallint(64)  Mediumint(64)  Varchar(20)  Varchar(20) | Primary key  Number of product  Cost  A bag or basket  Marketing | Yes  Yes  Yes  Yes  Yes | PK  FK  FK |  |
| SalesOrder | Id  cart\_id  customer\_id  shippingAddress | Int  Varcahr(20)  Varcahr(20)  Varcahr(20) | Primary key  A bag or basket  Number of names  Delivery | Yes  Yes  Yes  Yes | PK  FK  FK  FK |  |
| Shipping  Address | id  address  eircode | Int  Varcahr(20)  Varcahr(20) | Primary  House  Code of house | Yes  Yes  Yes | PK |  |
| Customer | Id  firstName  lastName  cart\_id  shippingAddress | Int  Varcahr(20)  Varcahr(20)  Varcahr(20)  Varcahr(20) | Primary key  First Name  Last Name  A bag or basket  Delivery | Yes  Yes  Yes  Yes  Yes | PK  FK  FK |  |
| User | id  email  password | Int  Varcahr(20)  Varcahr(20) | Primary key  Email  Password | Yes  Yes  Yes | PK  PK |  |

# System Design/ Architecture Overview

* 1. Introduction

This section will describe the internal functionality of the web framework that you have chosed for the implementation. Add further sections if required by the specification of your web application ??????

* 1. Model View Controller

It emphasises the separation of business logic and display in software. Which Controller that you can receive the product or click “add item” to add product.

* 1. User Authenticaion

User authentication confirms a user's identity when trying to gain access to a network or computing resource by authorizing a human-to-machine transfer of qualifications during network connections to confirm a user's authenticity.

* 1. Routing

The process of selecting a path across one or more networks is known as network routing.

* 1. Templating

Describe the templating engine and how it was used to configure/ style the web application.

Add a sequence diagram in this section and other diagrams that illustrate the architecture clearly. ??????

Diagram

Description automatically generated

# Testing

* 1. Introduction

This chapter describes the testing that has been undertaken for the application. This chapter is presented in two sections:

1. Functional Testing
2. User Testing

Functional testing is a type of software testing whereby the system is tested against the functional requirements. The app is tested by looking to see if the actual output for a given input corresponds with the expected output. The tests should be based on the requirements for the app. The results of functional testing can indicate if a piece of software is functional and working, but not if the software is easy to use.

User testing looks to see if a piece of software is easy and intuitive for the user.

* 1. Functional Testing

This section describes the functional tests which were carried out on the app. These functional tests can be categorised as: (whatever is relevant to your app)

Login/Registration

Navigation

Calculation

CRUD

Functional testing generally uses a Black Box Testing technique which means that the internal logic of the system being tested is not of interest to the tester. The tester is only interested in whether the actual output agrees with the expected output.

* + 1. Login/Registration

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No | Description of test case | Input | Expected Output | Actual Output | Comment |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

* + 1. Navigation

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No | Description of test case | Input | Expected Output | Actual Output | Comment |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

* + 1. Calculation

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No | Description of test case | Input | Expected Output | Actual Output | Comment |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

* + 1. CRUD

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Test No | Description of test case | Input | Expected Output | Actual Output | Comment |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

## Discussion of Functional Testing Results

Describe the results from the tests. Address any functionality where unexpected behavior could not be debugged.

* 1. User Testing
  2. Conclusion

Discussion of test results.

# Project Management

## Introduction

This chapter describes how the project was managed. It shows the phases of the project, going from the project idea through the requirements gathering, the specification for the project, the design, implementation and testing phases for the project. It also discusses GitHub as a tool which assist in project management.

## Project Phases

In this section, describe each of the following project phases. Explain any issues which arose for each of the phases. (how you feel during weeks)

### Requirements (need)

### Design (you’d already do uppppp)

### Implementation (how going on with them )

### Testing

## SCRUM Methodology (lectuer notes)

Sprints

## Project Management Tools

### Github Project

Description

Include screen shots

How it worked in practice

### GitHub

Description

How it is used

How it worked in practice

# Reflection

## Your views on the project

Describe how you feel the project went from your perspective.

## How could the project could be developed further?

## Assessment of your learning.

Critically assess your learning. List what skills and competencies you have learned developed in this Continuous Assessment.

List which part of the project would need further development and itemize where you feel you have not satisfactorily completed the continuous assessment.

## Completing a large software development project

Describe what you have learnt from the project, from the point of view of completing a large software development project.

## Technical skills

Describe what you have learnt from the project, from a technical skills viewpoint.

## Further competencies and skills

Describe any extra competencies and skills that would help you with your development in the work place.

# References

Add a list of references that you used to complete the project.

The Department of Technology and Psychology in IADT uses APA 7th referencing style.

Use alphabetical order for your references.

This site gives details about how to cite websites using APA:

https://www.wikihow.com/Cite-a-Website-in-APA

The following is a useful site for creating citations for APA for websites.

<http://www.citationmachine.net/apa/cite-a-website>

You can also use the Referencing tab within Microsoft Word to enter reference information manually. Word then creates an APA style reference.