1. INTRODUCTION

1.1 ABOUT THE PROJECT

Granite is a natural stone that is believed to have formed approximately 300 million years ago. The stone is a type of igneous rock, or magmatic rock, which means the magma beneath the earth's surface, went through a crystallization process to create an igneous rock composed of a multitude of minerals and solid crystals. This concoction of earth's minerals through this process forms, you guessed it, granite.

The stone is mainly composed of feldspar and quartz, with small hints of other minerals such as mica and amphibole. To be formally considered granite the particular stone needs to be 10 to 50 percent comprised of quartz and 60 to 90 percent comprised of feldspar. Percentages of each mineral can differentiate within the slab and change the overall appearance of the granite. This will be discussed in detail further along the article, so keep reading!

Granite is a beautiful, colorful stone that is personalized for every owner. The colors, swirls, and placement of crystals depend on the unique crystallization process the rock underwent millions of years ago. Since the process and the location is so unique for each found rock, it is impossible to find two slabs that are exactly the same, meaning that your granite countertop is one-of-a-kind. The colors depend on the amount of each mineral in the slab. As mentioned before, granite is composed of quartz, feldspar, mica, amphiboles, and other types of minerals. If the granite has a greater percentage of feldspar, it will be of pinker hue. If the stone has a greater percentage of quartz or minerals.

1.2 NEED FOR THE PROJECT

Security is the main objective concerned in this project. This allows only authorized people to manage the data.

Time management is achieved through the forms created in this project.

APPLICATION

- Data management applications

ADVANTAGES

- Time saving
- High security
- Reliable system

1.3. COMPANY PROFILE

SR GRANITE is a leading company located in Madurai Dist., which is placed in Madurai to provide best importance to take care of student's career and provide high quality training to all class of people. Our organization not only provide the platform to build up the bright professional career in networking, Server Administration, VMware Administration and Internet Security but also provides the placement support in reputed companies.

We are proud to be the pioneers in "Hardware and Networking". Just when everyone was bent upon Software, we foresaw the tremendous potential in Hardware and Networking, and successfully emerged as one of the best IT Company for Hardware and Networking Solutions and the best institute for Hardware and Networking Training. Today the two sides of its business are equally balanced. The expertise of its training is coupled with a strong commitment to provide the best Hardware and Networking solutions. This has put IT Navigation Ltd., in the unique position of deriving synergies between Network Solutions and IT Training.

An educational and professional development organization working on various divisions including Software Development, Training, Web development, Corporate Training, Business process and Consultancy. They strive to excel a quality out-put in training individuals, Organization coders, development and business process with Professionals who are best in the business. They provide industrial exposure by making fresher work on real time projects. They have world class quality trainers who have the

industry exposure of around 8 years. Hence, it provides the best training in VB 6.0 and MS Access.

An innovative company, based in India that provides a series of Web-based and software applications that have helped their customer create successful business ventures through online initiatives. Web provide all the services that a company needs to get online from web designing to web hosting; we design, promote, program and manage leading-edge Web sites and e-business applications. Above all they provide optimized website promotion in major search engines.

Services includes: Professional Web Design, Internet Marketing, Link Building, Ecommerce Solution, Web Application Development, Multimedia Presentations, Customized Software Development, and Business Process Outsourcing- IT/IT

On-line Interactive Learning

We believe in On-line Interactive learning. That is to say, the problems, or doubts which students often face, while sitting before a system, is cleared by our staff as soon as they surface. This way our students learn more.

Get experienced while learning

After extensive learning, we subject our students to some Real Time situations (which is often created by our staff) and student left alone, to handle the situation, to overcome the problem, with his own solutions in this way, he is getting experienced,

even before the completion of course and is very much ready to seek the job with tremendous confidence.

Teaching Strategy

There is a saying, which goes like "It takes lot of beatings to make a pot". Here we literally follow this method of beatings; Beatings it is now in the beginning to beat the world later. Our training is vigorous. At IT Navigation Ltd., we run strict schedules and conduct several crucial tests so as to prepare you for the challenges you are going to face in the IT world as soon as you step out of IT Navigation Ltd.,.

Technical Facility

Our labs are enormous and equipped with the latest system available in the industry today. We also have product maintenance engineers who see it to that our systems are full functional at all times. We have a library, shelving books with latest version and edition covering various topics on Real time situation and Troubleshooting, etc.,

2. SYSTEM ANALYSIS

2.1 SYSTEM ANALYSIS FUNDAMENTALS

System Analysis and Design, is the process of gathering and interpreting facts, diagnosing problem and using the information to recommend improvement to the system. Before development of any project can be pursued, a system study is conducted to learn the details of the current business solution. Information gathered through the study forms the basis for creating alternative design strategies. Virtually all organizations are systems that interact with their environment through receiving input and producing output.

It is a management technique used in designing a new system, improving an existing system or solving problem. System analysis does not guarantee that the user will derive an ideal solution to a problem. This depends solely on the way one design a system to exploit the potential in the method. To put it in another way, creativity is as much as must pre-design the study and problem solving process and evaluates every successive step in the system analysis.

Taking all these factors into account and with the knowledge of the inter-relationship between the various fields and section and their potential interactions, they are consider for developing the whole system in and integrated manner, this project is developed to meet all the criteria in the

The management technique is also helps us in develop and design of the new system or to improve the existing system.

The following Objectives are kept in mind:

- Identify the customer's need.
- Evaluate the system concept for feasibility.

