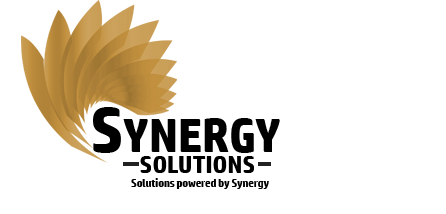
# ASSESSMENT BRIEF - COVER SHEET

| **Course: BSc Computing (All pathways)** | | | | **Year: 1** | **CSY1019 - Software Engineering 1** | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| PJ1 | | **Title: System Specification, Analysis and Design** | | | | | |
| Date due out:  22/11/2021 | Date due in: | | Extension date: | | | | Extension agreed by: |
| **Group Name:**   | Group Member Names | Student ID's | | --- | --- | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | | | | | | | **Tutor: Mark Johnson** | |

**ASSESSMENT FEEDBACK:**

| **RATING SCALE** | **A+ - A-** | | **B+ - B-** | | **C+ - C-** | **D+ - D-** | | **F+ - F-** |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Formulated Aims and Objectives  (10%) |  | |  | |  |  | |  |
| Problem Domain Elicitation Activities and Presented Findings (10%) |  | |  | |  |  | |  |
| Requirement Specification Document  (20%) |  | |  | |  |  | |  |
| System Interface Design  Documentation  (20%) |  | |  | |  |  | |  |
| Systems Architecture Analysis and Design  (20%) |  | |  | |  |  | |  |
| Client Presentation  (10%) |  | |  | |  |  | |  |
| Report Quality – Presentation, format and use of English  (10%) |  | |  | |  |  | |  |
| Specific aspects of your assignment that the marker likes: | | | | Specific aspects of your assignment that need more work: | | | | |
| Tutor’s Signature: | | Date: | | | | | Grade: | |

**System Specification, Analysis and Design**



# Contents Page

1. Introduction Kenneth

This section will provide a brief introduction for the project overall. It will provide the background information for the project. The aims and objectives will outline in detail, the end expectations of the projects and the software suite of products that are expected to be developed. Furthermore, it will also cover the project development methodology, which will provide an in-depth summary of the different elicitation techniques such as questionnaires, interviews etc… that will be used to extract key information, essential in the success of the project.

1.1 Project Background (1 page)

**Project name**

Claybrook Zoo

**Description of the project**

The Synergy Solutions software development company was approached by Matthew Jones, the current zoo manager at Claybrook zoo, who wants us to develop a suite of software products that includes a website, visitor information technologies and records management system.

Four key stakeholders:

1. **Matthew Jones:** The current zoo manager, who is an expert on the existing organisational procedures and practice.
2. **Thomas Smith:** An existing, regular visitor to the zoo, who has a good insight into the current visiting experience available for general members of the public.
3. **Jonathan Rodgers:** A senior administrator within the zoo, who is responsible for running the animal sponsorship scheme.
4. **Phillip Brown:** A local small business owner who is interested in the animal sponsorship scheme if he can perceive potential benefits by way of advertising/positive publicity available through the scheme.

**Current situation**

The zoo does not currently have any technology implemented in the business. All administrative tasks are paper based.

**The problems of the situation**

Concerns about loss of staff, animals and visitors data stored in the zoo, due to it being paper based.

Lack of technology - less outreach

Signage - updated once a year, as not technical.

**The way we want to solve the problems**

We will implement technology available to resolve all the concerns of the client.

For example, at the moment the animal’s record is stored on a paper based record form. To resolve this issue, we will develop a RMS (Record Management System), a database, which will allow the members of staff to find the required animal record easily. We will achieve this by allowing complex search criteria combinations which the staff member can use to interrogate the database. This database, therefore, will allow the members of staff to search for animals using multiple search criteria easily. Furthermore, we will also include a graphical representation of the animals held within the database, so that the animals can be easily identified.

To help promote the zoo and the features/benefits that it offers, to the wider members of the public and therefore provide more outreach, again through the implementation of technology we will develop and produce a zoo website. The website will allow potential visitors to look at the critical zoo animals held within the zoo, prior to actually visiting the zoo. The website will also include key information about the zoo, which will also encourage more visitors.

