Software Requirement Specification

1. Introduction:

The software requirement specification is a document that describes the external requirement for any system. The requirement analyst has to identify the requirements by talking to the clients and understanding and responding to their needs.

The requirement phase translates the ideas of clients into a formal document. The inputs are gathered from different resources. Input given by the clients may not be consistency. It might change according to the modern requirements.

2. Overview:

The project entitled "Online Mobile Shopping" enables customer to buy mobiles or accessories from anywhere through online. This application advertises some of the products for shopping. To buy products, customer has to create an account. Those who does not have an account, they can only view the available product. They can't buy it. Once the customer has created account, not only he can view the products, he can also add the product to the cart and also he can place an order to buy those products. This application then generates bill for that particular customer. After the confirmation, the customer has to enter his credit card details to buy those products.

Overall description:

3.1 Product Perspective:

The product will be developed completely independent and dynamic website. Customer must have an account to purchase the product.
This application stores all the information in the database which can be retrieved whenever needed and all the validations are performed during the entry of the data by the user thus ensuring that the user can not enter any wrong data which could cause problem later.

3.2 Product Function:

Initially customer has to register to the website to access most of the features of the application. The customer has to enter the details like username, password…etc. After registration customer will be able to purchase products and the purchased product can be added to the cart. Later customer has to enter his credit card details to buy the products. The confirmation of debit card numbers will be handled by the Pay pal website.

3.2.3 User Characteristics:

The user of this product is supposed to be fairly educated about the usage of the computers. He should understand how to store products and he should have knowledge about various products so that they could be saved. A person who has no knowledge of computers will find it difficult to understand the system. But with a little knowledge it will be very easy to handle the project.

Admin: Admin adds the new product and accessories and stores in the database which can be retrieved and used whenever needed and all the validation are performed during the entry of the data. Thus it ensures that the user cannot enter any wrong data which would cause problem later.

User: This application allows the user to access all the products available. To buy the products, customer must create an account in this website.

3.2.4 General constraints:

The constraints of this project are - system must support the runtime files of visual studio 2008 and must be able to run all the web pages.

3.2.5 Assumption and dependencies:

The project depends on the user's ability to understand the features of the online shopping and able to use the best of it. If the internet connection is not proper then this application will not work.

3. Functional requirements:

Login Module:

Input: Admin enters the Login Id and password.

Process Definition: Checks login Id and password is valid or not.

Output: Admin is directed to next page where he can add, delete or update the products.

New user Module:

Input: Customer enters their details to create new account.

Process Definition: Checks whether he entered all the details or not.

Output: Customer is directed to the next page where he can view all the available products

Product Module:

Input: Admin adds the new product which can be viewed by the users.

Process Definition: Checks whether all the fields are entered properly or not.

Output: Records will be added to the database.

Search Module:

Input: This module helps the customer to ease his search based on his interest. The search can be done on different categories like mobile model name, model number, colour, price etc

Process Definition: It retrieves the selected category from the database

Output: Displays what the subscribers like to search.

Cart Module:

Input: User can select any number of Mobile and add to the cart. He can also remove from the cart if he dislikes it later.

Process Definition: Checks whether all the fields are entered properly or not.

Output: Records will be added to the database.

Payment Module:

Input: This module describes the payment done by the customer. The payment information can include information like the model purchased, quantity, mode of payment etc.

Process Definition: Checks whether all the fields are entered or not.

Output: Displays the payment done by the customer.

Design Constraints:

The application is designed such a way that it suits for the resolution 1024 X 768.

System Attributes:

Robustness:

Product is robust. Because, security has become more robust in vb.net. In addition to the role based security in vb6, vb.net comes with a new security model, codes access security. This security controls on what the code can access.

Portability:

The Online Mobile Shopping shall run in any Microsoft Windows environments that contain ASP.net platform and the Microsoft SQL.

Reusability:

Our system is reusability system since a segment of source code that can be used again to add new functionalities with slight modification.

Testability:

Our system is testability system since it supports different types of testing methods

Other Requirements

There are no other requirements.

Project Synopsis

1. Title Of the Project:

Online Mobile Shopping

2. Introduction

This project is aimed at developing a Web application that depicts online Shopping of mobiles and purchasing using Payment Gateway.
Using this software, companies can improve the efficiency of their services. Online Shopping is one of the applications to improve the marketing of the company's products. This web application involves all the features of the online shopping.