- Perform economic and technical analysis.
- Allocate functions to hardware, software, people, database and other system elements.
- Establish cost and schedule constraints
- Create a system definition that forms the foundation for all subsequent engineering work.

Identification of the need:

In this, there are certain expressions that are being used in the development of the project. And, it is used to identify our needs or source in the project.

- Defining a problem
- Finding the various need for the problem
- Formalizing the need
- Relating the need

Thus, it is the first step for system development life cycle.

Initial Investigation

It is one way of handling the project, it is used to know about the user request and the modification of the system should be done.

The user's request for this project is as follows:

1. Assigning separate work area for different users.
2. Nature of the work
3. Regular update and delete of record
4. Regular calculation of Net Asset Value

5. Supplying the data with the time required.

The user request identifies the need for change and authorizes the initial investigation. It may undergo several modifications before it become a written commitment. Once approved the activities are carried out into action. The proposal, when approved, it initiates a detailed user-oriented specification of system performance and analysis of the feasibility of the evaluating alternative candidate systems with a recommendation of the best system for the job.

2.1. EXISTING SYSTEM

In gym management system, if we take the current system and compare with the proposed it is far behind. Every work in the existing is manual and done on the paper.

There might be a computer used somewhere for the work but it's is not doing exactly it's is supposed which is reducing the manual work. Entering everything manual to the computer by creating a file is not exactly we are talking in computerization.

The existing system requires a lot of manual work which results in taking more time than it should. The operations like updating and synchronizing data are also done manually in the existing system that is not automated and again time-consuming process.

These practices are not at all reliable as the one wrong entry can take a lot of time in detection and then there is a correction. Humans are prone to errors and can mistakes often unless it has some inbuilt programs which can take check the input and save from error.

We introduced the system to reduce the manual work effectively as there is the backend of the system which will take care of synchronizing and updating of the data for the system.

So, if there is any change in the system data it will appear to all other users of the system. As the system was not online the member cannot see their timeline that the event generated by them in past such as fee payment, attendance, batch timing and trainer profile etc.

Keeping an automated system is also helps in managing the member's information secure and safe. As it can only be seen by the administrator with the correct credentials which is not an option in the existing system.

Unless the records are kept in a physically safe location such as a locker. Some major drawbacks of the existing system:

Required a lot of paperwork and the process takes time.

Everything is done on the paper and these are highly prone to damages and requires a good amount of security and space to store.

Required Buying of goods more frequent as compared to online system e.g.: paper, pen.

Likely to have an error.

Lack of storage space for the handwritten documents.

Require more physical work and manpower

Information is not available globally to both clients and employees hence location restriction

2.2. PROPOSED SYSTEM

In gym management system, after the planning and analysis phase of the system gets completed. Then the next phase required transforming the collected required system information into structural blueprint which will serve as a reference while constructing the working system.

It is a phase when most of the risks and error unveiled so it’s is good practices to take care of this thing from the start.

This is a fully fledged system which will be the backbone of the while management of the gym so ignoring the risk or error is not an option as later it can make a greater form of itself.

So, it is better to minimize the problems faced by both staff and the manager in the Organization

2.3. FEASIBILITY STUDY

The objective of the feasibility study is not only to solve the problem but also to acquire a sense of its scope. The reason for doing this is to identify the most beneficial project to the organization.

There are three aspects in the feasibility study:

1. Technical Feasibility
2. Financial Feasibility
3. Operating Feasibility

Technical Feasibility

Technical feasibility is the study of the software and how it is included in the study of our project. Regarding this there are some technical issues that should be noted they are as follows:

- Is the necessary technique available The and how it is suggested and acquired?
- Does the proposed equipment have the technical capacity to hold the data required using the new system?
- Will the system provide adequate response that is made by the requester at an periodic time interval
- Can this system be expanded after this project development
- Is there a technique guarantees of accuracy, reliability in case of access of data and security

The technical issues are raised during the feasibility study of investigating our System. Thus, the technical consideration evaluates the hardware requirements, software

etc. This system uses VB as front end and MS ACCESS as back end. They also provide sufficient memory to hold and process the data. As the company is going to install all the process in the system it is the cheap and efficient technique.

This system technique accepts the entire request made by the user and the response is done without failure and delay. It is a study about the resources available and how they are achieved as an acceptable system. It is an essential process for analysis and definition of conducting a parallel assessment of technical feasibility.

Though storage and retrieval of information is enormous, it can be easily handled by MS Access. As the MS Access can be run in any system and the operation does not differ from one to another. So, this is effective.

Economical Feasibility

An organization makes good investment on the system. So, they should be worthful for the amount they spend in the system. Always the financial benefit and equals or less the cost of the system, but should not exceed the cost.

- **The cost of investment is analyzed for the entire system**
- **The cost of Hardware and Software is also noted.**
- **Analyzing the way in which the cost can be reduced**

Every organization wants to reduce their cost but at the same time quality of the Service should also be maintained. The system is developed according the estimation of the cost made by the concern. In this project, the proposed system will definitely reduce the cost and also the manual work is reduced and speed of work is also increased.

Operational Feasibility

Proposed project will be beneficial only when they are turned into an information system and to meet the organization operating requirements. The following issues are considered for the operation:

- Does this system provide sufficient support for the user and the management?
- What is the method that should be used in this project?
- Have the users been involved in the planning and development of the projects?
- Will the proposed system cause any harm, bad result, loss of control and accessibility of the system will lost?

