**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 web application.

**3.1 EXISTING SYSTEM**

In the existing computing system server based computing is used.Server-based computing (SBC) is an over-arching term referring to the technology by which applications are implemented, controlled, supported and functioned on the server. Upgrading hardware, application deployment, backing up of data and technical support are simplified in a server-based environment. We need the sever room to handle the systems and to store the data. In the existing student information systems basically they will establish the student data and they will be run in the normal physical server.

**3.1.1 Student information system**

A Student information system web application project built using AWS services. These services empower the development of scalable web application in which dynamically scalable and often virtualised resources are provided as a service over the internet. Educational establishments continue to seek opportunities to rationalize their way they manage their resources. Student information System provides with different types of events that are conducted by different colleges to provide knowledge on different technologies and the interest of students towards it. We can encourage and demonstrate the practice the actual methods as going beyond the horizons of textbooks and making something innovative is certainly a measure to improve an individuals in practical terms. And such programs when conducted are not known by the students. So our Moto is make students aware of the events conducted in the college. This is cost efficient and secure application that is built using some of the major Amazon Web Services.

**3.2 Drawbacks of existing system**

* The existing system needs the physical servers so that the cost for implementing this will be very high.
* It will consume more space for the physical setup including all other networking devices.
* The data will not be secured and data can’t be recovered after any disaster.

**3.3 PROPOSED SYSTEM ADVANTAGES**

* The biggest advantage of cloud computing is that there is no more provisioning or managing of physical servers. It is not that servers are troublesome.
* There is no need for the physical setup so that the implementation cost will be very less.
* Data will be stored in much secured way.
* Disaster recovery is the other very important benefit of cloud computing.
* Cost effective
* Can access from anywhere

**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 banking applications and threats present in the environment, the resources required to carry through, and ultimately the prospects for success in the student information 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 in student information system using cloud computing 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 student information. 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 student information system. The technical requirements are then compared to the technical capability of the student information system. The systems project is considered technically feasible if the internal technical capability is sufficient to support the student information system requirements. The analyst must find out whether current technical resources can be upgraded or added to in a manner that fulfils the request under consideration. Student information system is technically feasible by storing the data in the cloud and accessing some of the cloud services like AWS Cognito for the user management and security .

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?
* Is it a practical proposition?
* Manpower- programmers, testers & debuggers
* Software and hardware
* Are the current technical resources sufficient for the new system?
* Can they be upgraded to provide to provide the level of technology necessary 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 in student information 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 event as well as student details development. In students information system the data will be stored in the cloud so that the data will be available at any time and it can be accessed from anywhere.

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

* Does current mode of operation provide adequate throughput and response time?
* Does current mode provide end users and managers with timely, pertinent, accurate and useful formatted information?
* Does current mode of operation provide cost-effective information services to the business?
* Could there be a reduction in cost and or an increase in benefits?

**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 student information 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 student information system. An entrepreneur must accurately weigh the cost versus benefits before taking an action.

In student information system the capital cost for maintaining system is very low compared to the existing system because the backend is created in cloud so that there is no need to manage the physical servers and no need for the administrator.

Possible questions raised in economic analysis are:

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

**CHAPTER 4**

**SYSTEM SPECIFICATION**

**4.1 FUNCTIONAL REQUIREMENTS:**

**4.1. 1 View:**

a. The system should allow users to view the events.

b. The system contains different forms of events.

c. The system shall inform the user about the various events happens in near surrounding college.

**4.1.2 Register:**

a. The system should allow users to register for the particular events in which they wish to participate.

b. The system should allow users to search for information about the events like venue of event, registration fees start and end date and other details

**4.1.3 Publish:**

a. The system should allow user to publish the events .

**4.2 NON-FUNCTIONAL REQUIREMENTS**

**4.2.1 User Interface:**

a. The system shall maintain an easy to use interface across all functionality and for all users

b. The client’s user interface should be compatible with all commonly used browsers, such as Internet explorer, Firefox, Google chrome and Safari.

**4.2.2 Scalability:**

a. Support many users with proven scalability.

b. A larger scale means a larger customer community, which can deliver more and higher-quality feedback to drive future innovation.

c. A larger customer community also provides rich opportunities for collaboration between customers.

**4.2.3 Security:**

a. The administrative system should be protected from unauthorized access.

b. The database should protected from attacks and unauthorized access.

c. The interface should be protected from attacks.

d. All passwords should be stored as a secure hash of the administrator password.

**4.2.4 High Performance**:

a. Cloud-computing provider's platforms must deliver consistent.

b. High-speed systems performance worldwide and provide detailed historical statistics to back up performance claims.

**4.2.5 Disaster recovery:**

1. Data backup procedures that create multiple backup copies of customers' data, in near real time, at the disk level.
2. A multilevel backup strategy that includes disk-to-disk-to-tape data backup in which tape backups serve as a secondary level of backup, not as the primary disaster-recovery data source.
3. The disk-oriented model ensures maximum recovery speed with a minimum potential for data loss in the event of a disaster.

**4.2.6 High availability:**

1. Facilities with reliable power and network infrastructure.
2. Networking, server infrastructure and software.

**4.3 HARDWARE REQUIREMENTS**

Processor : Dual core processor

RAM : 2 GB

Monitor : 16’’ Color Monitor

Keyboard : Standard 110 keys

Pointing Device : Mouse

Smart Phone : Any type

**4.4 SOFTWARE REQUIREMENTS**

Programming Language :HTML/CSS, Java script, JSON, Python

Operating System : Windows

Front End : Html/CSS, Java script

Back End : AWS Lambda, Cognito, APIgateway

Web Browser : Mozilla Firefox, Google Chrome