3. Objective of the project:

This software helps customer to find different mobiles, their features, and new updates easily. It is designed such a way that one can view all the updates of the mobile from any place through online. The software will help in easy maintaining and updating products in the website for the administrator. Also quick and easy comparison of different products for the customers.

4. Scope of the project:

This system will reduce the manual operation required to maintain all the records of booking information. And also generates the various reports for analysis. Main concept of the project is to enter transaction reports and to maintain customer records. Hence this software can be used in any mobile showroom to maintain their record easily.

5. PROJECT CATEGORY: RDBMS

Software Requirements:

- Microsoft Visual Studio 2008
- Microsoft SQL Server 2008

Hardware Requirements:

- Processor: Pentium 4 or above
- RAM :1 GB or above
- Hard disk :40 GB or above

Languages used:

Front End: ASP.NET

Back End: Microsoft SQL Server 2008

Modules:

The modules used in this software are as follows:

- **Login:** This module has a drop down list box from where we have to select **ADMIN or USER**. The **ADMIN** has all the rights in the software including updating the status of his site. The other fields in login **are** username and password. If the username and password are correct then it is directed to next page.

- **New user:** This module is for the users who do not have their account. Here user is allowed to create an account to login. The account creation is done by filling the registration form with user details such as name, phone, email etc.

- **Product:** This module has information regarding the mobiles such as its name, model, color, price information, its features etc.The **ADMIN** has the authority to Add, Delete, Update etc. The **USER** can only view the Mobile, add to cart only those in the stock etc.

- **Accessories:** This module consists of various available accessories of the Mobile with its name and picture, price information etc.

- **Search:** This module helps the customer to ease his search based on his budget or interest. The search can be done on different categories like mobile model name, model number, colour, price etc

- **Cart:** User can select any number of Mobile and add to the cart. He can also remove from the cart if he dislikes it later.

- **Payment:** This module describes the payment done by the customer. The payment information can include information like the model purchased, quantity, mode of payment (cash, loan) etc.

- **Stocks:** This gives the details regarding the products available for sale.

Data Flow Diagram

A Data Flow Diagram (DFD) is a graphical representation of the "flow" of data through an Information System. A data flow diagram can also be used for the visualization of Data Processing. It is common practice for a designer to draw a context-level DFD first which shows the interaction between the system and outside entities. This context-level DFD is then "exploded" to show more detail of the system being modeled.

A DFD represents flow of data through a system. Data flow diagrams are commonly used during problem analysis. It views a system as a function that transforms the input into desired output. A DFD shows movement of data through the different transformations or processes in the system.

Dataflow diagrams can be used to provide the end user with a physical idea of where the data they input ultimately has an effect upon the structure of the whole system from order to dispatch to restock how any system is developed can be determined through a dataflow diagram. The appropriate register saved in database and maintained by appropriate authorities.

Data Flow Diagram Notation

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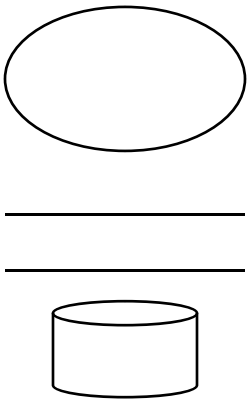