Issues that may be a minor problem will sometimes cause major problem in the operation. It is the measure of how people can able to work with the system. Finding out the minor issues that may be the initial problem of the system. It should be a user-friendly environment. All these aspect should be kept in mind and steps should be taken for developing the project carefully.

Regarding the project, the system is very much supported and friendly for the user. The methods are defined in an effective manner and proper conditions are given in other to avoid the harm or loss of data. It is designed in GUI interface, as working will be easier and flexible for the user.

They are three basic feasibility studies that are done in every project.

3. SYSTEM SPECIFICATION

3.1. HARDWARE SPECIFICATION

Processor	:	Intel Core 2 Duo
Processor Speed	:	3.06 GHz
RAM	:	2 GB
Hard Disk Drive	:	500 GB
CD-ROM Drive	:	Sony
Monitor	:	“17” inches
Keyboard	:	TVS Gold
Mouse	:	Logitech

3.2. SOFTWARE SPECIFICATIONS

Operating system	**: - Windows 7.**
Front End	**: - VB 6.0**
Back End	**:- MS ACCESS**

3.2.1 ABOUT WINDOWS-7

Windows makes your computer easier to use, with new and enhanced features. Windows is easier to use with true Web Integration and workflow enhancements such as, icon highlighting, forward and backward buttons, and an easy-to-customize **Start** menu.

Multiple display support

Multiple display support makes it possible for you to use several monitors simultaneously to increase the size of your desktop, run different programs on separate monitors, and run programs or play games with multiple views. For example, students can conduct research with Microsoft Encarta displayed on one monitor and type their report in Microsoft Word on a second monitor. To learn more about multiple display support

Windows' makes your computer more responsive by improving startup time. Using power management techniques, you can start your computer in just a few seconds and restore all your programs where you left them. In addition, it allows your computer to continue working even though it appears to be turned off. You can leave all of your programs running, download your favorite Web pages, send and receive e-mail, back up your hard disk, or tune-up your operating system without being at your computer.

Power Management

Power Management works on computers that have Advanced Power Management (APM), and it works even better on newer computers that use the Advanced Configuration and Power Interface (ACPI). Power Management also makes it possible for you to put your computer on standby or hibernate to save power resources.

Accessibility wizard

The Accessibility wizard makes it easier for people with disabilities to operate a computer without installing special software. Accessibility options—such as StickyKeys, Show Sounds, and MouseKeys—are designed to help users with specific disabilities make full use of the computer.

Universal Serial Bus

The Universal Serial Bus (USB) makes your computer easier to use with advanced plug-and-play capabilities. Using a new, universally standard connector, you can add devices to your computer easily without having to restart.

Windows improves computer reliability by introducing new wizards, utilities, and resources that help keep your system running smoothly.

System File Checker

System File Checker keeps track of critical files that make your computer run. If these are moved or changed, System File Checker restores them

ScanDisk

Scandisk runs automatically in the event the operating system is shut down improperly. Scandisk detects corruptions when they are most likely to occur and then corrects them. You can also run Scandisk at any time to evaluate your computer.

Windows includes tools that help your computer run faster than Windows 95 without adding new hardware. Windows includes a suite of programs designed to optimize your computer's efficiency, especially when used together.

Maintenance wizard

Maintenance wizard helps you get the best performance from your system. You can run Maintenance wizard to make your programs run faster, check your hard disk for problems, and free hard disk space. By scheduling these utilities to run on a regular basis, you can make sure that your computer is performing at its best.

Disk Defragmenter

Disk Defragmenter optimizes the speed with which your programs load and run. With quick startup and shutdown, you can work, play games, and explore the Internet faster and more efficiently.

Windows makes your computer more entertaining by introducing new features such as enhanced television, video playback, and support for new hardware. These enhancements provide you with hours of fun.

Windows supports a variety of new hardware devices, such as DVD, force-feedback joysticks, digital audio speakers, and recording devices. Improved plug and play capabilities make installing new hardware even easier. You will also enjoy improved graphics, especially 3-D graphics, and video playback

3.2.2 ABOUT VISUAL BASIC

Visual Basic is an ideal programming language for developing sophisticated professional applications for Microsoft Windows. It makes use of Graphical User Interface for creating robust and powerful applications. The Graphical User Interface as the name suggests, uses illustrations for text, which enable users to interact with an application. This features makes it easier to comprehend things in a quicker and easier way.

Coding in GUI environment is quite a transition to traditional, linear programming methods where the user is guide through a linear path of execution and is limited to a small set of operations. In a GUI environment, the number of options open to the user is much greater, allowing more freedom to the user and developer. Feature such as easier comprehension, user-friendliness, faster application development and many other aspects such as introduction to ActiveX technology and Internet features make Visual Basic an interesting tool to work with.

Visual Basic was developed from the BASIC for the early microprocessor based computers. In 1982, Microsoft Quick Basic revolutionized Basic and was legitimized as a serious development language for MS-DOS environment. Later on, Microsoft corporation created the enhanced version of BASIC called Visual Basic for windows.

Whether our goal is to create a small utility for our self or our work group, a large enterprise-wide system, or even distributed applications spanning the globe via the Internet, Visual Basic has the tools we need.

