Assignment NO:1

SOFTWARE REQUIREMENT SPECIFICATION

FOR

INSURANCE MANAGEMENT

-Advanced Software Engineering

Submitted To:

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Date:15/2/2021

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Date:15/2/2021

INSURANCE MANAGEMENT SYSTEM

SYNOPSIS

“INSURANCE MANAGEMENT SYSTEM” is a responsive web application that is developed by using latest industrial standard technologies like HTML and java .The primary aim of this software is to provide an improved design methodology ,Which envisages the future expansion, and modification, which is necessary for core sector like banking . This necessitates the design to be expandable and modifiable and so a modular approach is used in developing the software.

The project entitled as **“INSURANCE MANAGEMENT SYSTEM”** is developed using Microsoft SQL server as the back end tool. The goal of the project is to take policies online by using computer instead of going outside at home .It is easier and quicker.

SYSTEM SPECIFICATION

HARDWARE CONFIGURATION

Processor	:	Intel Pentium or above
Base Memory	:	256 MB RAM
Extended Memory	:	1 GB SDRAM
Cache Memory	:	2MB
Hard Disk	:	320GB
CD-ROM	:	CD S520/A
Keyboard (110/10Key)	:	PC/AT Enhanced PS/2Keyboard
Mouse	: First/Pilot Mouse Serial (c48)	

SOFTWARE SPECIFICATION

Operating System	:	Windows 10.
Developing tool	:	Eclipse
Front end	:	Java
Back End	:	MySQL

WINDOWS 10

Windows 10 is a series of personal computer operating systems produced by Microsoft as part of its Windows NT family of operating systems. It is the successor to Windows 8.1, and was released to manufacturing on July 15, 2015 and broadly released for retail sale on July29, 2015.[9] Windows 10 receives new builds on an ongoing basis, which are available at no additional cost to users, in addition to additional test builds of Windows 10 which are available to Windows Insiders. Devices in enterprise environments can receive these updates at a slower pace, or use long-term support milestones that only receive critical updates, such as security patches, over their ten-year lifespan of extended support.
One of Windows 10's most notable features is support for universal apps, an expansion of the Metro-style apps first introduced in Windows 8. Universal apps can be designed to run across multiple Microsoft product families with nearly identical code—including PCs, tablets, smartphones, embedded systems, Xbox One, Surface Hub and Mixed Reality. The Windows user interface was revised to handle transitions between a mouse-oriented interface and a touchscreen-optimized interface based on available input devices—particularly on 2-in-1 PCs, both interfaces include an updated Start menu which incorporates elements of Windows 7's traditional Start menu with the tiles of Windows 8. Windows 10 also introduced the Microsoft Edge web browser, a virtual desktop system, a window and desktop management feature called Task View, support for fingerprint and face recognition login, new security features for enterprise environments, and DirectX 12.

ADVANTAGES OF WINDOWS 10

- The loading time of Windows 10 is much less than that of Windows 7.
- Stability and performance has been greatly improved in Windows 10.
- Redesigned UI mixes the advantages of Windows 7 & Windows 8 which helps users of Windows 7 or earlier get comfortable to use it.
- It is safer to use the latest Windows operating system.
- Although Windows 7 is safe at present. But it is unknown when Microsoft will stop the Support for Windows 7 just like Windows XP.
- For gaming perspective, it gets Directx 12, which promises high frame rates with future games.
- Better integration with Windows phone.
- Update Windows 10 with the button ―Update‖ will not damage or delete Your files.

DISADVANTAGES OF WINDOWS 10

- Your personal information will be shared with Microsoft for better service and improvement.
- Upgrading to Windows 10 sometimes may lead to system crash. If it happens, you need to spend hours to solve this problem.
- It is not so good for old computer. Upgrading sometime could slow down the computer because the out-of-date hardware is not enough to run the new system smoothly

JAVA

Java is a general-purpose programming language that is class-based, object-oriented, and specifically designed to have as few implementation dependencies as possible. It is intended to let application developers "write once, run anywhere"(WORA), meaning that compiled Java code can run on all platforms that support Java without the need for recompilation. Java applications are typically compiled to "bytecode" that can run on any Java virtual machine (JVM) regardless of the underlying computer architecture. The syntax of Java is similar to C and C++, but it has fewer low-level facilities than either of them. As of 2018, Java was according to Git Hub one of the most popular programming languages in use, particularly for client-server web applications, with a reported 9 million developers.

