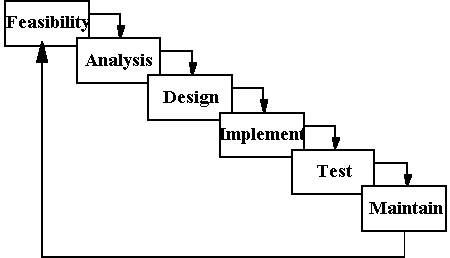
**SYSTEM DEVELPOMENT LIFE CYCLE (SDLC)**

The Systems Development Life Cycle **(SDLC)** is a conceptual model used in project management that describes the stages involved in an information system development project from an initial feasibility study through maintenance of the completed application. Various SDLC methodologies have been developed to guide the processes involved including the waterfall model (the original SDLC method). Documentation is crucial regardless of the type of model chosen or devised for any application, and is usually done in parallel with the development process. Some methods work better for specific types of projects, but in the final analysis, the most important factor for the success of a project may be how closely particular plan was followed.



**4.1 Problem Analysis**

**4.1.1 Applications**

The main applications of the online shopping website are the ability of the website to properly show product information to potential buyers and manage order information. The administrator has the ability to change, modify, view and delete the various details regarding the products available on the site. The users have the ability to log in and post their queries and download arts.

**4.1.2 Challenges**

The challenges mainly lie in detecting attacks like viruses, hacking and also in the implementation of firewall. A virus can enter the system and can disrupt the working of the website. Hacking can be done by some people who want to access some restricted sections of the website (e.g. administrator’s area) and to modify or taper some aspects of the website.

Scanning attacks may yield:

(i) The method used by viruses to enter the system.

(ii) The types of database allowed through a firewall.

(iii) The paths or ways used by hackers to enter the system

(iv) The loopholes remaining in the system (or website) which are used by attackers.

(v) The server from where the viruses or hackers are gaining access to the system.

(vi) The types of viruses able to affect the website.

And with the implementation of firewall and other security mechanisms that are designed for it, the online shopping website becomes safe and secure.

**4.2 Requirement Analysis**

**4.2.1 Goal of Thesis:**

The goal of my thesis is to develop a website that can be used as aregistration website with the features of user-friendly interaction and online shopping. The whole project will be based on PHP with MYSQL as the database with certain security constraints added to it.

My aim is also to implement the Administrator part in to the project so that the administrator himself can easily view, add, delete and modify various entries.

1. **Administrator**

He has to see whether the website is working properly and whether the details available in the system are relevant and correct. He can view, add, modify, delete product details, categories, and manage orders.

1. **Database**

The database keeps all the records of all the users and the details they provide during registration process. For creating such records, it takes the help of tables which is created in the MYSQL. The tables can have infinite entries of all the registered users as well as administrators.

1. **Buyers**

My aim is also to provide efficient way by which buyers can browse the site to find what they are looking for and have a great online shopping experience.

**4.3 Feasibility Study**

From the inception of ideas for software system, until it is implemented and delivered to customer and even after that the system undergoes gradual developments and evaluations.

The software is said to have life cycle composed of several phases.

At the feasibility stage, it is desirable that two or three different configuration will be pursed that satisfy the key technical requirement but which represent different level of ambition and cost.

Feasibility is the determination of whether or not a project is worth doing. A feasibility study is carried out select a best system that mate performance requirements.

The data collected during primary investigation examines system feasibilities that is likelihood that the system will be beneficial to the organization. Four tests for feasibility study are as follows:

**4.3.1 Technical Feasibility:**

This is concerned with specifying equipment and software that will successfully satisfy the use considerably, but might include

* + The feasibility to produce output in a given time because system is fast enough to handle multiple users.
  + Response time under certain circumstances and ability to process a certain volume of transaction of a particular speed.
  + Feasibility to communicate data to distant location.

**4.3.2 Economical Feasibility:**

Economic analysis is the most frequently used technique used for evaluating the effectiveness of a proposed system. More commonly known as cost/benefit analysis the procedure is to determine the benefits and savings that are expected

from a proposed system and compared them with cost. Though the cost of installing the system may appear high, it is one-time investment. The resulting benefits is that automation results in turnaround time. The resulting cost/benefit ratio is favorable.

**4.3.3 Operational Feasibility:**

It is mainly related to human organizational as social aspects. The points to be considered are - The system interface is standard, user friendly and provides extensive help. Hence no special training is not required.

**4.3.4 Social Feasibility:**

Social feasibility is determination of whether a proposed project will be acceptable to people or not, so this project is totally Social and Feasible

**4.4 System Analysis**

**4.4.1 The Analysis model**

The analysis model must achieve three primary objectives:

* To describe what the customer requires
* To establish the basis for the enhancement of a software design.
* To define a set of requirements that can be validated once the software is completely enhanced. The main elements of the analysis model are briefly described below.
* At the core of the model lies the ***data dictionary***, which is a repository that contains descriptions of all the data objects consumed or produced by the software. Three different diagrams surround the core.
* The **entity relation diagram** depicts relationships between data objects.
* The **data flow diagram** provides an indication of how the data is transformed as they move through the system.
* The **state transition diagram** indicates how the system behaves as a consequence of external events.

**4.5 Design Phase**

The design phase involves converting the informational, functional, and network requirements identified during the initiation and planning phases into unified design specifications that developers use to script programs during the development phase. Program designs are constructed in various ways. Using

a top-down approach, designers first identify and link major program components and interfaces, then expand design layouts as they identify and link smaller subsystems and connections. Using a bottom-up approach, designers first identify and link minor program components and interfaces, then expand design layouts as they identify and link larger system and connections.

Contemporary design techniques often use prototyping tools that build mock-up designs of items such as application screens, database layouts, and system

architectures. End users, designers, developers, database managers, and network administrators should review and refine the prototyped designs in an iterative process until they agree on an acceptable design.

Designers should carefully document completed designs. Detailed documentation enhances a programmer’s ability to develop programs and modify them after they are placed in production. The documentation also helps management ensure final programs are consistent with original goals and specifications. Organizations should create initial testing, conversion, implementation, and training plans during the design phase. Additionally, they should draft user, operator, and maintenance manuals.

For design of the website project:

1. First Database has to be designed which can be used to handle all the back-end requirements.
2. The basic structure of the website has to be designed.
3. The main template to be used for the website is designed.