- Data access features allow we to create databases, front-end applications, and scalable server-side components for most popular database formats, including Microsoft SQL Server and other enterprise-level databases.
- ActiveX™ technologies allow we to use the functionality provided by other applications, such as Microsoft Word processor, Microsoft Excel spreadsheet, and other Windows applications. We can even automate applications and objects created using the Professional or Enterprise editions of Visual Basic.
- Internet capabilities make it easy to provide access to documents and applications across the Internet or Intranet from within our application, or to create Internet server applications.
- Our finished application is a true .exe file that uses a Visual Basic Virtual Machine that we can freely distribute

A complete discussion of the inner workings of Windows would require an entire book. A deep understanding of all of the technical details isn't necessary. A simplified version of the workings of Windows involves three key concepts: windows, events and messages.

The Microsoft Windows operating system manages all of these many windows by assigning each one a unique id number. The system continually monitors each of these windows for signs of activity or events. Events can occur through user actions such as a mouse click or a key press, through programmatic control, or even as a result of another window's actions.

Each time an event occurs, it causes a message to be sent to the operating system. The system processes the message and broadcasts it to the other windows. Each window

can then take the appropriate action based on its own instructions for dealing with that particular message (for example, repainting itself when it has been uncovered by another window).

As you might imagine, dealing with all of the possible combinations of windows, events and messages could be mind-boggling. Fortunately, Visual Basic insulates you from having to deal with all of the low-level message handling. Many of the messages are handled automatically by Visual Basic; others are eased as Event procedures for our convenience. This allows you to quickly create powerful applications without having to deal with unnecessary details.

At design time you can use the Data Environment designer to create a DataEnvironment object. The DataEnvironment object can include Connection and Command objects, hierarchies (relationships between Command objects), groupings, and aggregates. Before designing your DataEnvironment object, you should determine what information you want to present, identify the databases that contain the information, and determine your run time objective

Data Report Designer Features

The Microsoft Data Report designer is a versatile data report generator that features the ability to created banded hierarchical reports. Used in conjunction with a data source such as the Data Environment designer, you can create reports from several different relational tables. In addition to creating printable reports, you can also export the report to HTML or text files.

- Automatically create reports that are export in HTML format for instant distribution on the Internet.
- Create reports that show the sums of transactions occurring on a daily basis.

The Data Report designer has several features:

1. **Drag-and-Drop Functionality for Fields**—Drag fields from the Microsoft Data Environment designer to the Data Report designer. When you do this, Visual Basic automatically creates a text box control on the data report and sets the DataMember and DataField properties of the dropped field. You can also drag a Command object from the Data Environment designer to the Data Report designer. In that case, for each of the fields contained by the Command object, a text box control will be created on the data report; the DataMember and DataField property for each text box will be set to the appropriate values.
2. **Toolbox Controls**—The Data Report designer features its own set of controls. When a Data Report designer is added to a project, the controls are automatically created on a new Toolbox tab named DataReport. Most of the controls are functionally identical to Visual Basic intrinsic controls, and include a Label, Shape, Image, TextBox, and Line control. The sixth control, the Function control, automatically generates one of four kinds of information: Sum, Average, Minimum, or Maximum. For more information about the Function control, see "Adding a Function Control to the Data Report."
3. **Print Preview**—Preview the report by using the Show method. The data report is then generated and displayed in its own window.

Note A printer must be installed on the computer to show the report in print preview mode.

4. **Print Reports**—Print a report programmatically by calling the PrintReport method. When the data report is in preview mode, users can also print by clicking the printer icon on the toolbar.

   Note A printer must be installed on the computer to print a report.

5. **File Eort**—Eort the data report information using the EortReport method. Formats for eort include HTML and text.
6. **Eort Templates**—You can create a collection of file templates to be used with the EortReport method. This is useful for eorting reports in a variety of formats, each tailored to the report type.
7. **Asynchronous Operation**—The DataReport object's PrintReport and EortReport methods are asynchronous operations. Using the ProcessingTimeout event, you can monitor the state of these operations and cancel any that are taking too long.

3.2.3 ABOUT MS-ACCESSS

Many data access applications created with earlier versions of Visual Basic store and manage data using the Microsoft Jet database engine, the engine used by Microsoft Access. These applications use Microsoft Data Access Objects (DAO) to access and manipulate data.

Now we can use Microsoft ActiveX Data Objects (ADO) to easily manipulate data in a variety of database formats, including Microsoft Jet format. We may still want to use DAO to work with your local Microsoft Jet databases, but for new applications you'll probably want to use ADO and the new data access features of Visual Basic.

Microsoft Access is a powerful Windows 95-based relational database management system (RDBMS), which we can use to create and modify database tables, data entry forms, reports, and queries (customized requests for information from one or more tables).

In Access, a database is a collection of information. Examples of databases include private telephone directories, lists of customers and suppliers, parts in a warehouse or store, and even private tape, book, and compact disk collections. The information in an Access database is retained in tables. Tables consist of rows and columns. Each row is called a record and pertains to a specific person or supplier, inventory item, or event. Each column contains a discrete element of information, called a field. A field might be a name, telephone number, stock-keeping unit number, unit cost, or any other piece of information.

People use a database to perform data management tasks, such as storing, retrieving, and analyzing data about orders and customers. A Microsoft Access

application is made up of the same objects as a Microsoft Access database—tables, queries, forms, reports, macros, and modules. The objects are stored in one or more Microsoft Access database (.mdb) files. What makes an application different from a database is that the objects are tied together into a coherent system. An application organizes related tasks so that the user can focus on the job at hand, not on how the application works or on the program used to develop the application.

The keys to a Microsoft Access application are its objects, their properties, and the events that occur on forms. Here's how it works:

An application consists of objects Your application is made up of objects that users see and use directly (forms and reports) and supporting objects that control how the forms and reports work (tables, queries, macros, and modules). You build the forms and other objects in their respective Design views.