ADVANTAGES OF JAVA

- **Simple:** Java was designed to be easy to use, write, compile, debug, and learn than other programming languages. Java is much simpler than C++ because Java uses automatic memory allocation and garbage collection.
- **Object-Oriented:** Object oriented programming is associated with concepts like class, object, inheritance, encapsulation, abstraction, polymorphism, etc. which allows you to create modular programs and reusable code. You can declare classes, create objects inside classes, and interact between two objects.
- **Platform-Independent:** Java offers the comfort of write program once and run on any hardware and software platform and any Java compatible browser. This gives the ability to move easily from one computer system to another.
- **Distributed:** Java has great networking capability, it is designed to make distributed computing easy with the networking capability that is inherently integrated into it.
- **Secure:** Java is the first programming language to include security an integral part of the design. Java's compiler, interpreter, and runtime environment were each developed with security in mind. Java Virtual Machine has a unique identifier that identifies the byte code and verifies it before running it.
- **Allocation:** Java has the feature of Stack allocation system. It follows LIFO (Last in First Out) which helps the data to be stored and retrieved easily.
- **Multithreaded:** Java is one of the programming languages to support Multithreading. Multithreading is the capability for a program to perform several tasks simultaneously within a program.
- **Rich APIs:** Java offers various APIs for application development. Java APIs (Application Programming Interface) is the set of commands or methods of communication among various activities like Database connection, networking, I/O, XML parsing, utilities, and much more.
- **Powerful Open source Rapid Development Tools:** Over the year's several open source development tools i.e., IDEs such as Eclipse and Netbeans, have been created with Java as a base which makes Java more powerful for application development. IDEs makes application development simpler with powerful coding and debugging features.
- **Robust**: Java is one of the most robust programming languages, that is Java is more reliable. Java compilers can detect any errors in the coding. There are also other features like exception handling and garbage collection which makes Java more robust.

JSP

JSP Java Server Pages (JSP) is a technology that helps software developers create Dynamically generated web pages based on HTML, XML, or other document types. Released in 1999 by Sun Microsystems, JSP is similar to PHP and ASP, but it uses the Java programming language. To deploy and run Java Server Pages, a compatible web server with a servlet container, such as Apache Tomcat or Jetty, is required. Architecturally, JSP may be viewed as a high-level abstraction of Java servlets. JSPs are translated into servlets at runtime, therefore JSP is a Servlet; each JSP servlet is cached and re-used until the original JSP is modified.

JSP can be used independently or as the view component of a server-side model–view–controller design, normally with JavaBeans as the model and Java servlets (or a framework such as Apache Struts) as the controller. This is a type of Model 2 architecture.

SP allows Java code and certain predefined actions to be interleaved with static web markup content, such as HTML, with the resulting page being compiled and executed on the server to deliver a document. The compiled pages, as well as any dependent Java libraries, contain Java bytecode rather than machine code. Like any other Java program, they must be executed within a Java virtual machine (JVM) that interacts with the server's host operating system to provide an abstract, platform-neutral environment. JSPs are usually used to deliver HTML and XML documents, but through the use of OutputStream, they can deliver other type of data as well.

The Web container creates JSP implicit objects like request, response, session, application, config, page, pageContext, out and exception. JSP Engine creates these objects during translation phase

Java Server Pages (JSP) is a server-side programming technology that enables the creation of dynamic, platform-independent method for building Web-based applications. JSP have access to the entire family of Java APIs, including the JDBC API to access enterprise databases. This tutorial will teach you how to use Java Server Pages to develop your web applications in simple and easy steps

JSP technology is used to create web application just like Servlet technology. It can be thought of as an extension to Servlet because it provides more functionality than servlet such as expression language, JSTL, etc.A JSP page consists of HTML tags and JSP tags. The JSP pages are easier to maintain than

Servlet because we can separate designing and development. It provides some additional features such as Expression Language, Custom Tags, etc.