Function

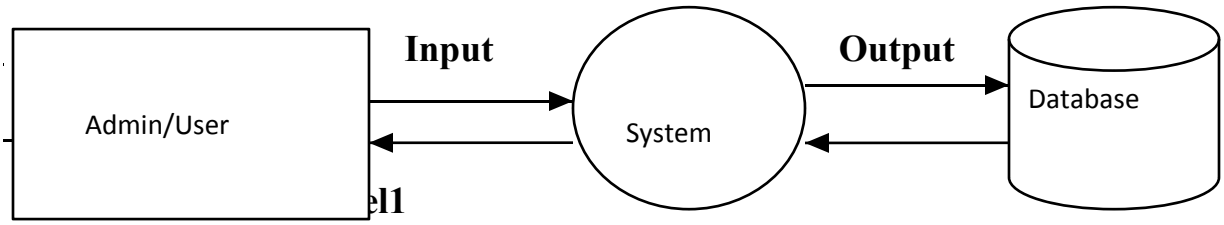
File/Database

Input/output

Flow

Data Flow Diagram of the Shopping Site

Level 0



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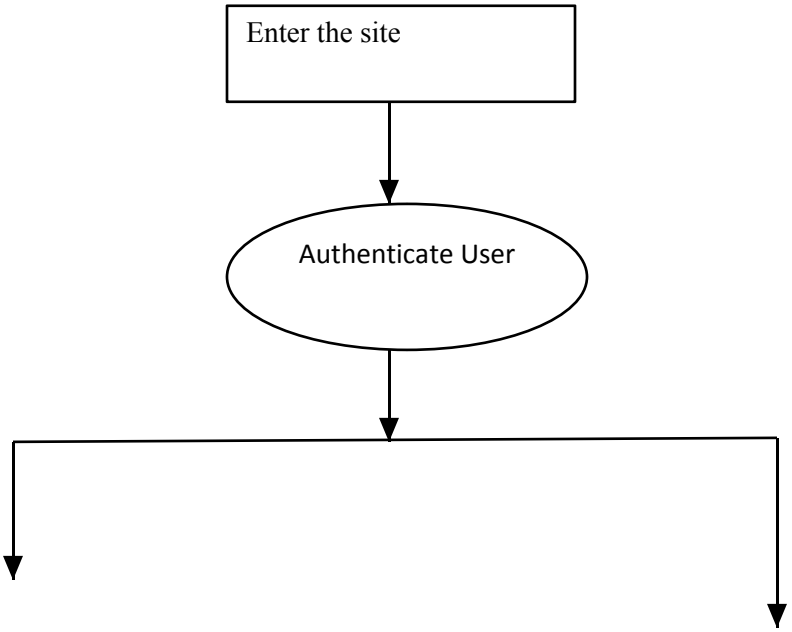
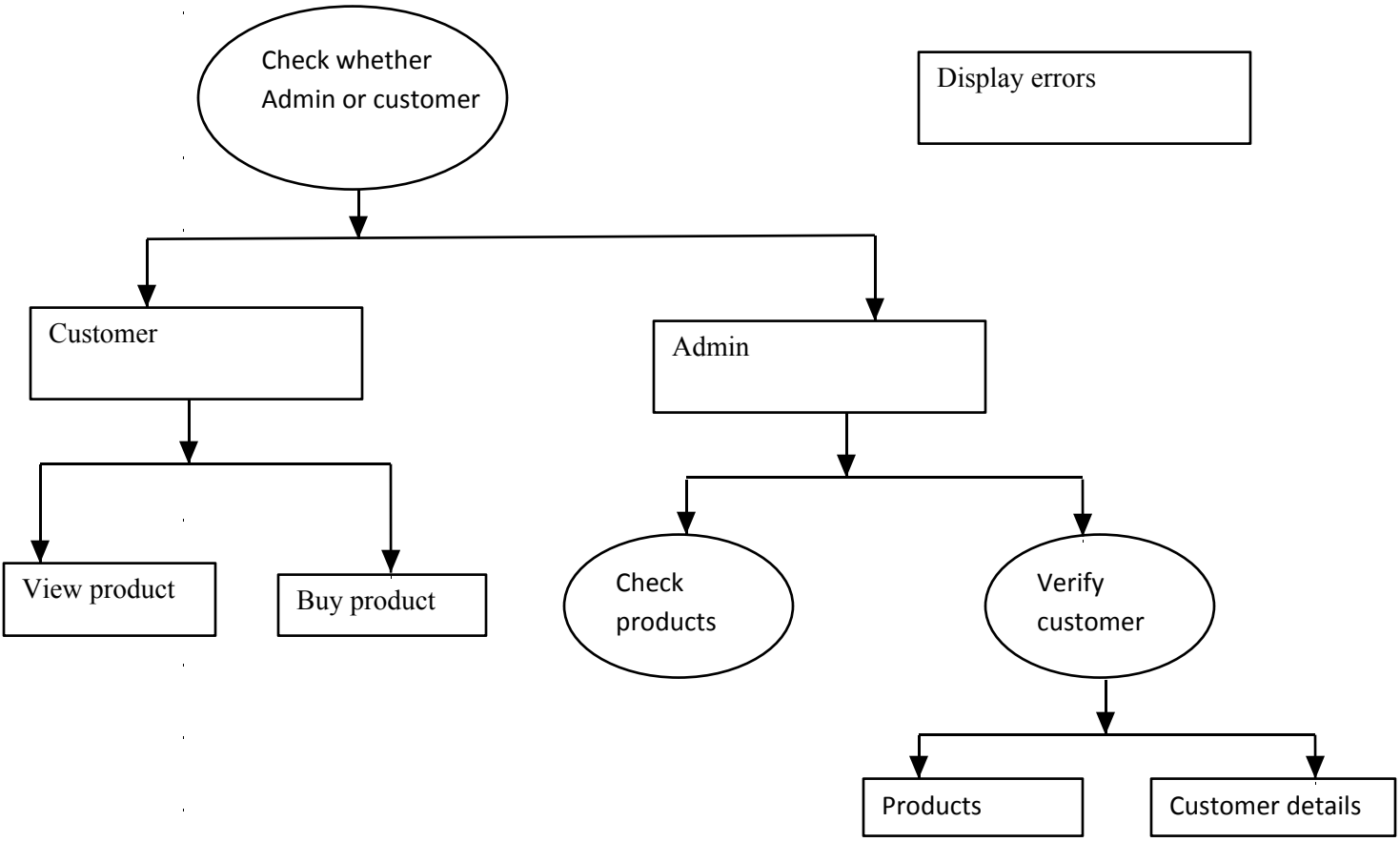




