Project Synopsis

“Covid-19 API”

Submission Details

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Synopsis Contents

1. Title of the Project.

2. Introduction and Objectives of the Project.

3. Project Category (RDBMS/OOPS/Networking/Multimedia/Artificial

Intelligence/Expert Systems etc.).

4. Tools/Platform, Hardware and Software Requirement specifications.

5. Problem Definition, Requirement Specifications (Detailed functional

Requirements and Technical Specifications), Project Planning and Scheduling (Gantt chart and PERT chart).

6. Scope of the solution.

7. Analysis (Data Models like 0, 1 and 2 level DFDs, Complete ER Diagrams with

cardinality, Class Diagrams etc. as per the project requirements).

8. A complete Database and tables detail with Primary and Foreign keys, and proper

constraints in the fields (as per project requirements)

9. A complete structure which includes:

i. Number of modules and their description to provide an estimation of

the student’s effort on the project. Along with process logic of each

Module.

ii. Data Structures as per the project requirements for all the modules.

iii. Process Logic of each module.

iv. Implementation methodology

v. List of reports that are likely to be generated.

10. Overall network architecture (if required for your project)

11. Implementation of security mechanisms at various levels

12. Future scope and further enhancement of the project.

13. Bibliography

Introduction & Objective(s)

1. Introduction

1.1 Background corona virus widely known as covid-19 are a large family of viruses that are known to cause illness ranging from the common cold to more severe disease such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) The virus out-braked on Nov-2019 from Wuhan city of china. The virus affected south China for about a month and then it spread throughout the world making the path through Europe. The champion’s league game between Atlanta and Valencia became the poison for spreading the virus in Europe as more than 80,000 spectators were in stadium. Till date, the virus had spread in about 235 territories affecting more than 55 million of population. Nepal also reported its first COVID-19 case on 23 January 2020 which today tallied to 208,299 cases. The timely imposing of the lockdown controlled the chances of rapid incrementation of infected population till June. But with the foreign manpower being brought to home country and loosening of lockdown after July, the number of infected population increased in the exponential way. The large number of people are being infected and killed on daily basis all over the world. And the data of death, infected and recovered cases are being provided on 2 different websites, Google, webpages etc. But these data are only limited to national and international level. Therefore, with the necessity to bring the data of local level with effective analysis, and to make a project work possible through virtual classes we the students of Geomatics engineering were assigned with project “Emergency Handling of COVID-19 in Home Districts”. We all were divided into different groups with 5 members from 5 different districts in each. Hence, with the guidelines of supervisors and strong group work, we have finally completed our engineering project. 1.2 Problem Statement With an outbreak of COVID -19 in Nepal, ‘Ministry of Health and Population’ is providing the data on daily basis through websites, newspaper, Facebook and different Medias. But these data are only based on national level. Such sites highlight the national level infected, recovered, death cases.

Objective(s):- The primary objective of our project is: To study timely trend of Covid-19 in our home districts along with theϖ comparative study of situations, The secondary objectives of our project are: To determine the possible analytical outcomes of COVID-19 situations based onϖ To study and evaluate the provided facilities, works done to minimize the effectϖdifferent age groups and other divisions. To develop the idea and concept of teamwork, field project and analytical skills toϖand spreading of virus from a local level us.

2. Project Category

This application is basically a client server based application system that means though

having users interaction and input-output conversation, yet it will be operated from any

machine, which are attached with the server. Basically it will maintain a server based

communication and exchange ideas and also they can receive services from every corner of

the organization. Any type of response can generate on the real time basis, i.e. instantly the

user can get their answers against various queries.

There are various features in which a project can be categorized. The proposed project has

been divided into three main categories, which can be described as:

Front – end: -

The front-end tool of this proposed project is Visual Basic.net. Visual Studio is a

complete suite of tools for building desktop applications. In addition to building high-

performing desktop applications, we can use Visual Studio&#39;s powerful component-based

development tools and other technologies to simplify team-based design, development,

and deployment of Enterprise solutions.

Back – end: -

The back end of the project is supported by SQL Server.

SQL Server -SQL Query Analyzer is a graphical tool that allows us to:

 Create queries and other SQL scripts and execute them against SQL Server

databases.

