School Management System

Name

Institution

Writing501

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1. Introduction

School Management System (SMS) is the PHP and efficient MYSQL database-Web-framework. Schools do not require costly hardware and tools for implementing SMS. Both schools require internet access and desktops. Our program is a central portal and framework so schools can conveniently access the system based on login credentials from anywhere (Ahmad Al-hayek, 2016). The School Management System is an autonomous portal network that practically any person can access through a standard internet accessed device from anywhere. SMS may also be customized to the unique needs of each school. The System Life Cycle (SDLC) is the standard system-development technique for this SMS. The SDLC approach tracks the project through planning, analysis, design, execution, managing and monitoring, from the beginning of development. In this assignment, system analysis will be performed by using three SDLC phases for a school management system. Those three SDLC phases include system planning, system analysis, and system designing.

2. Phase 1: System Planning

This is the first step of the development of the program. The strategy determines whether or not a new initiative is required to meet the strategic goals of an organization, and is a proposal to expand on an infrastructure and change or enhance a project (or feasibility study). The organization should also seek to satisfy and meet its stakeholders ' needs. This move aims at defining the nature of the problem and finding solutions. Assets, prices, resources, advantages and other things at this point should be considered.

2.1 Project Identification and description

Project title is school management system. The world of today is filled with advancements in technology, particularly in development. All has been updated to more technical and professional

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than before. There is a certain form of enrollment control at every college, annual meetings etc. By asking the school to enter into the electronic world where it demands electronic advantages, it is making you processions of an electronic era that has become the whole world. You will require a website here to ensure that this website is also open to teachers and students and that it is a Students unique location to track the monthly logos received from school, and even in the case of a teacher who is not authorized to go to school and will send signs and notes to the Director of the school. We may also assume that this website conveniently supports all administrative activities both inside and outside the classroom.

The primary customer of this project are educational institutes specially schools and colleges. Most schools are already faced with a problem of course management. The trainer doesn't handle their workload well, so the lessons don't even take place on schedule. There are not many students who have to graduate. The biggest concern is the supervision of the job and preparation of the students.

In the school too, it is inappropriate for students to know how well the pupil passes the test, but when they go to school or even, the teacher cannot be sure that they also know the sign the parent and the guardian does not have, so must go to school and ask them for the success of his son.

2.2 Feasibility studies

A feasibility study is conducted to determine whether to modify the existing systems or build a whole new system. It helps to get an outline of the issue and to get an outline of how there is a feasible solution. In the early analysis, there are three facets of the feasibility report and those are technical, organizational and Economical.

2.2.1 Technical Feasibility

The school management program is web-based and is also accessible from every browser. The strategy is workable since the purposes of program growth are logical and realistic. The web-based

applications are built across the framework, such as using the PHP and HTML and MySQL programming language.

2.2.2 Organizational Feasibility

The system analyst also has to understand the operability of the project demanded. Operational and organizational feasibility relies on sufficient human capital for the project which includes forecasting the operation which application of the device until the system is installed. The framework provided offers end user or registered users the interface based on app settings (VASANI, 2016).

2.2.3 Economical Feasibility

Development Cost: Because the tools and technologies are on-line available, development costs are very minimum. It is a community initiative and no staff costs. Project time is well planned and does not affect other entities ' operations and events. When the program is developed, the businesses buying the program have a training manual, as well as physical therapy for those who need it. Because the original computers already can be used, no new equipment is required.

Performance Benefits: Reporting speed improved. Faster data formation, entry, update and recovery. Redundancy or duplication of data decreased.

Cost-Avoidance Opportunities Avoid data recovery and server procurement charges as it can be streamlined and accessible online. The program is clearly economically viable, and the advantages are greater than the program costs in the given reasonable time span for the user / customer. The program is a strategic advantage for the teacher (Chowdhary, 2020).