Objects have properties you can set you set objects' properties to make them look and behave the way you want. For example, all forms have a **DefaultView** property that specifies whether a form should appear in Form or Datasheet view. Once you set the property, the form opens automatically in the correct view. By setting properties, you make your objects behave more intelligently.

Forms respond automatically to events when people use the forms in your application, their actions—changing data in a field, clicking a command button, moving the mouse—are recognized by Microsoft Access as *events.* Microsoft Access responds to these events automatically. For example, when a user changes the data in a text box, Microsoft Access checks to make sure that the data is the correct data type. When a user clicks a command button, Microsoft Access displays the button so it appears pressed in.

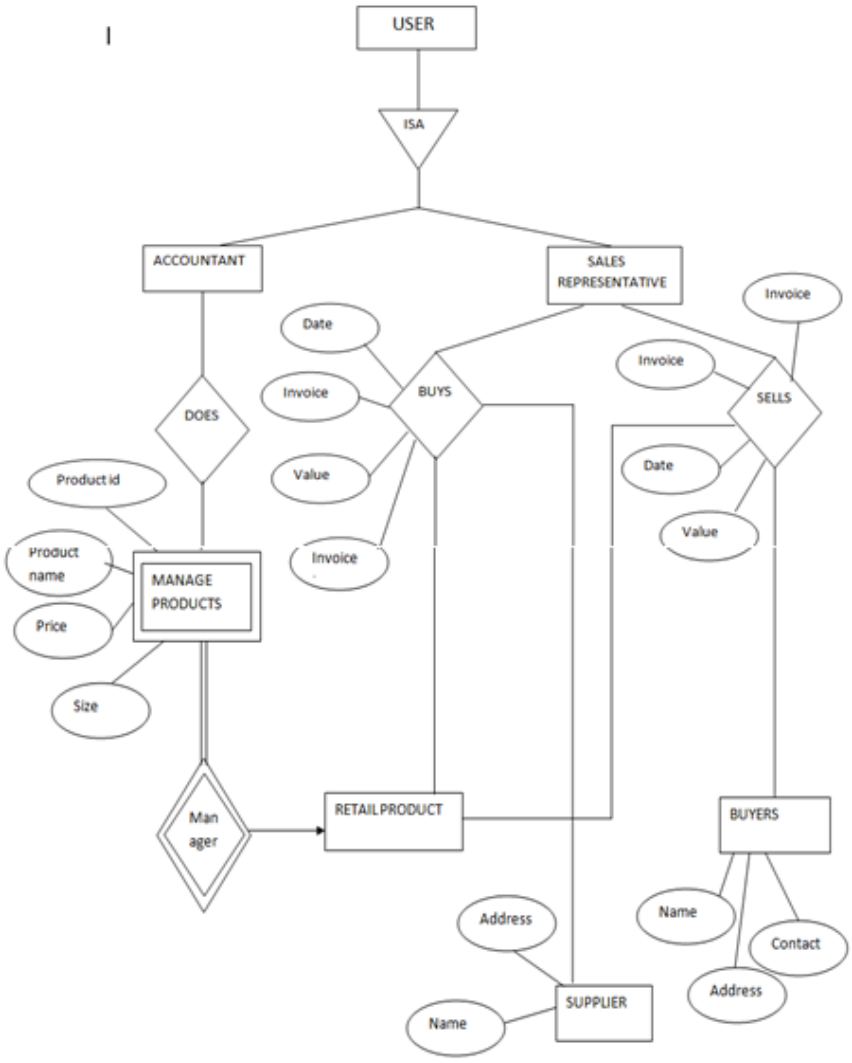
You can add your own, custom response to an event You can use either a macro or an event procedure to add the response you want to an event. An *event procedure* is a Visual Basic procedure you write that's attached to a form, report, or control; Microsoft Access runs it when a specified event occurs. You specify in the event procedure or macro what you want to take place when the event occurs. For example, you can change object properties, open or close objects, or manipulate data. You use *event properties* to determine whether Microsoft Access runs a macro or an event procedure in response to an event. For example, to have a macro run in response to a command button's Click event, you set the button's **OnClick** event property to the name of the macro.

You can extend Visual Basic with external libraries In addition to writing your own event procedures; you can use Visual Basic to call external procedures in Microsoft Access library databases (MDAs) and in dynamic-link libraries (DLLs). For example, you can enable or disable menu commands by calling functions in the DLLs that are part of Microsoft Windows.

