**CHAPTER 3**

**SYSTEM ANALYSIS**

System analysis is a problem-solving technique that decomposes a system into component pieces of purpose of studying how well those component parts work and interact to accomplish their purpose the following chapter provides the detail description of the existing system. It also provides an overview of the proposed system and feasibility of the ticket automation system.

**3.1 EXISTING SYSTEM**

In existing system user needs specific solutions to the problem arise. Man power is required to assign a unique ticket. Team has a great stress when solving the same queries repeatedly. It also saves the solved solutions in a database in order to solve when the same queries arise.

**3.1.1 Ticket Automation**

A Ticket automation project is built using NLP algorithms that analyses user’s queries and understand user’s message. The system is designed for support team in all product organisations where users can ask any product related questions. The system recognizes user’s query and understands what he wants to convey and simultaneously answers them appropriately. The questions asked by the users can be in any format. The NLP algorithm analyses users queries then convert into tokens. Then the tokens are assigns to the persons in the particular domain.

**3.2 Drawbacks**

**3.2.1 Ticket Automation**

* It is used to assign the tokens to the persons in the particular domain.
* It can provide the solutions only for the frequently solved queries.

**3.3 PROPOSED SYSTEM**

The proposed system is RPA bot which uses NLP algorithm to solve the user’s queries. This system should be able to analyse and understand user’s queries and react accordingly.

For any product related queries, we have put a mail to customer support team and it will be forwarded to the particular domain members in order to provide the solution. Frequently solved queries will be stored in the database to provide solutions when the similar queries raised by the user. Without this system an organisation needs a team for assigning the tokens to the domain related persons.

**3.4 FEASIBILITY STUDY**

An analysis and evaluation of a proposed project to determine if it is technically feasible, is feasible within the estimated cost, and will be profitable. Feasibility studies are almost always conducted where large sums are at stake. A feasibility study aims to objectively and rationally uncover the strengths and weaknesses of an existing ticketing systems and threats present in the environment, the resources required to carry through, and ultimately the prospects for success in this system.

**3.4.1 Tests of Feasibility**

Feasibility study is conducted once the problem clearly understood. Feasibility study is necessary to determine that the proposed system is feasible by considering the technical, operational, and economical factors. By having a detailed feasibility study the management in the will have a clear-cut view of the proposed system of the automation system. Feasibility study encompasses the following things:

* Technical Feasibility
* Economical Feasibility
* Operational feasibility

**3.4.1.1 Technical Feasibility**

A large part of determining resources has to do with assessing technical feasibility. It considers the technical requirements of the proposed project of Ticket automation. The technical requirements are then compared to the technical capability of the Ticketing system. The systems project is considered technically feasible if the internal technical capability is sufficient to support the Ticket automation system’s requirements.

The essential questions that help in testing the operational feasibility of a system include the following:

* Is the project feasible within the limits of current technology?
* Does the technology exist at all?
* Is it available within given resource constraints?
* Manpower- programmers, testers & debuggers
* Are the current technical resources sufficient for the new system?

**3.4.1.2 Operational Feasibility**

Operational feasibility is dependent on human resources available for the project and involves projecting whether the system will be used if it is developed and implemented. Operational feasibility is a measure of how well a proposed system solves the problems, and takes advantage of the opportunities identified during scope definition and how it satisfies the requirements identified in the requirements analysis phase of ticketing system development.

The essential questions that help in testing the operational feasibility of a system include the following:

**3.4.1.3 Economical Feasibility**

Economic analysis could also be referred to as cost/benefit analysis. It is the most frequently used method for evaluating the effectiveness of a new system of the Ticketing system. In economic analysis the procedure is to determine the benefits and savings that are expected from a candidate system and compare them with costs.

If benefits outweigh costs, then the decision is made to design and implement the ticket automation system. An entrepreneur must accurately weigh the cost versus benefits before taking an action.

Possible questions raised in economic analysis are:

* Is the system cost effective?
* Do benefits outweigh costs and system study?