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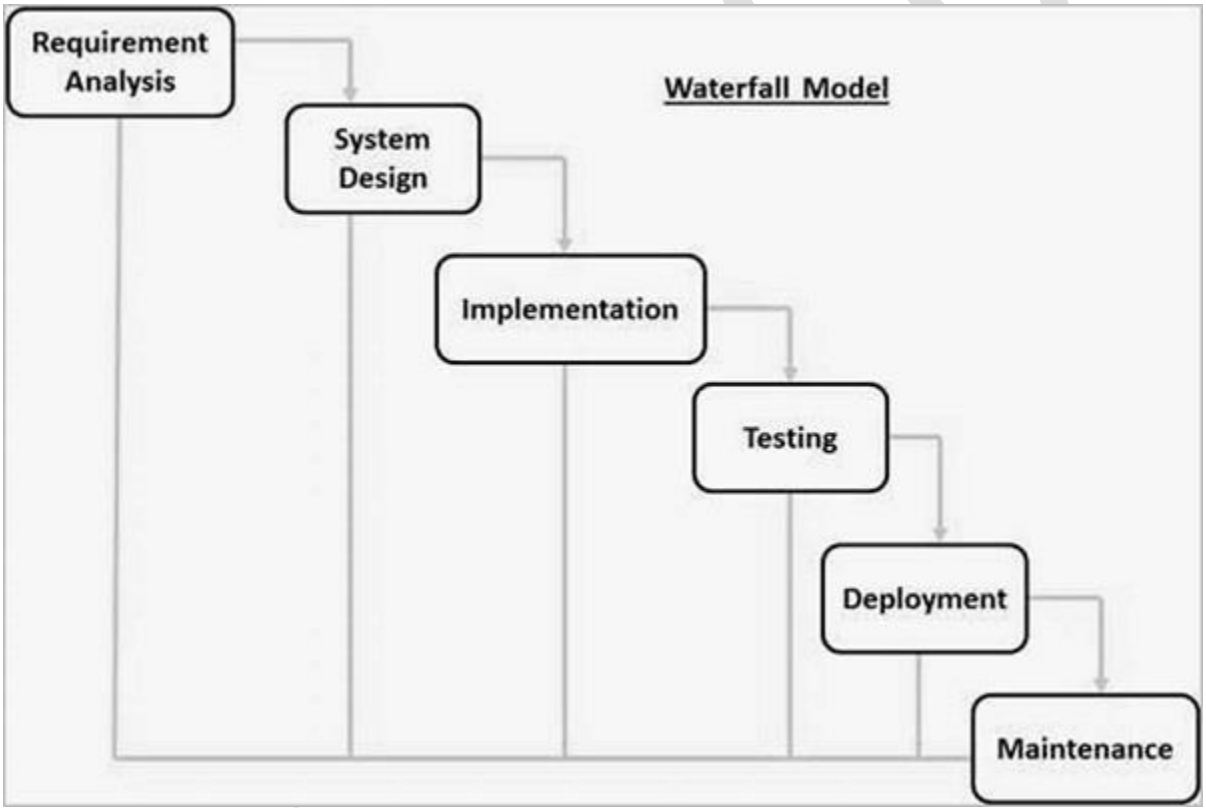
2.3 SDLC Development Methodology

The Waterfall methodology is the technique to be used in this school management system. Waterfall approach was first SDLC Model to be used widely in Software Engineering to ensure success of the project. In "The Waterfall" approach, the whole process of software development is divided into separate phases. In this Waterfall model, typically, the outcome of one phase acts as the input for the next phase sequentially.

The image below shows the different phases of the Model Waterfall.