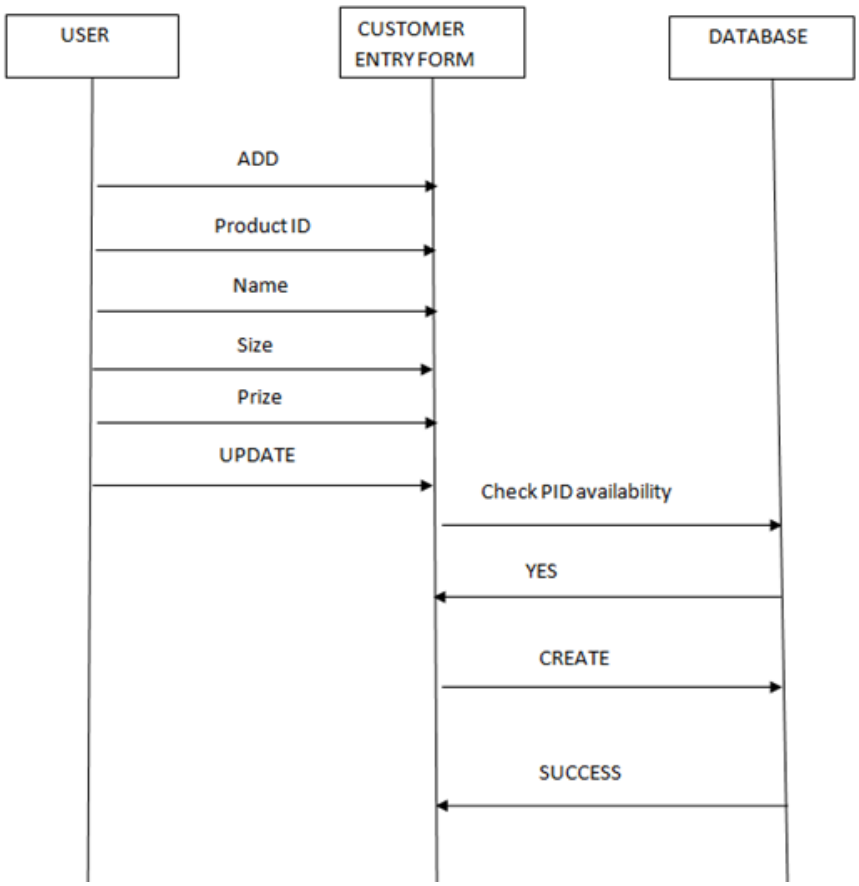
If you've developed database applications using other products, you may eect to write a Main program in the Visual Basic language that makes your application work. The Main program would be the application's brain; you'd use it to tell the objects how to appear and react, and how to process the data, much as the manager of an office delegates different projects.