To resolve other issues, such as queuing at the zoo tickets office, we will also investigate the relevant technologies that the zoo can implement to incorporate possible touch-screen features which will be a part of the visitor information technology, such as a kiosk system or a QR driven and Mobile Application that will run on a smartphone that will allow visitors to interact with the existing attractions at the zoo.

1.2 Project Aims and Objectives (1 page)

The key aim of this project is to develop very effective and efficient suite of products which includes:

1. A customer facing zoo website
2. A internally facing visitor information technologies
3. A zoo records administration/content management system that will allow key business records for the zoo to be effectively managed.

The end goal of the project is that the three software products developed will very effectively resolve all the concerns of the client. In order to successfully meet this aim, the following table, provides an overview of the objectives that have been developed for each of the three software products:

Do the objectives as bullet points

A customer facing zoo website

A internally facing visitor information technologies

A zoo records administration/content management system

1.3 Project Development Methodology (2 page)

Talk about the different elicitation techniques such as questionnaires, interviews and reading the brief. Talk about the advantages and disadvantages for each of the elicitation technique and justification for why you have chosen the particular technique.

Use the table below:

| Technique | Advantages and Disadvantages | Justification |
| --- | --- | --- |
| Background reading | Advantages  -  Disadvantages  - |  |
| Interviews | Advantages  -  Disadvantages  - |  |
| Questionnaire | Advantages  -  Disadvantages  - |  |

2 Requirements Engineering

This section will cover the elicitation activities that we will carry out, to ensure that we gather the requirements that are required to achieve success in this project. The main elicitation technique that we will use to gather the information will be interviews. It will outline the interview plans and then an in-depth documentation of the interview findings. Furthermore, we will also carry out other problem domain research as a review of the comparable systems for each of the software products, where we will carry out an in depth research into existing systems for each of the products. We will also provide a summary of the relevant legislation for the project. Finally to gather further information we will also develop a questionnaire for the current visitors, to gain a better understanding of their perspective of the zoo.

Brief description of each

2.1 Elicitation Activities

2.1.1 Interview plansEVERYONE - done!!

DOES EYERBODY’S INTERVIEW PLAN NEED TO BE HERE OR JUST THE GROUP PLAN ?? - Only add group plans for 3 interviews

2.1.1.1 Interview plan for Matthew Jones

**Group Interview plan - Interview 1**

**Group Interview plan - Interview 2**

**Group Interview plan - Interview 3**

INCLUDE IT

2.1.2 Interview findingsEVERYONE - done!!

**Interview 1**

JASON NEEDS TO CONFIRM HIS PART

**Interview 2**

JOEL PART MISSING

**Interview 3**

INCLUDE IT

Add a Paragraph about all the interviews overall

2.1.3 Visitor Questionnaire

2.1.3.1 Questionnaire Design -- include questionnaire

2.1.3.2 Questionnaire Results Analysis

Inlcude graphs, pie charts etc.. . for each question add a paragraph about the results and what you found.

2.1.3.1 Comparable Software System Review

Include brief introduction for each section(repeat for each section)

The format: brief introduction for each software system, advantages and disadvantages, ADD IMAGE OF THE SYSTEM and reference the system(eg.. the software name… such as Chester Zoo),

Use the format above for all the three systems: RMS, WESBITE AND KIOSK

2.1.3.1.1 Records Management Systems

***Table: Comparison between AWS Platform and Oracle Cloud***

|  | **AWS** | **Oracle Cloud** |
| --- | --- | --- |
| **Cloud Fundamentals** | A broad range of services and products that meet any requirement to enable a flexible and robust cloud environment. | Cloud products and services are supplied as a complete integrated stack. |
| **Technology** | Dependent on advanced technology.  Database compatibility concerns, limited database performance if compared with Oracle. | Dependent on advanced technology. Oracle representatives claim its database technology to be 20 years ahead of AWS. |
| **Scalability** | Near-unlimited scalability. | Near-unlimited scalability. |
| **Offering Adequacy** | Adequate services delivered within a wide diversity. | The bare-bone solution with minimal out-of-the-box functionality. |
| **Position in the Market** | Long standing leader and the biggest market share. | New to the market with a small market share. |
| **Cost** | High, depending on each specific configuration. | High, depending on each specific configuration. However, it is to be lower than AWS. |
| **Customer Support** | Multilingual and limited support that depends on a wide network of partners and managed services providers. | Deficient support of enterprise-level customers lack of managed services providers. |

