# CHAPTER 3: REQUIREMENTS ANALYSIS

## Introduction

This chapter entails an analysis of the resources – software, hardware and others – that are needed for the proposed system to function or work properly. It also provides a brief summary of the existent system.

## Current System

Here you’re showing an understanding of the existing system before you start proposing your own or an update of what is there.

### Context Level Diagram

### Process Flow Diagram

### Use-case

## Feasibility Study

A feasibility study is an analysis of the practicality and viability of a proposed solution while emphasising on the potential hurdles that can be met. This section looks to critique the applicability of the proposed system with respect to various aspects such as profitability, technicality and whether it is economic.

### Technical Feasibility

This refers to an analysis of the technical functionality of the proposed system.

#### Hardware Requirements

The following are the hardware required for the project to run:

A development PC with these minimum requirements: 2GB installed RAM and a Core i3 Processor with processing speeds of 1.5GHz and 60GB of disk space. The table below illustrates a comparison of the minimum, recommended and available hardware requirements for the system to run.

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirement** | **Minimum** | **Recommended** | **Available** |
| **Installed RAM** | 2GB | 8GB | 4GB |
| **Processor** | Core i3 @ 1.5GHz | Core i7 @ 3.0GHz | Core i5 @ 2.5GHz |
| **Hard Disk** | 60 GB | 150GB | 1TB |

Technically speaking, in terms of hardware, the proposed project is feasible since the available hardware surpasses the minimum hardware required for it to run.

#### Software Requirements

The following software requirements are needed for the project to begin running:

Any Python 3 version, which is the programming language used to develop the system. Django, the Python Web Framework (and associated libraries to be installed using the pip command), Hyper-Text Mark-up Language (HTML), Cascading Style Sheets (CSS) and JavaScript (JS), the front-end technology for User Interface design, and Visual Studio Code, a text editor, for writing the code, as well as any modern browser for displaying the rendered results obtained or retrieved from the database.

|  |  |  |  |
| --- | --- | --- | --- |
| **Requirement** | **Minimum** | **Recommended** | **Available** |
| **Python** | 3.1.0 | 3.8.2 | 3.8.2 |
| **Text Editor** | Notepad++ | Visual Studio Code | Visual Studio Code |
| **Web Browser** | Microsoft Edge | Mozilla Firefox | Mozilla Firefox |

The recommendations above are given with particular concern on the RAM of the PC in use. They require less RAM to run and are therefore ideal for any PC with minimal hardware requirements.

### Economic Feasibility

This section analyses the development cost of the project with regards to the purchase of the tools that are required for the entire development process as well as other additional costs. It tries to assess the cost-benefit of the given project.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Item** | **Quantity** | **Cost** | **Capital Cost** |  |
| HP Laptop | 1 | Free | Researcher |  |
|  |  |  |  |  |
|  |  |  |  |  |

Requirements Analysis

### Functional Requirements

### 3.3.1.1 Context Level DFD

### 3.2.1.2 DFD Level 1

### 3.2.1.3 DFD Level 2 (Optional)

### 3.2.1.4 Use-case

### 3.2.2 Non-functional Requirements

### 3.2.2.1 Performance

### 3.2.2.2 Usability

### 3.2.2.3 Security

### 3.3 Interface Requirements

### 3.4 Technical Requirements

### 3.5 Assumptions

### 3.6 Conclusion