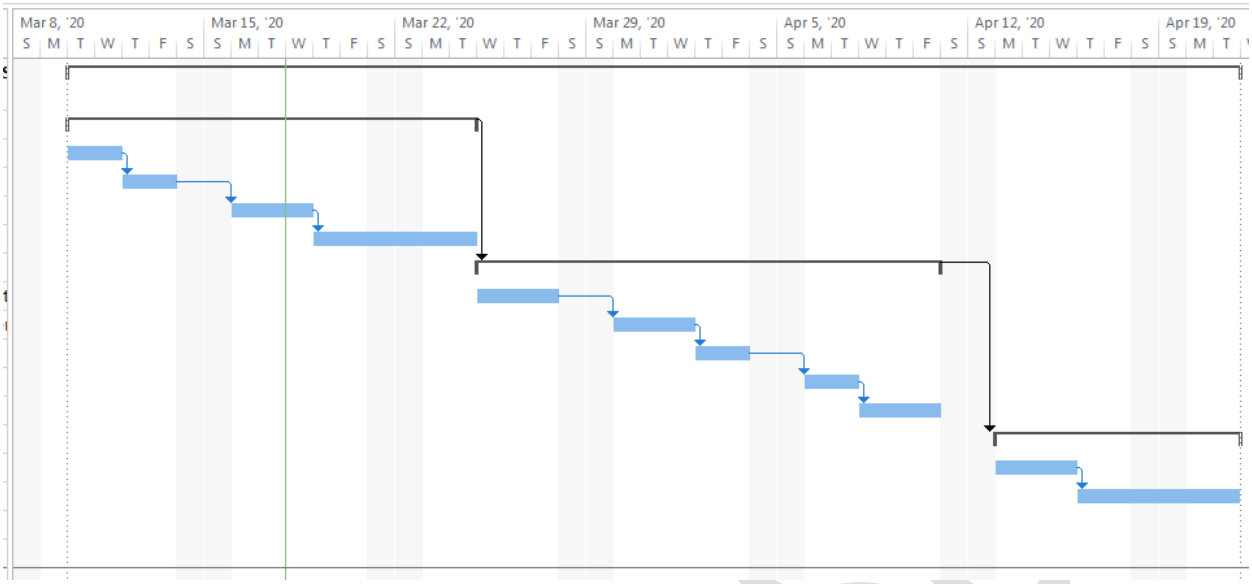


It allows for departmentalization and control, which is a major benefit of waterfall development. For each phase of development, a schedule may be set with phases and a product may be produced one at a time in the development model.

2.4 Work plan using Gantt chart

The Gantt chart includes a complete system description from demand collection to machine checking. This offers a practical perspective of how well the project performs in keeping with the schedule and any necessary improvements (Mohammad, 2016).

Task Mode	Task Name	Duration	Start	Finish
	Developing Student Management System	**31 days**	**3/10**	**4/21**
	Planning	**11 days**	**3/10**	**3/24**
	Project Identification	2 days	3/10	3/11
	Feasibility Studies	2 days	3/12	3/13
	Select Methodology	3 days	3/16	3/18
	Develop work plan	4 days	3/19	3/24
	Analysis	**13 days**	**3/25**	**4/10**
	listing functional requriements	3 days	3/25	3/27
	listing non-functional requriements	3 days	3/30	4/1
	create use cases	2 days	4/2	4/3
	Data flow diagramming	2 days	4/6	4/7
	ER modeling	3 days	4/8	4/10
	Designing	**7 days**	**4/13**	**4/21**
	Selecting architecture design	3 days	4/13	4/15
	Data storage design	4 days	4/16	4/21



3. Phase 2: System Analysis

3.1 Functional Requirements

Admin	Creating, editing and deleting students and staff. Publish user news. Storing, editing and deleting student ranking, programming, and printing. Add teachers to classrooms and subjects. Student looking for name and title. Writing, writing, deleting, and printing timetable.
Staff	Using Subject to add student tags. Attach the attendance of the student by subject. Connect to your parent and your student. Publish app news.

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	Add the Questions. Add another class, introduce operation. Add to Admin Operations.
Student	Ask your teacher and the admin Question Bank for each subject. Per subject, show your marks. Adjust the details of your account.

3.2 Non-Functional Requirements

- If not sufficiently validated, any area must be highlighted.
- Quick navigation and user-friendly.
- The loading page should be adequate to provide access to the Internet at reasonable levels.
- The website pages are well built.
- Look, font, shades, etc.
- Performance of system
- Files and information backup
- Program maintenance solutions
- The documents and changes can be quickly tracked and updated.