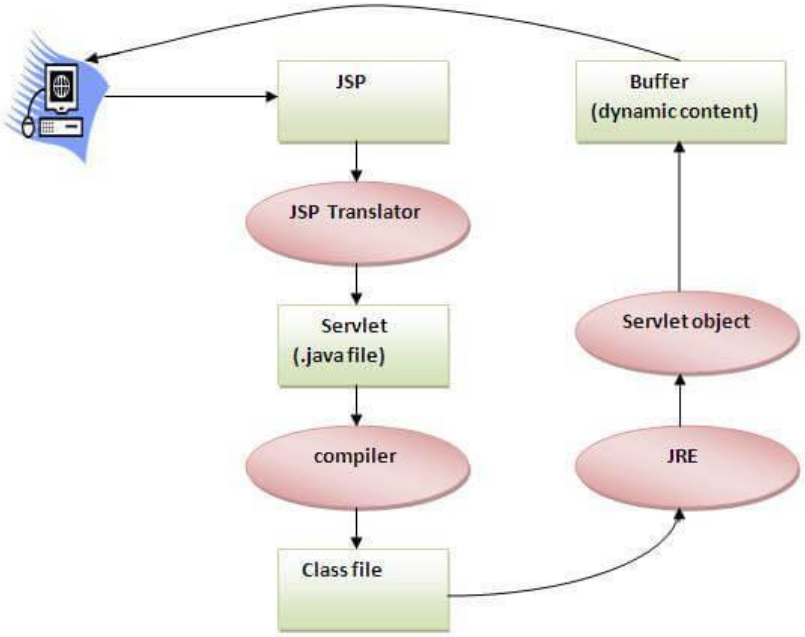
Advantages of JSP over Servlet

There are many advantages of JSP over the Servlet. They are as follows:

- **Extension to Servlet:** JSP technology is the extension to Servlet technology. We can use all the features of the Servlet in JSP. In addition to, we can use implicit objects, predefined tags, expression language and Custom tags in JSP, that makes JSP development easy.
- **Easy to maintain:** JSP can be easily managed because we can easily separate our business logic with presentation logic. In Servlet technology, we mix our business logic with the presentation logic.
- **Fast Development: No need to recompile and redeploy:** If JSP page is modified, we don't need to recompile and redeploy the project. The Servlet code needs to be updated and recompiled if we have to change the look and feel of the application.
- **Less code than Servlet:** In JSP, we can use many tags such as action tags, JSTL, custom tags, etc. that reduces the code. Moreover, we can use EL, implicit objects, etc.

The Lifecycle of a JSP Page

- The JSP pages follow these phases:
    - Translation of JSP Page
    - Compilation of JSP Page
    - Classloading (the classloader loads class file)
    - Instantiation (Object of the Generated Servlet is created).
    - Initialization (the container invokes jspInit() method).
    - Request processing (the container invokes _jspService() method).
    - Destroy (the container invokes jspDestroy() method).



MySQL

MySQL (/ˌmaɪˌɛsˌkjuːˈɛl/ "My S-Q-L")[5] is an open-source relational database management system (RDBMS). Its name is a combination of "My", the name of co-founder Michael Widenius's daughter, and "SQL", the abbreviation for Structured Query Language. MySQL is free and open-source software under the terms of the GNU General Public License, and is also available under a variety of proprietary licenses. MySQL was owned and sponsored by the Swedish company MySQL AB, which was bought by Sun Microsystems (now Oracle Corporation). In 2010, when Oracle acquired Sun, Widenius forked the open-source MySQL project to create MariaDB.

MySQL is a component of the LAMP web application software stack (and others), which is anacronym for Linux, Apache, MySQL, Perl/PHP/Python. MySQL is used by many database-driven web applications, including Drupal, Joomla, phpBB, and WordPress. MySQL is also used by many popular websites, including Facebook, Twitter, Flickr, and YouTube.