2.1.3.1.2 Zoo Websites JASON TEAM

Comparable systems

**Whipsnade zoo**

Website

Description automatically generated with low confidence

This is the website for Whipsnade zoo which mainly focuses on giving out information about the zoo to the people who are visiting the system. When you first visit the website you are approached with a home page which has a slideshow of all the latest information.

| **Positive attributes** | **Negative attributes** |
| --- | --- |
| The homepage is spaced out clearly and easy to read and extract information | The bar above the zoo’s logo is too colourful and may confuse the user as the colour schemes to not associated with the headings that they lead to |
| Picture slides on the homepage give a glimpse of what is going on within the zoo such as events etc and is very informative to the potential customers and maybe some potential sponsorships | The background of the whole website is white which is plain, if parents show their kids this website they are not drawn into it, however if it had some colour it would |
| Social media links are right at the top when you visit the page, this can give the customers a quick and easy access on in hand information about the zoo and how it is now, this can be seen through Instagram or Facebook posts | There are two navigation bars on the homepage this confuses the user on where it will direct them to |
| Horizontal navigation bar makes it easier for the user to navigate around the website as it has its own subheadings on specific areas |  |
| Allows the user to sign up for email updates this is useful as it interacts with the user, if you want to join you can add your email address and you will be notified once everything is set in place and you are kept posted through your email |  |
| The website is up and running 24 hours and has no issues |  |
| Customers can purchase their tickets efficiently online under the title ‘’buy tickets’’ on the navigation bar which is very useful for the users as it does not consume time on spending most of the time trying to search where to buy the tickets |  |

**Colchester zoo**

**Image one**Graphical user interface, website

Description automatically generated

Graphical user interface, text

Description automatically generated

**Imagine two**

| **Positive attributes** | **Negative attributes** |
| --- | --- |
| Once you approach the website you are notified with an important update which states all the important information the user needs to take in before continuing **(image 2)** | Social media links that are on top of the main navigation bar are not as noticeable due to the colours used |
| The important update includes FAQ’s which is attached to a hyperlink and takes you to the page with no problems as it loads straight away once clicked | There are a lot of buttons on the homepage which can be a bit daunting for the user as it is crowded and may confuse the user on what they have to click on the get information up |
| Video slideshow on the homepage this makes it engaging with the younger generation as it is visual |  |
| Drop down navigation bar makes the accessibility easier for the user |  |
| Zoo themed colour theme, this reflects a warm and friendly environment at the zoo |  |

**Chester zoo**

Graphical user interface

Description automatically generated

| **Positive attributes** | **Negative attributes** |
| --- | --- |
| Welcoming homepage, seen in the image above, this implies to the user that the zoo is friendly | The navigation bar is too close to the slides on the homepage which makes it overwhelming for the user as the font and colours are very similar |
| colour and professional homepage unlike the other webpages, this makes more customers on board to come to the zoo due to the professionalism shown on the webpage | Pictures on the slideshow covers the circles the user chooses to navigate themselves onto the next picture on the homepage |
| colours that are on the website are seen as child friendly, this makes children more engaged and attracted to the page |  |
| The user can specially search for what they want by clicking on the magnifying glass right next to the drop down navigation bar |  |
| Once you go on the homepage you can take a quiz this is appealing for families to do together and attracts their target audience to come together |  |
| Book your tickets icon is colourful from the rest, this makes it quick and efficient for the user to book their tickets, also while you are at it you can sponsor an animal, this increases the zoo’s profit which we can use for the Claybrook zoo |  |

Summary of alternative website.