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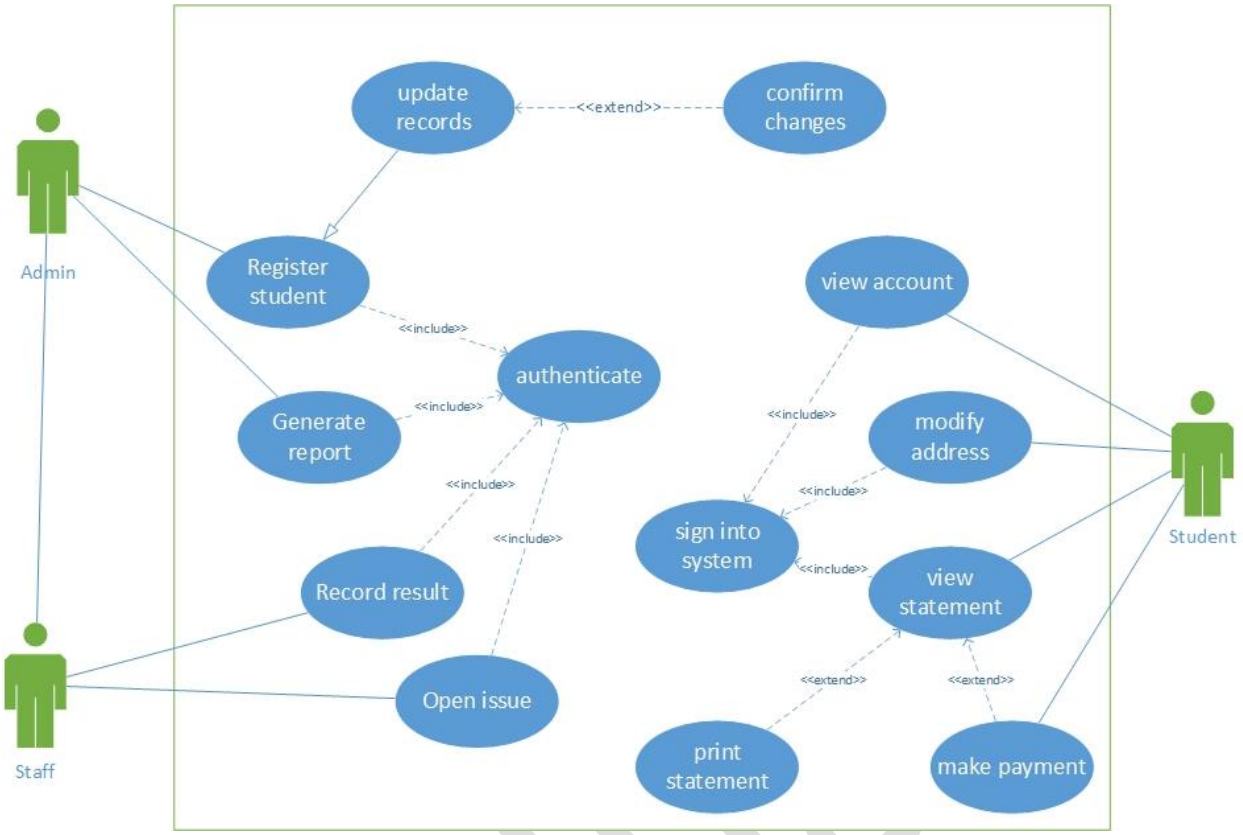
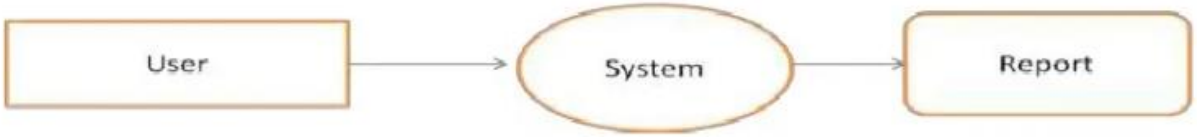