ADVANTAGES OF MySQL

- **Maturity:** MySQL is a setup database, implying that there are a large network, broad testing and a little bit of strength.

- **Compatibility:** MySQL is accessible for every single real stage, including Linux, Windows, Mac, BSD, and Solaris. It additionally has connectors to languages like Node.js, Ruby, C#, C++, Java, Perl, Python, and PHP, implying that it's not constrained to SQL query language.
- **Cost-effective:** The database is open source and free.
- **Replicable:** The MySQL database can be mirrored across various nodes, implying that the workload can be decreased and the scalability and accessibility of the application can be expanded.
- **Sharding:** While sharding is impossible on most SQL databases, it should be possible on MySQL servers.
    - This is both cost-effective and useful for business.

- Automatic transaction support
- Join support
- Mature solution
- Privilege and password security system

ADVANTAGES

- **Easy Installation:** All the Microsoft products are easy to install with one click installation procedure and readable GUI with lots of instructions for the layman.MS SQL Server contains all these characteristics and it has extremely user friendly installation interface unlike other database servers which requires extensive command line configuration.
- **Improved Performance:** MS SQL server contains excellent compression and encryption capabilities that result in improved data storage and retrieval functions.
- **Security:** MS SQL server is considered one of the most secure database servers with complex encryption algorithms making it virtually impossible to crack the security layers enforced by the user. MS SQL server is not an open source database server which reduces the risk of attacks on the database server.
- **Multiple Editions and Price Variations:** A good thing about MS SQL server is that it is available in multiple editions in order to cater the needs of huge corporate sector organizations to a domestic user. The price range also varies which allows anyone to buy the product which meets their price range.

- **Excellent Data Restoration and Recovery Mechanism:** MS SQL server is fully aware of the importance of your data. Hence MSSQL Server contains many sophisticated features that allow you to recover and restore the data which has been lost or damaged. Although you cannot recover individual records but it is possible to restore complete database using some advanced recovery tools contained in MS SQL Server database.

ECLIPSE

Eclipse is an integrated development environment (IDE) used in computer programming, and is the most widely used Java IDE.[6] It contains a base workspace and an extensible plug-in system for customizing the environment. Eclipse is written mostly in Java and its primary use is for developing Java applications, but it may also be used to develop applications in other programming languages via plug-ins, including Ada, ABAP, C, C++, C#, Clojure, COBOL, D, Erlang, Fortran, Groovy, Haskell, JavaScript, Julia, Lasso, Lua, NATURAL, Perl, PHP, Prolog, Python, R, Ruby (including Ruby on Rails framework), Rust, Scala, and Scheme. It can also be used to develop documents with LaTeX (via a TeXlipse plug-in) and packages for the software Mathematica. Development environments include the Eclipse Java development tools (JDT) for Java and Scala, Eclipse CDT for C/C++, and Eclipse PDT for PHP, among others.

The initial codebase originated from IBM Visual Age. The Eclipse software development kit (SDK), which includes the Java development tools, is meant for Java developers. Users can extend its abilities by installing plug-ins written for the Eclipse Platform, such as development toolkits for other programming languages, and can write and contribute their own plug-in modules. Since the introduction of the OSGi implementation (Equinox) in version 3

of Eclipse, plug-ins can be plugged-stopped dynamically and are termed (OSGI) bundles Eclipse software development kit (SDK) is free and open-source software, released under the terms of the Eclipse Public License, although it is incompatible with the GNU General Public License.[10] It was one of the first IDEs to run under GNU Class path and it runs without problems under IcedTea.

HTML (HYPER TEXT MARKUP LANGUAGE)

Hypertext Markup Language (HTML) is the standard markup language for creating web pages and web applications. With Cascading Style Sheets (CSS) and JavaScript, it forms a triad of cornerstone technologies for the World Wide Web.

Web browsers receive HTML documents from a web server or from local storage and render the documents into multimedia web pages. HTML describes the structure of a web page semantically and originally included cues for the appearance of the document.