2.1.3.1.3 Visitor Kiosk/Information Systems Madhab

Kiosk Systems Software

Compare the Kiosk systems with their wireless internet access, virtual keyboard, size, usability, support, remote access and etc.

| Products  Features | Virtual  Keyboard | Usability | Secure Browsing | Platform | Support | Wireless Internet access | Remote Access |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Hexnode UEM | **Yes** | **Volvo** | **Yes** | * **Web Based** * **iPhone App** * **Android App** * **Window App** | * **Email/Help Desk** * **FAQs/Forum** * **Knowledge base** * **Phone support** * **Chat** | **Yes** | **Yes** |
| FrontFace | **Yes** | **NXP** | **Yes** | * **Android App** * **Window App** | * **Email/Help Desk** * **FAQs/Forum** * **Knowledge base** * **Phone support** | **Yes** | **Yes** |
| Epos Now | **No** | **Worldpay** | **No** | * **Web Based** * **iPhone App** * **Android App** * **Window App** | * **Email/Help Desk** * **Phone support** * **Chat** | **No** | **No** |
| Kioware | **Yes** | **SunPower** | **Yes** | * **Web Based** * **Android App** * **Window App** | * **Email/Help Desk** * **FAQs/Forum** * **Knowledge base** * **Phone support** * **Chat** | **Yes** | **Yes** |
| Kiocloud | **Yes** | **BYU** | **Yes** | * **Web Based** | * **Email/Help Desk** * **FAQs/Forum** * **Phone support** * **Chat** | **Yes** | **Yes** |

2.1.3.2 Development Relevant LegislationKIOSK TEAM

MISSING

Add a bref introduction for the each

Then add the legislations. Do it using subheadings

2.1.3.3 Visitor Questionnaire (Optional) EVERYONE - done!!

**Visitor Questionnaire**

**Visitor Questionnaire**

Thank you for taking your valuable time to complete this online questionnaire designed to find out what you(an existing Claybrook Zoo visitor) feel about the current zoo visiting experience and also what you would like to see improved in the future.

Please be absolutely honest about your opinion on the following questions.

**Note:** Please keep in mind that any information that you provide in this questionnaire will be restricted to members of my team only. Your answers will remain confidential & your identity anonymous.

| **Questions** | **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |
| --- | --- | --- | --- | --- |
| **About You** |  |  |  |  |
| I heard about the Claybrook zoo from your leaflet/advertisement |  |  |  |  |
| I heard about the Claybrook zoo from my family/friend |  |  |  |  |
| I visit the Claybrook zoo often |  |  |  |  |
| **About your visiting experience** |  |  |  |  |
| The staff members were really approachable, friendly and helpful |  |  |  |  |
| I know about your current sponsors |  |  |  |  |
| The staff are very knowledgeable |  |  |  |  |
| I enjoyed my time at Claybrook zoo |  |  |  |  |
| My overall experience in buying the tickets at the ticket office was positive |  |  |  |  |
| The Claybrook has met my expectations as a visitor |  |  |  |  |
| **Future** |  |  |  |  |
| I would prefer to purchase the tickets on a website in advance rather than at the ticket office |  |  |  |  |
| I would consider sponsoring an animal |  |  |  |  |
| The zoo is an fascinating place |  |  |  |  |
| I would be interested to purchase merchandise from the gift shop |  |  |  |  |
| The overall visiting experience at Claybrook zoo is very positive |  |  |  |  |
| I would recommend Claybrook zoo to my family and friends |  |  |  |  |
| Are there any other improvements or changes that you want to see in the future? |  | | | |
| Before you submit the questionnaire, please let us know how you would rate the questionnaire overall?  ☆☆☆☆☆  Please provide any additional feedback: | | | | |
|  | | | | |