Entity Relationship Diagrams (ER-Diagrams):

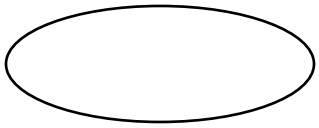
An entity-relationship (ER) diagram is a specialized graphic that illustrates the interrelationships between entities in a database. ER diagrams often use symbols to represent three different types of information. Boxes are commonly used to represent entities. Diamonds are normally used to represent relationships and ovals are used to represent attributes

An **entity-relationship model** (ERM) in software engineering is an abstract and conceptual representation of data. Entity-relationship modeling is a relational schema database modeling method, used to produce a type of conceptual schema or semantic data model of a system, often a relational database, and its requirements in a top-down fashion.

Symbols used in this E-R Diagram:

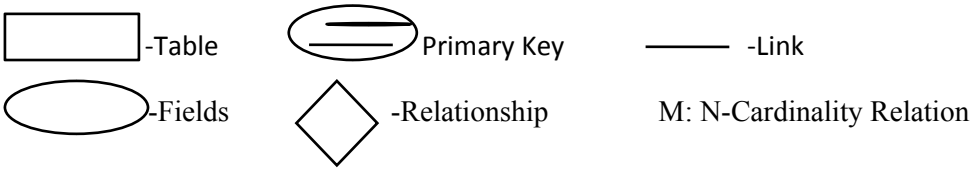
Entity: Entity is a "thing" in the real world with an independent existence. An entity may be an object with a physical existence such as person, car or employee. Entity symbol is as follows

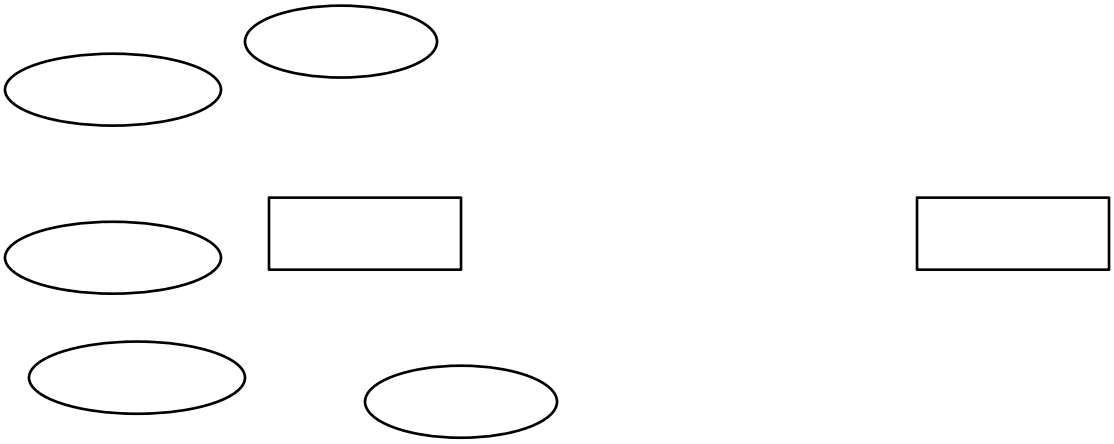
Attribute: Attribute is a particular property that describes the entity. Attribute symbol is



Relationship: Relationship will be several implicit relationships among various entity types whenever an attribute of one entity refers to another entity type some relationship exits. Relationship symbol is:

Key attributes: An entity type usually has an attribute whose values are distinct for each individual entity in the collection. Such an attribute is called key attribute. Key attribute symbol is as follows





Testing

INTRODUCTION

Testing is the process of running a system with the intention of finding errors. Testing enhances the integrity of a system by detecting deviations in design and errors in the system. Testing aims at detecting error-prone areas. This helps in the prevention of errors in a system. Testing also adds value to the product by conforming to the user requirements.