HTML elements are the building blocks of HTML pages. With HTML constructs, images and other objects such as interactive forms may be embedded into the rendered page. HTML provides a means to create structured documents by denoting structural semantics for text such as headings, paragraphs, lists, links, quotes and other items. HTML elements are delineated by tags, written using angle brackets. Tags such as <img /> and <input /> directly introduce content into the page. Other tags such as <p> surround and provide information about document text and may include other tags as sub-elements. Browsers do not display the HTML tags, but use them to interpret the content of the page.

HTML can embed programs written in a scripting language such as JavaScript, which affects the behavior and content of web pages. Inclusion of CSS defines the look and layout of content. The World Wide Web Consortium (W3C), maintainer of both the HTML and the CSS standards, has encouraged the use of CSS over explicit presentational HTML since 1997.

CSS (CASCADING STYLE SHEET)

Cascading Style Sheets (CSS) is a style sheet language used for describing the presentation of a document written in a markup language like HTML. CSS is a cornerstone technology of the World Wide Web, alongside HTML and JavaScript.
CSS is designed to enable the separation of presentation and content, including layout, colors, and fonts. This separation can improve content accessibility, provide

more flexibility and control in the specification of presentation characteristics, enable multiple web pages to share formatting by specifying the relevant CSS in a separate .css file, and reduce complexity and repetition in the structural content.

Separation of formatting and content also makes it feasible to present the same markup page in different styles for different rendering methods, such as on-screen, in print, by voice (via speech-based browser or screen reader), and on Braille-based tactile devices. CSS also has rules for alternate formatting if the content is accessed on a mobile device.

The name cascading comes from the specified priority scheme to determine which style rule applies if more than one rule matches a particular element. This cascading priority scheme is predictable.

The CSS specifications are maintained by the World Wide Web Consortium (W3C). Internet media type (MIME type) text/css is registered for use with CSS by RFC 2318 (March 1998). The W3C operates a free CSS validation service for CSS documents.

In addition to HTML, other markup languages support the use of CSS including XHTML, plain XML, SVG, and XUL.

EXISTING SYSTEM

The existing system is the manual system. The manual system is prone to error. It is time consuming. It is very difficult for a person to produce the report. There are chances for changing the scheme report and do malpractice. This system involves a lot of manual entries with the applications to perform the desired task.

DRAWBACKS

- Usage of papers in the payment process leads to less efficiency, less accuracy less productivity.
- Increasing expenditure for papers shuffling and storage.
- Increasing labors and hence errors.
- Less control of Amounts.
- Time delay between the payment and its receipt.
- Persons who are present in different part of the world cannot transact efficiently.

PROPOSED SYSTEM

The proposed system is designed to eliminate the drawbacks of the existing system. It is designed by keeping to eliminate the drawbacks of the present system in order to provide a permanent solution to the problems. The primary aim of the new system is to speedup transactions. . It comes as no surprise to one that when everything is being converted to computerize. Already the business has to global with the coming of Internet. Now, no more the individual aims at the local market is also just a click of button away. In this fast race of business and moneymaking, no country, no company and no individual want to fall back. Everyone wants to lead the group. Hence, everyone is trying to make the best use of Internet.

FEATURES

- By clicking on each insurance the user get enough information about the insurance.
- User can directly apply for the insurance by submitting his valid informations.
- User can transact amount without any delay after the approval of the Admin.
- User can give feedback after using the service.
- A User can take multiple policies at a time and he/she can pay the amount for that.

INPUT DESIGN

Input design is a design process of converting user oriented inputs to a computer based format. The input media used is keyboard. Details are entered through data entry screens. Outline data entry accepts commands and the data are displayed on the CRT screen for verification. The major approaches to input design are the menu and the prompt design. In each alternative, the user's options are predefined and the system is designed in a user friendly manner. Appropriate error messages are given when false details are entered. Design of a system in a menu driven fashion enables the user to select any option accordingly using simple keystrokes or mouse clicks.