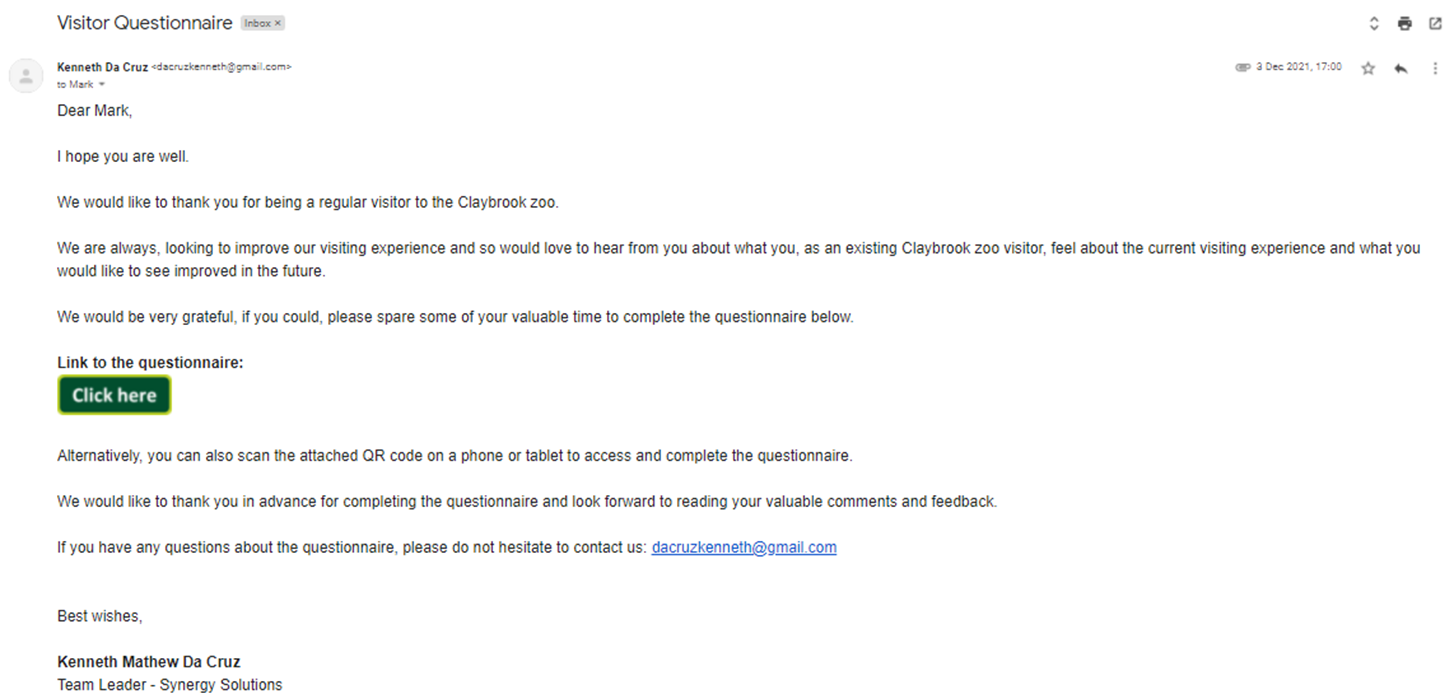
Thank you for completing the questionnaire. We genuinely appreciate your views on the questions and will use your comments to improve the visiting experience of our zoo.

We hope you have enjoyed completing this questionnaire.

Include section about how the questionnaire was distributed to the visitors

This questionnaire was distributed to 100 current visitors of the Claybrook zoo on the 7th of December 2021. The questionnaire was sent to the visitors via email, requesting them to complete the questionnaire.

Following is an example of the email sent to a visitor. The same email format was used when sending the questionnaire to all the visitors.

**Email sent to the Visitor**

**Results from the Questionnaire**

The questionnaire was distributed to 100 current visitors of the Claybrook zoo on the 7th of December 2021.