4. SYSTEM DESIGN

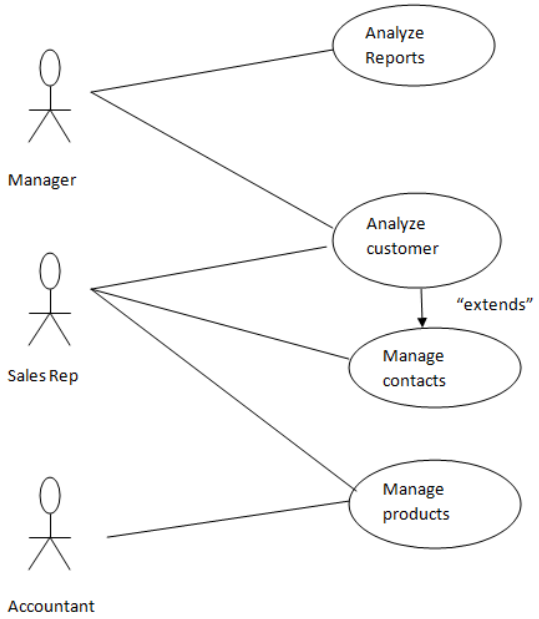
4.1 ARCHITECTURAL DESIGN



4.2 SYSTEM FLOW DIAGRAM

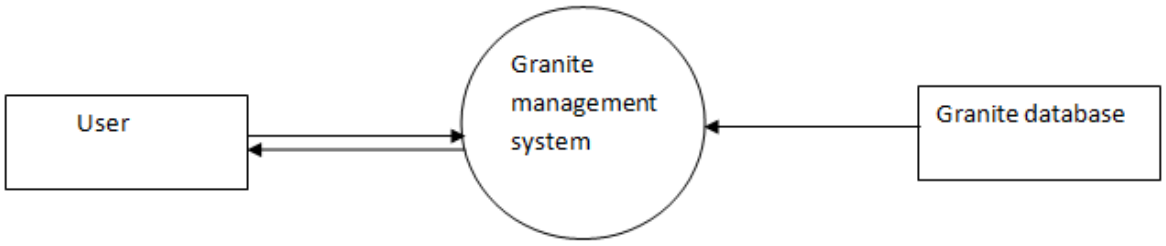


4.3 USE CASE DIAGRAM

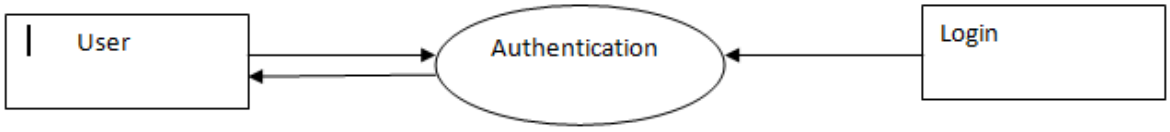


4.4 DATA FLOW DIAGRAM:

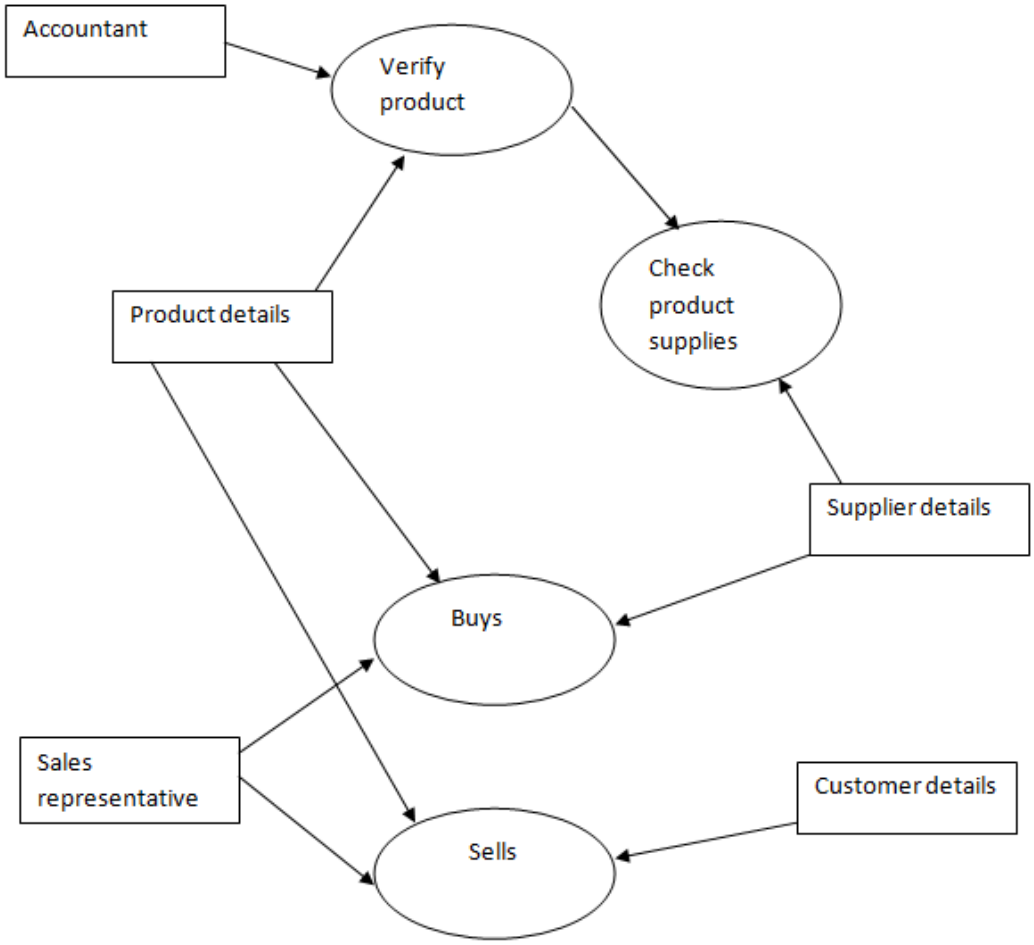
4.4.1 ZERO LEVEL DFD:



4.4.2 FIRST LEVEL DFD:



4.4.3 SECOUNT LEVEL DFD:



5. SYSTEM TESTING AND IMPLEMENTATION

5.1.SYSTEM TESTING

Software testing is an important element of S/W quality assurance and represents the ultimate review of specification, design and coding. The increasing visibility of S/W as a system element and the costs associated with a S/W failure are motivating forces for well planned, through testing.

Though the test phase is often thought of as separate and distinct from the development effort--first develop, and then test--testing is a concurrent process that provides valuable information for the development team.

Internal Testing

The software testing was given equal priority to the system study phase. The question raised during system study was “how to do?” and during testing the importance was given to the question that “how it should be done?”.

Each and every user screen, database structures etc., have been designed after consulting the considering the user requirements.

Unit Testing

For successful implementation each and every module of the new system was tested separately to rectify the error within it’s boundaries. Detail design description was used as a guide in the process. The database was checked with sample data to ensure its normal form. Each query result and reports were also checked for their integrity. The tests that were done under the unit testing are,

(a) Interface Testing

To assure that the information properly flows into and out of program unit.

(b) Data Structure Testing

To ensure that the data are stored properly in the underlying tables.

(c) Independent Path Testing

All independent paths through the module were executed at least once to assure that they are behaving as per expectations.

Integration Testing

It is a system technique for construction of the program structure while at the same time conducting tests to uncover errors associates with interfacing. The objective is

to take unit-tested modules and build a program structure as specified by the system design.

All the modules that go under the unit testing are integrated together to get the whole software as a single module. Integration separate modules are done in a systematic manner. This integration is a formal procedure that must be executed carefully and according to the need.

Validation Testing

To cover functional errors ie., to check whether functional characteristic confirm to the specifications or not. The goal of validation testing is to demonstrate the software traceability to the requirements. Validation test confirms whether the software is functional.

Testing plays a vital role to reach the cent percentage perfectness in any system. It is the major quality control measure used to determine the status and usefulness of the system. Its basic function is to find the errors in the software by examining all the possible loop hones. The goal of testing is top find out uncovered requirements, designs or coding errors or invalid acceptance or storage of data etc.

Testing of the new system has been done successfully in different levels. There are so many testing activities that help to find the errors and to reach a safer state in the system implementation.

In the case of on-line response it is found out that the response time is normal. In volume testing even when the number of records increased the software and hardware was found to be functioning satisfactorily. By stress testing, it gives good response to the

volume testing and also takes only short time interval to finish. Hence passess the s tress test too.

In the usability test, the user friendly nature of the system was tested and found to be outstanding. All these tests make the make the expectation about the well functioning of the system helpful.

5.2 VERIFICATION AND VALIDATION

This system has been verified and validated by using the

(a). Test data

(b). Live data

Verified With Test Data

In this case of testing, the data were developed artificially and these data are applied to the system. The result of the system was checked, whether it satisfies the specification of the system. Each module in this system has been tested independently and finally tested as a package.

Verified With Live Data

In this case, the real data are applied to the system and its result was checked with original result that was calculated manually.