The following are the features of the data entry screen for proposed system:-

- **User friendly:** The proposed system is designed in a user friendly manner.
- **Menu driven:** The proposed system is menu driven. This helps the user to select any option designs at any time and operations are very easy.
- **Interactive :** The package is developed on the support of menu driven program. When we look through the menu items we can easily understand what it means, so that a person with little experience can also operate the system.

  The following are the major input forms used for this project:

- **Login form:** This input form is used for providing a username and a password for the Administrator and User.
- **Register User:** This input form is used for storing the details of User who is going to login first.
- **Registration form:** This input form is used for storing the details of the User.
- **Send feedback form:** This input form is used for send the feedback of the user.

OUTPUT DESIGN

The output design has been done so that the results of processing should be communicated to the user. Effective output design will improve the clarity and performance of outputs. Output is the main reason for developing the system and the basis on which they will evaluate the usefulness of the application

Output design phase of the system is concerned with the convergence of information to the end user-friendly manner. The output design should be efficient, intelligible so that system relationship with the end user is improved and they can enhance the process of decision-making.

The following are the major output forms used for this project:

- **View the approved users:** This output form displays the details of registered users.
- **View User request:** This output form displays the details of the request that the user send.

- **Feedback form:** This output form is used to display the details of users feedback.

DATABASE DESIGN

Database Design is an important activity in design. The efficiency of the system lies in the efficiency of the database. The database design consists of predetermining number of tables that are to be used and fields that are to be used in each table. The efficiency of the system to retrieve the appropriate data depends on how the fields are specified and the coding mostly depends on format of the database.
To group the given data and to give them a logical structure, a database design is necessary. The overall objective in the development of a database is to treat data as an organized resource and integrated whole.
A database is a repository of information. It is a collection of interrelated data stored with minimum redundancy to serve many users quickly and efficiently. The general objective is to make easy access of information quickly, inexpensive and flexible for the users. In this project, we mainly concentrate in relational databases. Relational database stores data in tables, which is in turn, composed of rows also known as records, columns also known as fields.
The fields in the relational models are shown below:

- **Primary Key:** This key is used to identify records uniquely. It also notify the not null constraint.
- **Foreign Key** –A foreign key is a field that points to the primary key of another table. The general theme is to handle information as an integrated whole, with a minimum redundancy and improved performance.

Some general objectives in establishing a database are follows:

- Eliminate redundant data as much as possible.
- Integrating existing data files.
- Share data among all users.
- Incorporate changes easily and quickly.
- Simplify the use of data files.
- Lower the cost of storing and retrieving data.
- Improve accuracy and consistency
- Provide data security from unauthorized use

- Exercise central control over standards.

- A complete data base management system separates the definition of data from programs. The concept of data independence is one of the key advantages of a data base management system. With a DBMS, it is possible to design file structures much more easily and to set up a database that can be used by a number of different applications. As a result, the system increases programming productivity.

- The choice of a particular database management system is complicated. In this system a relational data model is used because of the many features it offers. Relational data model can be analyzed formally, which gives them a strong foundation and some degree of standardization across implementations

- Data directory specifies the major element in the system and care should be taken, while designing, in order to avoid unnecessary duplication of data. The entire package depends on how the data is maintained in the system. Several tables are maintained in the system to store data which are required for the processing of various data as well as storing intermediate for final processed results. Different modules are used to meet the user needs and to access these stored data.

SYSTEM DEVELOPMENT

Systems development is the process of defining, designing, testing, and implementing a new software application or program. It could include the internal development of customized systems, the creation of database systems, or the acquisition of third party developed software. Written standards and procedures must guide all information systems processing functions. The organization's management must define and implement standards and adopt an appropriate system development life cycle methodology governing the process of developing, acquiring, implementing, and maintaining computerized information systems and related technology.

DESCRIPTION OF MODULES

This project involves two modules:

- **Admin**
- **User**

1. **ADMIN**
   The admin has the overall permission over the system. He can add policy, approve user, view user and also view the feedback that are the user given about the service of the system.