The following results were obtained:

| **Questions** | **Strongly agree** | **Agree** | **Disagree** | **Strongly disagree** |
| --- | --- | --- | --- | --- |
| **About You** |  |  |  |  |
| I heard about the Claybrook zoo from your leaflet/advertisement | **25%** | **25%** | **50%** |  |
| I heard about the Claybrook zoo from my family/friend | **30%** | **20%** | **50%** |  |
| I visit the Claybrook zoo often | **30%** | **20%** | **20%** | **30%** |
| **About your visiting experience** |  |  |  |  |
| The staff members were really approachable, friendly and helpful | **90%** | **10%** |  |  |
| I an aware about the current sponsorship scheme for animals at the zoo. | **25%** | **25%** |  | **50%** |
| The staff are very knowledgeable | **85%** | **10%** | **5%** |  |
| I enjoyed my time at Claybrook zoo | **95%** | **5%** |  |  |
| My overall experience in buying the tickets at the ticket office was positive | **10%** | **20%** | **70%** |  |
| The Claybrook has met my expectations as a visitor | **85%** | **10%** | **5%** |  |
| **Future** |  |  |  |  |
| I would prefer to purchase the tickets on a website in advance rather than at the ticket office | **100%** |  |  |  |
| I would consider sponsoring an animal | **30%** | **20%** | **20%** | **30%** |
| The zoo is an fascinating place | **85%** | **10%** | **5%** |  |
| I would be interested to purchase merchandise from the gift shop | **85%** | **15%** |  |  |
| The overall visiting experience at Claybrook zoo is very positive | **90%** | **10%** |  |  |
| I would recommend Claybrook zoo to my family and friends | **100%** |  |  |  |
| Are there any other improvements or changes that you want to see in the future? | **Updated signage and use of technology and interactive exhibits to make the visitor my exciting for my children (x10)** | | | |
| Before you submit the questionnaire, please let us know how you would rate the questionnaire overall?  ☆☆☆☆☆ – 4.5 average review  Please provide any additional feedback: | | | | |

Graph for each question and brief analysis on it and comment on results overall.

2.2 Requirements Specification

Now that we have gained an in-depth understanding of the problem domain, in this section, we will develop the requirements specification documentation for this project. This will include an in-depth explanation of the existing business operations, through the use of flowcharts,to effectively outline the flow of information in the company. Furthermore, we will also outline a brief summary of the existing business limitations.

Brief introduction

2.2.1 Problem Domain Description PROBLEM DOMAIN TEAM

* Concerns about loss of staff, animals and visitors’ data stored in the zoo, due to it being paper based: the inadequate record management is a major limitation to the zoo business preventing a proper data representation of records.
* Lack of technology – the lack of technology infrastructure creating limitations to potential visitors to look at the animals held within the zoo and prior to visiting.
* Signage – Regular update of the signage,as this could be done automatically eliminating the manual process, decrease in man labour and increase in information accuracy.
* Less sponsorship attraction due to the lack of publicity: lack of advanced publicity platform will discourage sponsors to invest in the business, by expanding the system to include details of the zoo’s animal sponsorship scheme will promote/advertise positive publicity.

2.2.1.1 Existing Business Operation

Brief introduction

Then add a flowchart for the whole business process and then talk about what it shows.

2.2.1.1.1 Animal Life-Cycle

Brief introduction and talk about what the lifecycle shows

Elizabeth

2.2.1.1.2 Sponsorship Life-Cycle

Brief introduction and talk about what the lifecycle shows

Jason

2.2.1.2 Summary of existing business limitations EVERYONE

In this section we have carried out analysis on the information collected in the interviews with the clients, in order to briefly identify the problems or issues with the current system that require effective resolutions.

The table below outlines the problems that were identified within the current system.

Brief introduction

**Limitations - The overall project**

| **Everyone** | * Requires a large physical space in the zoo buildings to store the paper-based files/documentation. * Possible loss of the paper-based files. * Time consuming to input and extract data. * Lack of technology implemented. |
| --- | --- |

Table 2.2.2.1 Identified limitations in current business model

2.2.2 Functional Requirements

In this section, we will detail the functional requirements for the software suite of products that will be developed. It will detail what the new software systems will do in order to effectively solve the problems that were highlighted by the key stakeholders.