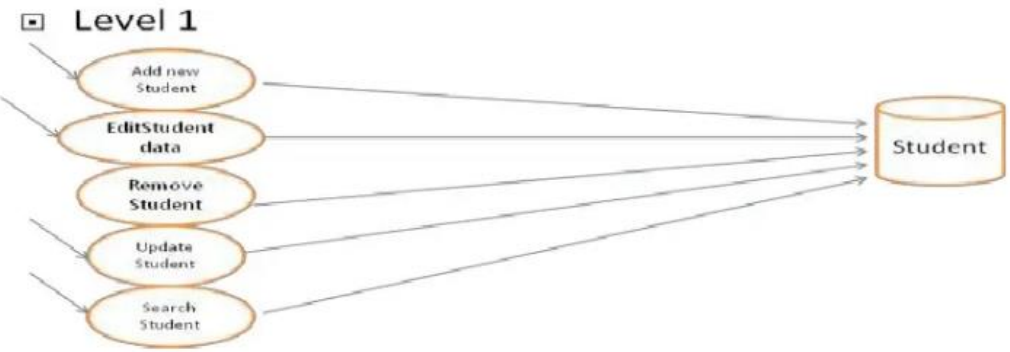
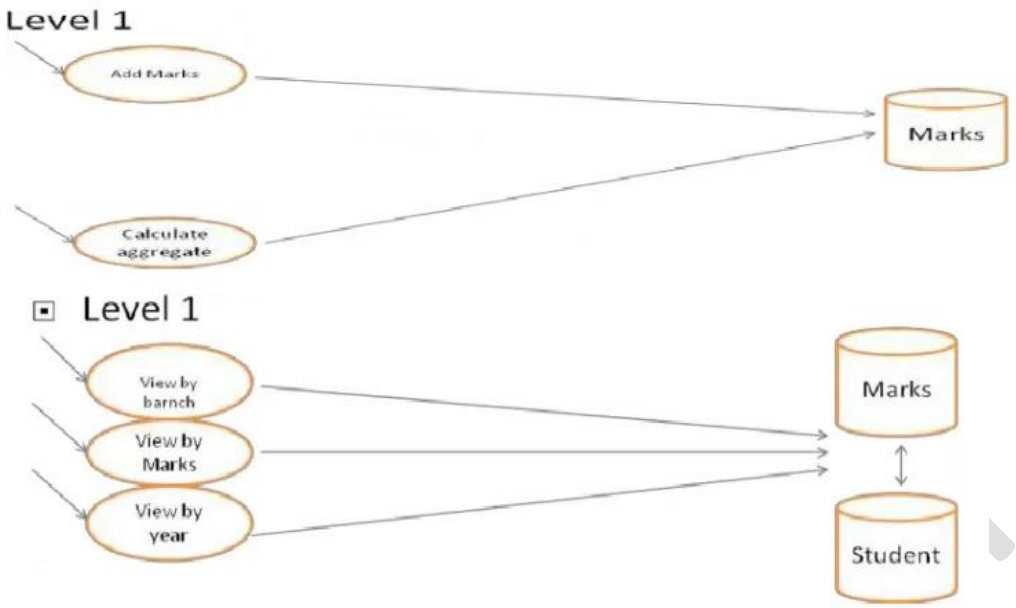
3.1 Use Cases