2. **USER**

   The user can choose policy after login to the system. Then the user can apply to the policy that he had choosen. He/she can submitting his valid information and photo .After the admin approve his request he can pay the amount by online

SYSTEM TESTING

UNIT TESTING

Unit test comprises of a set tests performed by an individual program prior to the integration of the unit into large system. A program unit is usually the smallest free functioning part of the whole system. Module unit testing should be as exhaustive as possible to ensure that each representation handled by each module has been tested. All the units that makeup the system must be tested independently to ensure that they work as required.

During unit testing some errors were raised and all of them were rectified and handled well. The result was quiet satisfactory and it worked well.

INTEGRATION TESTING

Integration testing is a system technique for constructing the program structure while at the same time conducting tests to uncover errors associated with interfacing. The objective is to take unit tested modules and build a program structure that has been dictated by design. Bottom-up integration is the traditional

strategy used to integrate the components of a software system into functioning whole. Bottom-up integration consists of unit test followed by testing of the entire system. A sub-system consists of several modules that communicated with other defined interface.

The system was done the integration testing. All the modules were tested for their compatibility with other modules .They test was almost successful. All the modules coexisted very well, with almost no bugs. All the modules were encapsulated very well so as to not hamper the execution of other modules.

VALIDATION TESTING

After validation testing, software is completely assembled as a package, interfacing errors that have been uncovered and corrected and the final series of software test; the validation test begins. Steps taken during software design and it attempts to verify that protection mechanisms built into a system testing can greatly improve the probability of successful integration in the larger system. System testing is actually a series of different tests whose primary purpose is to fully exercise the computer based system.

- **Acceptance Testing :** Here the system is tested whether it meets all the client needs. The client himself does the testing.
- **Security Testing :** It will in fact protect it from improper penetration. The system's security must of course be tested from in vulnerability form frontal-attack.
- **Test Data Output :** After preparing test data, the system under study is tested using the test data. While testing the system using test data, errors are again uncovered and corrected by using above testing and corrections are also noted for future use.

SYSTEM IMPLEMENTATION

System implementation is the final phase i.e. putting the utility into action. Implementation is the state in the project where theoretical design turned into working system. The most crucial stage is achieving a new successful system and giving confidence in new system that it will work efficiently and effectively. The system is implemented only after through checking is done and if it is found working in according to the specification.The implementation is the final stage and it is an important phase. It involves the individual programming, system testing, user training and the operational running of developed proposed system. Implementation is the process of conversion of a new or revised system design into an operation one. Implementation is the stage where the theoretical design is converted into a working system. An implementation plan is to be made before starting the actual implementation of the system. The process of putting the developed system in actual use is called system implementation.

The system can be implemented only after through testing is done and it is found to be working according to the specifications.

The implementation stage involves following tasks:

- Careful Planning
- Investigation of system and constraints.
- Design of methods to achieve the changeover.
- Evaluation of the changeover method.

Implementation Plan

For a successful implementation of the system, implementation plan is necessary. Its major elements include test plan, an equipment installation plan and a launching plan. A test plan is a document detailing a systematic approach to test a system such as a machine or software. The plan typically contains a detailed understanding of what the eventual workflow will be. Training plan is necessary to ensure that all person who are associated with computer related information system have necessary knowledge and skills. Equipment implementation activities are site preparation, equipment installation and hardware and software checkout.

The following are the steps involved in the implementation plan:

- Test system with sample data.
- Detection and correction of errors.
- Make the necessary changes in the system.

SECURITY TECHNOLOGIES & POLICIES

A computer system is secure if neither its ability to attain its objectives nor its availability to survive can be adversely affected by an unwanted event. A computer based security is a combination of many assets or resources designed to perform some function or to provide service. The facility to impose strict authorization is completely vested in the hands of the system administrator. He / She has the full authority to add / delete user to and from the system respectively. Only valid users can enter into the system. They have to provide a valid username, password and privileges to prove that they are valid users. If any one of them is wrong, access is denied to the system.