Brief introduction - extremely important section - significant detail required about the functional requirements for all the three systems - add access table for all three systems - RMS is key in this section

Add access table and then talk about it

Add flowchart to show what the new website will show and then talk about it - repeat for the three systems

2.2.2.1 Records Management System DAWOOD TEAM

* Administrators Need to be able to have full access rights so they need to be able to add, Edit, Delete, Archive all documents.
* Staff need to have Partial access to the Record Management System (RMS). So, they need to be able to edit some files as well as add files.
* Be able to filter, Search for animals and records based on specific categories.
* There needs to be security measures to protect the data in the RMS.
* All systems will need to be catered for all age groups and types of people.

Written by Dawood.

2.2.2.2 Zoo Website JASON TEAM

* The website need to be accessible to everyone and easy to use for all age groups.
* All systems will need to be catered for all age groups and types of people.
* The website should give a better outreach to the public
* Have social media links on the website to attract more customers to the door, this will be by them seeing how great the service and experience is at the zoo
* Advertise the oncoming events on the website
* Drop down approach on the website make the user want to explore
* Be child friendly, with the graphics and games
* Content frequently updated on seasonal basis
* Sign up to be a member and sponsor
* Purchase tickets
* Purchase merchandise

2.2.3.3 Visitor Kiosk Information System KIOSK TEAM

* The QR code need to be accessible to everyone and easy to use for all age groups.
* All systems will need to be catered for all age groups and types of people.-
* Have the option to look at animal information through signage or a mobile device.
* Mobile app needs to be family friendly, easy to use
* Mobile app needs to hold all the records of animals in the zoo
* Mobile app needs to be synced with the mobile game
* Mobile app needs to have a payment gateway
* The main kiosks located around the zoo, will need to have mini kiosks with qr codes and information of the animals, places to visit and sponsorship
* See topic 6 for additional examples.

2.2.3 Performance Requirements (Records Management System) DAWOOD TEAM

In this section, we will outline the performance requirements for each of the software systems that will be developed. We will address four performance requirements for the proposed system which includes speed, capacity, reliability and usability.

MISSING

Brief introduction , then talk about the bits below - do the same for the three systems

2.2.3.1 Speed

2.2.3.2 Capacity

2.2.3.3 Reliability

2.2.3.4 Usability

2.2.4 Performance Requirements (Zoo Website) WEBSITE TEAM

Below I have discussed the 4 essential performance requirements for the proposed part of the software system: website.

2.2.4.1 Speed

The website response time will need to be quick, maximum of 3 seconds ????

The user must be able to open/access and switch between the sub-web pages on the website very quickly.

The user must be able to book tickets and pay for them very quickly and effectively.

The user must also be able to easily sign up to the newsletter very quickly and get a response, instantly that they have signed up.

2.2.4.2 Capacity

Maximum number capacity of site visitors - “send it to you by email”

2.2.4.3 Reliability

Downtime of the website - Sunday nights going into early Monday morning, maybe 11am to 3pm, would be best, unless its peak time.

2.2.4.4 Usability -

The time taken for the user to learn the software website will be determined by the user group category that they fall into. However, overall, the website that will be developed, will be very easy to use/operate, as it will be very intuitive.

Below I have defined the different user group categories and also indicated how long it will approximately take for each user group to learn how to use the website.

* Beginner user

A beginner computer user should be able to navigate through the website and understand how to carry out essential tasks, such as finding contact details of the zoo and be able to book tickets on the website and sign up to the newsletter, in no more than 10 minutes.

* Intermediate user

An intermediate computer user should be able to navigate through the website and understand how to carry out essential tasks, such as finding contact details of the zoo and be able to book tickets on the website and sign up to the newsletter, in no more than 8 minutes.

* Expert user

An expert computer user should be able to easily navigate through the website and understand how to carry out essential tasks, such as finding contact details of the zoo and be able to book tickets on the website and sign up to the newsletter, in no more than 5 minutes.

2.2.5 Performance Requirements (Visitor Information System) KIOSK TEAM (Mobile App)

On the below subcategories, we will focus on finding the best system to have a high performance. We will focus on creating the app to be compatible with the **IOS** and **Android** system to increase the compatibility across devices.