The goals of verification and validation activities are to access and improve the quality of the work products generated during development and modification of software. Quality attributes of interest include correctness, completeness, consistency, reliability, usefulness, usability, efficiency to standards and overall cost effectiveness.

Verification is a rigorous mathematics demonstration that source code confirms to its specification. Validation is the process of evaluating software at the end of the software development process to determine the compliance with requirements.

5.3 SYSTEM IMPLEMENTATION

The new system was started to operate along with existing system. The result of the new system was compared with the old system. Suppose the result is wrong, the error must be debugged. After the acceptance of the user, the existing system will be placed by the new system. This software package has been made user friendly and menu driven. So any user can handle this package very easily and it does not require any intensive training for the user.

Documentation

Before implementing the system two important documents should be proposed.

User Manual

It explains the user about the guidelines and procedures to use various functions available in the system. It includes the complete list of error message and the appropriate action to be taken.

System Manual

It explains all the aspects of design, which is useful mainly for the further maintenance of the system.

User Training and Documentation

After successful completing of acceptance testing, the application project is ready to use. In order to put new application system into use, following activities should be completed.

- Preparation of User & System documentation
- User training kit
- Test run for a period of one month to ensure smooth switching over.

A presentation of the project will be made to user followed by demonstration explaining about the usage of the software. General training would be given to the user of the system. The main aim of the training would to furnish the user with a working knowledge of newly developed system. User manuals describing the procedures for invoking the function listed on menu will be circulated to user departments.

6. MAINTENANCE

MAINTENANCE FUNDAMENTALS

The term “software maintenance” is used to describe the software engineering activities that occur following delivery of a software product to the customer. The maintenance phase of the software life cycle is the time period in which a software product performs useful work.

Maintenance activities involve making enhancement to software products, adapting products to new environments and correcting problems. Software product enhancement may involve providing new functional capabilities, improving user display and modes of interaction, and upgrading external documents. Adaptation of software to a new environment

may involve moving the software to a different machine. Problem correction involves modification and revalidation of software to correct errors.

The enhancement of this project can be accomplished easily. That is, any new functional capabilities can be added to the project by simply including the new module in the homepage and giving a hyperlink to that module. Adaptation of this project to a new environment is also performed easily.

7.1. CORRECTIVE MAINTENANCE

This includes modifications and updating done in order to correct or fix problems, which are either discovered by user or concluded by user error reports.

Identification & Tracing - It involves activities pertaining to identification of requirement of modification or maintenance. It is generated by user or system may itself report via logs or error messages. Here, the maintenance type is classified also.

Analysis - The modification is analyzed for its impact on the system including safety and security implications. If probable impact is severe, alternative solution is looked for. A set of required modifications is then materialized into requirement specifications. The cost of modification/maintenance is analyzed and estimation is concluded.

Design - New modules, which need to be replaced or modified, are designed against requirement specifications set in the previous stage. Test cases are created for validation and verification.

7.2. ADAPTIVE MAINTENANCE

An activity that modifies the software to properly interface with a changing environment. The system has been modified so that various change include to the new system.

Implementation - The new modules are coded with the help of structured design created in the design step. Every programmer is expected to do unit testing in parallel.

System Testing - Integration testing is done among newly created modules. Integration testing is also carried out between new modules and the system. Finally the system is tested as a whole, following regressive testing procedures.

Acceptance Testing - After testing the system internally, it is tested for acceptance with the help of users. If at this state, user complaints some issues they are addressed or noted to address in next iteration.

Delivery - After acceptance test, the system is deployed all over the organization either by small update package or fresh installation of the system. The final testing takes place at client end after the software is delivered.

Training facility is provided if required, in addition to the hard copy of user manual.

Maintenance management - Configuration management is an essential part of system maintenance. It is aided with version control tools to control versions, semi-version or patch management.

7.3. ENHANCEMENT MAINTENANCE

As software is used, the customer/user will recognize additional functions that will provide benefit. Perceptive maintenance extends the software beyond its original functional requirements.

In the case of Net banking system can be added new functions such that the user can able to retrieve the information in a user friendly and it will be very helpful for future development.

Market Conditions - Policies, which changes over the time, such as taxation and newly introduced constraints like, how to maintain bookkeeping, may trigger need for modification.

Client Requirements - Over the time, customer may ask for new features or functions in the software.

7. FUTURE ENHANCEMENT

The computerized system has been designed and developed flexibly for the current requirements of the user. The reports modules contain options for creating various reports needed by the Company.

In future new reports can be added in this module when the user requirement changes. This software is not providing budget allocations. In future budget allocations may be added as additional features in the system.

- The application can be enhanced by many extra features. Some of these features can be summarized as follow:

- Improving the user interface, because the user interface always can be improved
- Back end the system to EBS to achieve the payment process-Develop mobile application, since it is more easy to use
- Develop a version for fees collection in public transport

8. CONCLUSION

The progress in science & technology is a non-stop process. New things and new technology are being invented. As the technology grows day by day, we can imagine about the future in which thing may occupy every place.

The proposed system based is found to be more compact, user friendly and less complex, which can readily be used in order to perform several tedious and repetitive tasks. Though it is designed keeping in mind about the need for granite business, it can be for other purpose such as inventory. Due to the probability of high technology used in this fully software controlled. The feature makes this system is the base for future systems.

The principle of the development of science is that **"nothing is impossible"**.

So we shall look forward to a bright & sophisticated world

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