 Quickly create commonly used database objects from predefined scripts.

 Quickly copy existing database objects.

 Quickly insert, update, or delete rows in a table. (Open Table window)

Client – Server Architecture: -

The project is also a client-server based application that means though having users

interaction and input-output conversation, it can be operated from any machines that are

attached with the server. Basically it will maintain a server based communication and the

user can receive information instantly against their various queries. The required

information of any album made by the user in the client machine can be derived from the

server machine. The server machine distributes all its data and information to the client

machines that can help the users.

3. Tools/Environment Used

The project is to be developed using Asp.Net 3.5 with Visual Basic 2008 as the front-end

tool, JavaScript as scripting language and SQL Server 2008 as the backend tool. For this

reason a minimum hardware configuration of Pentium IV or Core 2 duo 3.0 Ghz or dual

Core 3.0 Ghz processor is needed. Hardware with better configuration will provide much

better platforms to the software operate. However, the hardware configuration that is to be

used to develop the project as follows: -

 Intel dual core or core 2 duo with 3.0 GHz processor speed.

 Hard Disk 500 G.B

 H.P DVD Writer

 Ram 2 G.B (ZION)

 Peripherals I-Ball Ps2 mouse and keyboard.

 Display 15” TFT Monitor (ACER/SAMSUNG)

After the description of the hardware configuration, comes the description of the software

configuration .The most important fact is the Operating System that forms the base of the

languages to be used for the development. If the languages are not supported by the

Operating System then it is impossible to develop a project, like Dos, Windows 98 does not

support Asp.Net 3.5 and SQL Server 2008. The Operating System to be used for the

development of the project is “Windows XP”.

Windows XP: -

Windows XP will provide increased speed and security at the desktop, while offering better

hardware compatibility and enhanced features. International Technology Services (ITS)

released the Windows XP operating system in a three-phase approach. This phased

deployment process provided ITS’ with valuable customer feedback, data collection and

analysis, which resulted in the completion and final release of the Windows XP Operating

System. Windows XP offers several new tools and features that focus on improved

productivity, security and usability.

There is several key performance improvements included in Windows XP. Users will notice

faster boot-up times, improved program responsiveness and with the 64bit OS, equipment

and software can take advantage of additional RAM.

Through the user account control (UAC) feature windows XP makes it easier and more

secure to run programs as a standard user instead of an administrator. The Windows firewall

is also enabled to provide additional protection against malicious software.

Mobile users and remote workers will notice a big improvement with the wireless

networking features of Windows XP.

ASP.NET 3.5: -

The .NET Framework (pronounced dot net) is a software framework developed by

Microsoft that runs primarily on Microsoft Windows. It includes a large library and

provides language interoperability (each language can use code written in other

languages) across several programming languages. Programs written for the .NET

Framework execute in a software environment (as contrasted to hardware

environment), known as the Common Language Runtime (CLR), an application virtual

machine that provides services such as security, memory management, and exception

handling. The class library and the CLR together constitute the .NET Framework.

Microsoft started development of the .NET Framework in the late 1990s, originally under

the name of Next Generation Windows Services (NGWS). By late 2000 the first beta

versions of .NET 1.0 were released.

Windows XP (service pack 3) does come with 3.0 version of the .NET Framework

installed. Version 3.0 of the .NET Framework is included with Windows Server 2008 and

Windows Vista. Version 3.5 is included with Windows 7, and can also be installed on

Windows XP and the Windows Server 2003 family of operating systems

VB.NET-

It is an object-orientedcomputer programming language that can be viewed as an

evolution of the classic Visual Basic (VB), which is implemented on the .NET Framework.

Visual Basic 2008 was released together with the Microsoft .NET Framework 3.5 on 19

November 2007.

For this release, Microsoft added many features, including:

 A true conditional operator, &quot;If (condition as Boolean, true part, false part)&quot;, to

replace the &quot;IIf&quot; function.