2.2.5.1 Speed

* The app needs to start in 1-2 seconds
* The logo icon needs to be responsive and activate the app
* Needs to be able to process a transaction in 3 seconds
* All the system databases needs to be up to date
* Ensure minimum memory consumption for the app to run fast and smooth
* The server down time , will be once a month for installing additional updates and run a main system check

2.2.5.2 Capacity

As the app will be connected to the same database the website will be using, the capacity will be limited by the same limitations as the website.

2.2.5.3 Reliability

* Needs testing for high battery time consumption
* Will be available 160 hours per week out of 168 hours
* Payments will be available 365 days out of 365

2.2.5.4 Usability

Determined time that will reflect on how long does any category able to learn how to use the app

The groups of users mentioned below reflect how much time has taken each group to use the app.

* Beginner user

In less than 10 minutes, a novice phone user should be able to navigate through the app and learn how to perform basic tasks, such as discovering the zoo's contact information and booking tickets using the app.

* Intermediate user

In less than 8 minutes, an intermediate phone user should be able to navigate through the app and learn how to perform basic tasks, such as discovering the zoo's contact information and booking tickets using the app.

* Expert user

In less than 5minutes, a novice phone user should be able to navigate through the app and learn how to perform basic tasks, such as discovering the zoo's contact information and booking tickets using the app.

2.2.6 Design Constraints (All software components) PROBLEM DOMAIN TEAM -

In this section we will discuss the design constraints for the project. These are non-functional requirements that will constrain how the three software systems are built. The design constraints were imposed by the clients.

The following issues were discussed and reviewed with the project’s clients during the interviews and the information obtained is recorded below.

Brief introduction

Add more detail to the bits below

The operating system

The hardware requirements

The Front-end graphic styles (Claybrook zoo defined colours etc..)

Any specific programming languages to be used

2.2.7 Commercial Constraints (Total Project) EVERYONE -

Brief introduction

We have taken into account the following estimations when calculating the commercial constraints for the project.

* Cost estimations
* Project time scale estimations

We have carried out some basic calculations, to calculate the potential cost of the project. The calculations were based on estimated factors such as:

* The estimated staff costs and the total hours of work that is required to complete the work.
* The project costs/resources
* The required profit margin

ADD PROJECT COST CALCULATIONS TABLE HERE

3 System Interface Designs

Now that we have gained an in-depth understanding of the features that each of the software systems must have and the functionalities that it must include, we will start developing the interface designs for each of the three systems. We will start with draft interface designs for each of the systems, which are the wireframes. The wireframes will be a simple sketch of what the layout of each system screen will look like and behave.

Brief introduction - Add brief introduction

Talk briefly about each of the sub section (E.g. the following shows)

3.1 Draft Interface Designs for RMS

3.1.1 Wireframes

3.1.2 System Navigation Diagram

3.1.3 System Screen mock-ups

3.1.4 System Activity Event Diagrams

3.3 Draft Interface Designs for Zoo Website

**Link to the developed website:** <https://thestoreshack.com/zoo/>

3.1.1 Wireframes

Display as table as there are two alternatives and then talk about them underneath

3.1.2 System Navigation Diagram

3.1.3 System Screen mock-ups

3.1.4 System Activity Event Diagrams

Beverly

3.1 Draft Interface Designs for Kiosk/Visitor Information

3.1.1 Wireframes

3.1.2 System Navigation Diagram

3.1.3 System Screen mock-ups

3.1.4 System Activity Event Diagrams

4 Analysis and Design Records Management System -

Brief introduction

4.1 Preliminary Analysis Stages

Brief introduction

4.1.1. Textual Analysis

Add table for all class names and routines

4.1.2. Significant Event Analysis

Go through each of the classes found in textual analysis, events

4.1.3. Class- Responsibility-Collaborator (CRC)

4.2. Detailed Static System Designs

4.2.1. First Draft BON System Architecture Diagram

4.2.2. BON System Chart

4.2.3. BON Cluster Charts

4.2.4. BON Class Charts

5 Report Conclusion

**The strengths of your work**

**The weaknesses of your work**

**Have the original aims and objectives been met?(If not, why not?)**

**Has the original problem(s) been solved ?**

**Future work or enhancements**

6 References

7 Appendix