System Security

System security refers to the technical innovation and procedures applied to the hardware and operating systems to protect against deliberate or accidental damage from a defined threat. In contrast, data security is the protection of data from loss, disclosure, modification, and destruction. The security features are considered while developing the system, so as to avoid the errors and omissions that may lead to serious problems. In this system, data loss is prevented by taking proper backups.

System Integrity

System Integrity refers to the proper functioning of hardware and programs, appropriate physical security and safety against external threats. A threat to a computer system is any event that adversely affects the one or more assets or resources, which make up the system.

An event can be any of the following:

- Interruption of Communication
- Destruction of hardware.
- Modification of software.
- Removal of programs.
- Disclosure of Information.

There are many methods for handling a threat

- Avoid it by altering the design.
- Threat retention.

Privacy

Privacy defines the rights of the users or organizations to determine what information they are willing to share with or accept from others and how the organization can be protected against unwelcome, unfair, or excessive dissemination of information about it.

Confidentiality

The term confidentiality is a special status given to sensitive information in a database to minimize the possible invasion of privacy. It is an attribute of information that characterizes its need for protection. In contrast privacy is largely a procedural matter of how information is used.

By considering these security measures, we have taken some precautions. They are:

- Physical security or protection from fire, flood and other physical damage.
- Database integrity through data validation techniques.
- Control measures through passwords on a regular basis.

A procedure for protecting systems makes sure that the facility is physically secure, provides recovery/restarts capability and has access to backup files. In a database environment, there are three types of failures. They are catastrophic, logical and structural. A catastrophic failure is one where part of a database is unreadable. It is restored using the roll forward method of memory. A logical failure occurs when activity of the database is interrupted (e.g. a power failure) with no chance of completing the currently executing transactions. The application stores the data in a RDBMS called SQL Server.

We can store data in a secured and easily retrievable manner into the tables. So the proposed system provides powerful security measures. The security measures of a computer system should be specified at an early stage in the design of the system. In this project, the data security and data validation checking methods are applied. Password protection and simple procedures to prevent the unauthorized access are provided to the users. This system allows the user to enter the system only through proper user name and password. If a user wants to access the data she has to provide username and password. If the username and password exists, the user can login and can access the data.

Security Policies

Security is a definition of what it means to be secure for a system, organization or other entity. For an organization, it addresses the constraints on behavior of its members as well as constraints imposed on adversaries by mechanisms. If it is important to be secure, then it is important to be sure all of the security policy is

enforced by mechanisms that are strong enough. In complex systems, policies can be decomposed into sub-policies to facilitate the allocation of security mechanisms to enforce sub-policies. However, this practice has pitfalls. It is too easy to simply go directly to the sub-policies, which are essentially the rules of operation and dispense with the top level policy. Policies ensure the consistent protection of information flowing through the entire system. Information is not always static and often changes at its processes. The information must be protected throughout the process at all.

CONCLUSION

The ‖Insurance Management System ‖ has been developed, tested, documented and implemented successfully. The main objective of the system was brought in to effect. The system is developed in a java as front-end tool and Microsoft SQL Server as backend tool. This application is currently an open one, which promises any amount of modules to be integrated along with it. Considering the current trends and the developments the future might offer, this is considered as an excellent system with a promising bright future in the coming Years.

Any system that has been used for a number of years gradually decays and becomes less effective because of the changes in environment to which it has to adopt. For a time, it is possible to overcome problems by amending and minor modifications to acknowledgement the need of fundamental changes. The important benefits that have been found out through the implemented system are:

- User friendly
- Simplified operation.
- Reduced processing time.
- Accurate result providing.
- More reliability.
- Increases accuracy.

FUTURE SCOPE

The software is developed in java, which makes the system more reliable and compatible with the other environments. The application proves better extensibility and flexibility for future enhancements. Any further requirement application is possible with the same features guaranteed. The design of this software is in such a way that the addition of any new module if necessary is possible without affecting the integrity of the present system.

- Can easily integrate any future developments in to the existing system .
- More services could be added.
- Existing services could be made user interactive
- Improved security features
- Improved user friendly interfaces.

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