

## CHAPTER 4

# SYSTEM REQUIREMENT SPECIFICATION

The main purpose of System Requirement Specification is to translate the ideas in the minds of a client into a formal document. Through System Requirement Specification the client clearly describes what it expects from the proposed system and the developer clearly understands what capabilities are required to build the system. It includes a variety of elements (see below) that attempts to define the intended functionality required by the customer to satisfy their different users. The purpose of this document is to serve as a guide to developers and testers who are responsible for the development of the system.

### 4.1 Functional Overview

- Rainfall data is collected from meteorological websites.
- An algorithm is used for creating a model.
- The chances of a flood are predicted.

### 4.2 Operating Environment

Operating environment involves minimum software and hardware requirements required by the system.

#### 4.2.1 Software Requirements

- Operating System : Windows 7 or above.
- Tools used : Jupyter 6.0 or above.
- Programming Language : Python Programming Language.

#### 4.2.2 Hardware Requirements

- Processor : Pentium 4 or above
- RAM : 6GB or above
- Hard Disk : 10GB or above
- Input device : Standard Keyboard and Mouse.
- Output device : High Resolution Monitor

### 4.3 Functional Requirements

Functional Requirements defines the function of a system or its component. A function is described as a set of inputs, the behavior and outputs. Functional requirements specify particular results of a system. Functional requirements drive the application architecture of a system. Following are the functional requirements used in the project.

- Process data in any required format i.e., xls, csv etc.
- Import the data and store its metadata relating to the segmentation without corrupting the contents.
- Concepts and target extraction.
- Predicting the outcome.

### 4.4 Non-Functional Requirements

Non-Functional requirement is a requirement that specifies criteria that can be used to judge the operation of a system, rather than specific behaviors. Non-Functional requirements are often called as quality attributes of a system. The following are the nonfunctional requirements of the application.

- Availability: The System will work as required according to the specified requirement.
- Reliability: The System has the ability to consistently perform the intended or required functions.
- Maintainability: The maintenance of a functional unit can be performed in accordance with the prescribed requirements
- Accessibility: The System can be accessed by any appropriate users.
- Operability: The System has the ability to keep itself safe and reliable, according to predefined operational requirements.
- Usability: The System is ease of use and learnable by the users.
- Responsiveness: The system has ability to respond to the user very fast as soon as the input is fed.
- Cost: The system is economically feasible.

### **4.5 Performance Requirements**

This application system will avoid use of papers and going through each and every detail for each state or district. Thus, this application results in efficient usage of time. This application will be useful for individuals, city planners, researchers etc. Application calculates the result automatically and displays it to the user. Interface is designed in such a way that user can understand very easily. Maintenance of the project is easy and understandable.