 Anonymous types

 Support for LINQ

 Lambda expressions

 XML Literals

 Type Inference

“Online Transport Management System”

 Extension methods

SQL SERVER 2008: -

Microsoft SQL Server is a relational database management system developed by

Microsoft. As a database, it is a software product whose primary function is to store and

retrieve data as requested by other software applications, be it those on the same

computer or those running on another computer across a network (including the

Internet). There are at least a dozen different editions of Microsoft SQL Server aimed at

different audiences and for different workloads (ranging from small applications that

store and retrieve data on the same computer, to millions of users and computers that

access huge amounts of data from the Internet at the same time).

JavaScript: -

JavaScript is sometimes referred to as a little language. Little languages are generally

characterized as being simplified, limited versions of full programming languages.

JavaScript can also interact effectively with CGI routines; this ability makes JavaScript

valuable for performing forms validation. Any processing operations of this sort that can

be performed locally can make a program respond more quickly to a user’s input since

the data doesn’t have to be passed back and forth across the internet until final

submission. JavaScript goes even further than these other scripting languages by

offering cross-platform operation across the span of the World Wide Web.

Problem Definition, Requirements Specifications,

Problem Defintion:-

Actually the study phase is considered as the requirement analysis, which is the most vital

part of the software development life cycle (SDLC). Without proper analysis something will

remain hidden from the developer may generate certain fatality in near future even in after

the implementation, too.

1. Problem Recognition:-

In this phase the analyst should clarify –

a. Who is behind the request for this work?

b. Who will use the solution?

c. What will be the economic benefit of the successful solution?

d. Is there any other source for the solution that the organization needs?

Getting answers all those questions by himself/herself, the analyst starts working and he

issues some questionnaires to the future users for gathering information and then after that

concentrates on the feasibility studies.

2. Preliminary Investigations:-

The purpose of the preliminary investigation is to collect information for developing

broad solutions for the purpose of feasibility study. Material collected in the preliminary

investigation not only act as a basis for forming the several board solutions of proposed

system but it also provides the much needed fit back for selection of the final candidates

system among the solutions suggested in the course of feasibility study. Following the

four broad methodologies, which are described as follows:

Carries on the preliminary investigation:-

a. Interview.

b. Questionnaire.

c. Fact finding studies, etc

After the verbal interview session is over, it was very clear that the team requires to

Requirements Specifications.

3. Problem Statement:-

Existing System-

System Analysis is a detailed study of the various operations performed by a system and

their relationships within and outside of the system. Here the key question is- what all

problems exist in the present system? What must be done to solve the problem? Analysis

begins when a user or manager begins a study of the program using existing system.

During analysis, data collected on the various files, decision points and transactions

handled by the present system. The commonly used tools in the system are Data Flow

Diagram, interviews, etc. Training, experience and common sense are required for

collection of relevant information needed to develop the system. The success of the

system depends largely on how clearly the problem is defined, thoroughly investigated

and properly carried out through the choice of solution. A good analysis model should

provide not only the mechanisms of problem understanding but also the frame work of

the solution. Thus it should be studied thoroughly by collecting data about the system.

Then the proposed system should be analyzed thoroughly in accordance with the needs.

System analysis can be categorized into four parts.¸ System planning and initial

investigation

a. Information Gathering

b. Applying analysis tools for structured analysis

c. Feasibility study

d. Cost/ Benefit analysis.3

In our existing system all the transaction of booking are done manually. Normally,

transport booking can make if the user want to use the transport that is available at the

company follow the type of transport, location, date and time. The user must book before

use the transport do three day before date of departure. It is to ensure the transport that

they want to use is available or not on the date and duration. The administrator also can

see the information about transport booking.

Proposed System-

Online Transport Booking System is believed to bring lots of benefit to its users and

admin. The benefit is the users can make a transport booking more easily. It is because

users just enter the information to make an application about transport booking by

online. The users also don&#39;t have to go management department to make a transport

booking. Besides that, users also don&#39;t have to use a paper to fill in the form but just

enter the information about transport booking in computer by online the web site. This

way also can save the user&#39;s time.

While for admin can help management of the information. The admin do not have to

check the availability of the transport because it is check automatically by the system.

The admin can get the information about the transport booking such as who want to book

the transport, what type of transport, what location and how long time duration of

booking. After that, admin can make a report and show the statistic about transport that

is booked by month via the system. So, data integrity in database will be increased with

safety because only admin can use and see the information in database.