Performance Requirements

2.2.3 Performance Requirements (Record Management System)

2.2.3.1 Speed

Throughput - A high throughput will provide us with an excellent starting point for testing to ensure that the database is well optimised. The database should be capable of processing 60 transactions per second and 120 records per second in batch mode.

Response Time - A DBMS should be able to locate any record in under half a second by searching through queries. This is the typical response time for several of the most popular search engines. This is due to the fact that anything above this will be seen by the user. One second is a small amount of time. However, it is slow in this context and will annoy the user, possibly driving them away from the system.

2.2.3.2 Capacity

Capacity requirements refer to the level of information or services that can be handled in the system. These are essential because they establish the way that the system can be utilised. If the capacity needs are not clearly defined, an underestimate may occur and the users will find the system unusable. On the other hand, developers might provide too many resources, making the system expensive and resource-intensive. For example:-

* The system would be able to support 50 simultaneous users.

* The system would be able to manage up to 20,000 employee records.”

2.2.3.3 Reliability(Efficiency)

The RMS reliability is often defined by how the the system will run run without failures and malfunctions for a specific time period under particular conditions. It is often represented by a “portability percentage”. For example if the system has a 75% reliability per month then there is a 75%chance the system will not experiences severe failures during this time period

2.2.3.4 Usability

Usability is a non-functional requirement that describes the difficulty it is to use the product. There are 5 main categories of usability:- **Learnability.** How fast is it for users to complete the main actions once they see the interface?

* **Efficiency:**

How users are able to do their tasks

* **Memorability:**

Users can step away form the activity on the system, return after some time and continue efficiently

* **Errors:**

How often efforts occur and the the amount of mistakes users make

* **Satisfaction:**

How good is the design to use

2.2.4 Performance Requirements (Zoo Website)

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)

2.2.5.1 Speed

2.2.5.2 Capacity

2.2.5.3 Reliability

2.2.5.4 Usability

2.2.3 Performance Requirements (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.

2.2.3.1 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

2.2.3.2 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.

2.2.3.3 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

2.2.3.4 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.