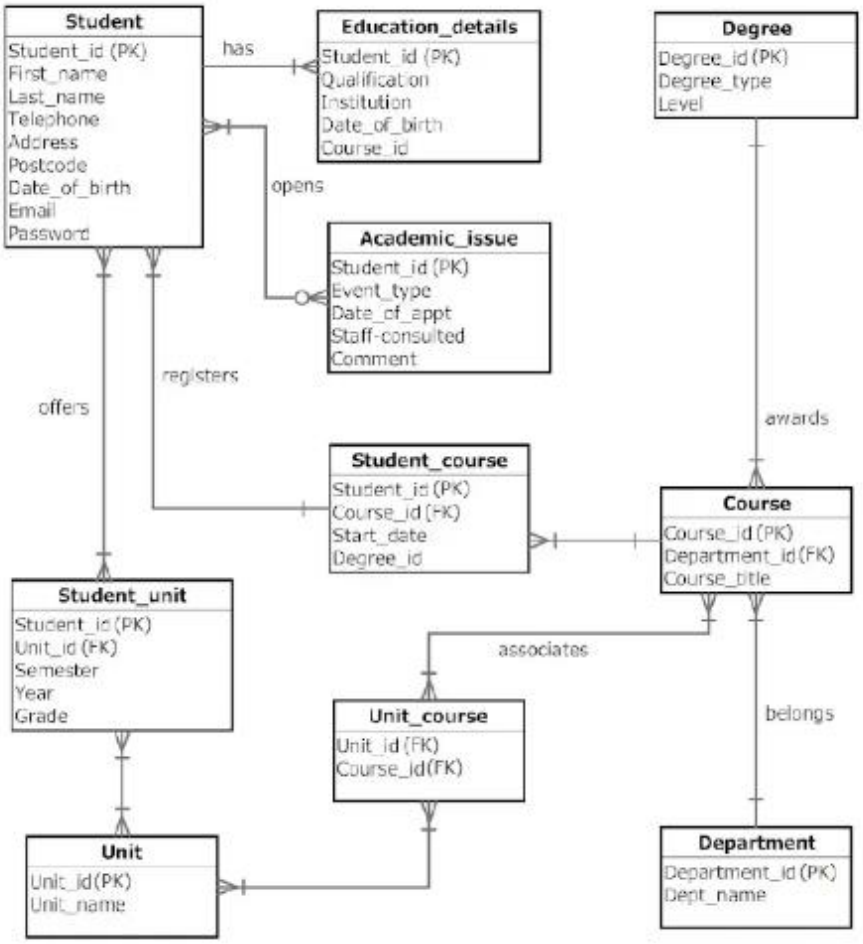
3.4 Data flow diagramming







3.5 ER Modeling



4. Phase 3: System Designing

4.1 Architecture Design

The new system would replace the existing manual system in all ways with an integrated system. The system's implementation is a 3-tier Interface for clients that can use the system's internet portal inside the school's area network or elsewhere on the site. The system is a 3-tier Client / Servers. The design of the device proposed is seen in Figure below. The data level preserves data for the applications including pupil, instructor, time etc. It stores the data in a link database administration system (RDBMS).

The middle level (web / application server) implements the organization logic, controller logic and view logic for controlling customer-data interaction. The controller logic handles consumer requests such as requests for student grades, enrollment and data collection from the database. Market laws enforced by corporate logic govern how consumers view and manage data software and should not view client data (Yau, 2019).

A web server is a network server (computer) program to address HTTP requests. The Internet Information System (IIS) and Apache are the most widely used web servers. The system's application server is IIS. HTTP is used for intranet or internet data sharing. This is the standard protocol for data transfer on the Internet.

The client level is the user interface of software comprising forms and functions on the client side. It shows the user's info. Users communicate directly through the user interface with the program. The system communicates to order and receive data from the applications using the web / application API. The data obtained from the server will be shown to the user.

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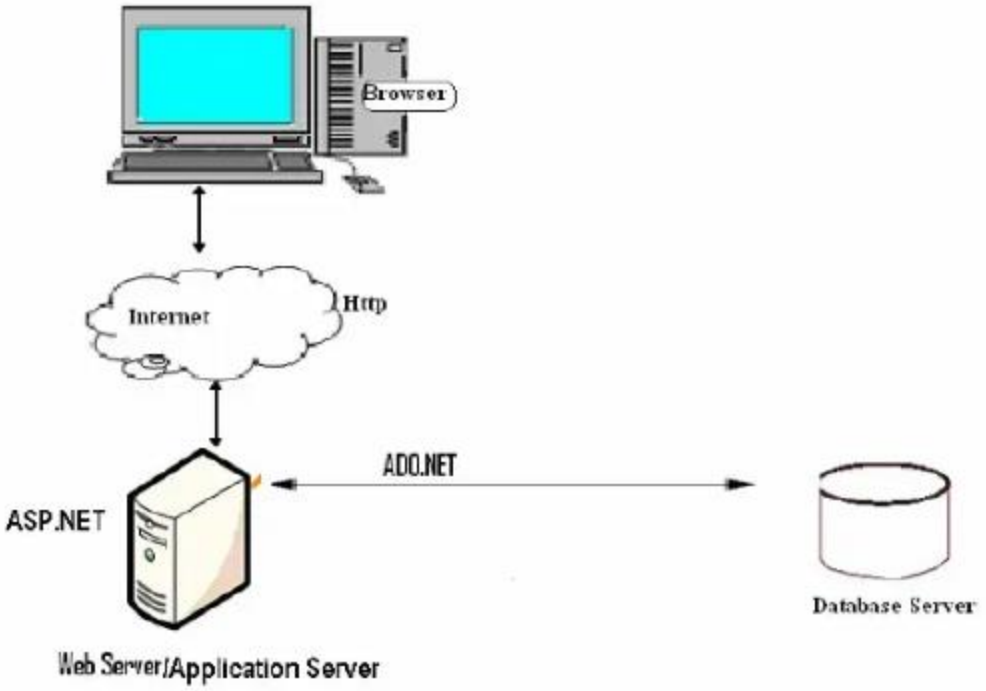

4.2 Data Storage Design

The general concept of a database is the centralized management of information. A database is an inter-related database with limited replication, and can be accessed quickly and easily by multiple people (Lencer, 2011). The analyst will concentrate on database architecture or how data can be structured depending on customer expectations after the creation of input and output. The overarching goal is to make access to information for other users fast, cost-effective and scalable. The following priorities are discussed during the creation of the database: Accurate and availability of additional low-cost data recovery from error Protection and protection Ease of learning and usage Secure Redundancy Information freedom.

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