The main purpose of testing is to detect errors and error-prone areas in a system. Testing must be thorough and well-planned. A partially tested system is as bad as an untested system. And the price of an untested and under-tested system is high.

The implementation is the final and important phase. It involves user-training, system testing in order to ensure successful running of the proposed system. The user tests the system and changes are made according to their needs. The testing involves the testing of the developed system using various kinds of data. While testing, errors are noted and correctness is the mode.

OBJECTIVES OF TESTING:

The objectives of testing are:

- Testing is a process of executing a program with the intent of finding errors.
- A Successful test case is one that uncovers an as- yet-undiscovered error.

System testing is a stage of implementation, which is aimed at ensuring that the system works accurately and efficiently as per the user need, before the live operation commences. As stated before, testing is vital to the success of a system. System testing makes a logical assumption that if all parts of the as system are correct, the goal will be successfully achieved. A series of tests are performed before the system is ready for the user acceptance test.

TESTING METHODS

System testing is the stage of implementation. This is to check whether the system works accurately and efficiently before live operation commences. Testing is vital to the success of the system. The candidate system is subject to a variety of tests: on line response, volume, stress, recovery, security and usability tests. A series of tests are performed for the proposed system is ready for user acceptance testing.

The Testing Steps are:

➢ Unit Testing

Unit testing focuses efforts on the smallest unit of software design. This is known as module testing. The modules are tested separately. The test is carried out during programming stage itself. In this step, each module is found to be working satisfactory as regards to the expected output from the module.

➢ Integration Testing

Data can be lost across an interface. One module can have an adverse effect on another, sub functions, when combined, may not be linked in desired manner in major functions. Integration testing is a systematic approach for constructing the program structure, while at the same time conducting test to uncover errors associated within the interface. The objective is to take unit tested modules and builds program structure. All the modules are combined and tested as a whole.

➢ Validation

At the culmination of the integration testing, Software is completely assembled as a package. Interfacing errors have been uncovered and corrected and a final series of software test begin in validation testing. Validation testing can be defined in many ways, but a simple definition is that the validation succeeds when the software functions in a manner that is expected by the customer. After

validation test has been conducted, one of the three possible conditions exists.

a) The function or performance characteristics confirm to specification and are accepted.

b) A deviation from specification is uncovered and a deficiency lists is created.

c) Proposed system under consideration has been tested by using validation test and found to be working satisfactory.

➢ Output Testing

After performing the validation testing, the next step is output testing of the proposed system, since no system could be useful if it does not produce the required output in a specific format. The output format on the screen is found to be correct. The format was designed in the system design time according to the user needs. For the hard copy also; the output comes as per the specified requirements by the user. Hence output testing did not result in any correction for the system.

➢ User Acceptance Testing

User acceptance of a system is the key factor for the success of any system. The system under consideration is tested for the user acceptance by constantly keeping in touch with the prospective system users at the time of developing and making changes whenever required.

This is done in regard to the following point:

a) Input Screen Design

b) Output Screen Design

c) Format of reports and other outputs.

Security mechanisms

This system is provided with authentication, without this user can pass. So only the legitimate users are allowed to use the application. If the legitimate users share the authentication information then the system is open to outsiders.

Limitations

- ✓ Since it is an online project, customers need internet connection to buy products.
- ✓ People who are not familiar with computers can't use this software.
- ✓ Customer must have debit card or credit card to purchase products.

Future scope and further enhancement

This web application involves almost all the features of the online shopping. The future implementation will be online help for the customers and chatting with website administrator.

Conclusion

The project entitled "Online Mobile Shopping" is developed using ASP.Net as front end and SQL Server database in back end to computerize the process of

online buying and selling of mobiles in a showroom. This project covers only the basic features required.

However a lot of features are already incorporated in this project. The main beneficiaries are both customers as well as ADMIN who consume more time while dealing with mobiles. Moreover extra features can be identified and incorporated in the future

In order to accommodate additional features it will take longer time and effort to understand the requirement and converting it into computerized system.

Bibliography