# **Chapter 3: Development Methodology**

## **3.1 Description of Methodology**

I am going to use waterfall model. Waterfall model is the sequential design method in which the progress can be seen flowing straightly downwards through different phases. The phases cannot be overlapped perhaps each phases need to be completed to move for next steps.

Advantages of waterfall model are as follows:

1. It is easy to understand and use.
2. It is best to use for the smaller project as the requirement are understood well.
3. Every steps of has exact deliverable and a process of review.
4. The processing of stages are done and finished one at a time.

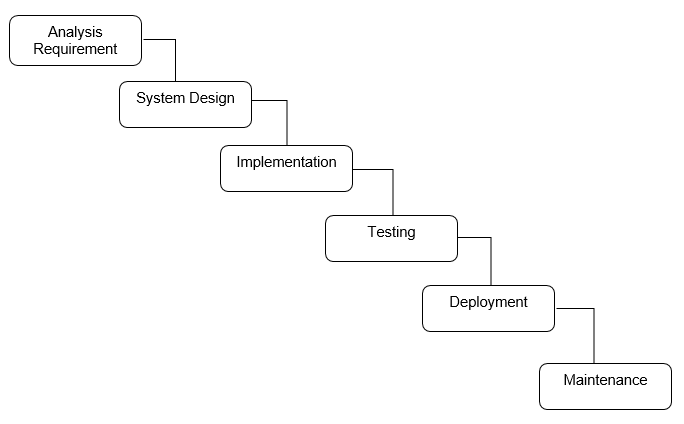


Figure: Waterfall Model

**Object Oriented Analysis (OOA)**

I am going to use object oriented analysis for developing this website. It is the way of identifying necessary needs or requirements which leads to the success of the system. Object are organized as the requirements in OOA. The information is produce in a conceptual model. Some of the models used in OOA are object model and Use cases. Object model defines the relation of class, name, properties and operations of the objects that are important. Images are defined by Use Cases.

**The reasons of using OOA:**

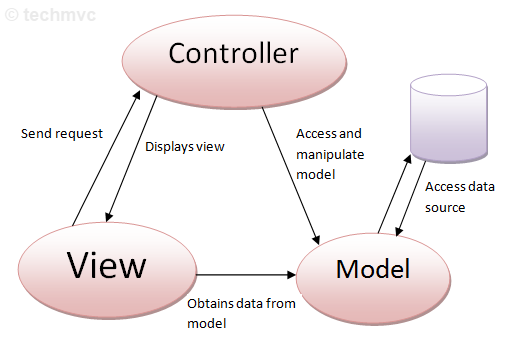
1. It helps to implement upgrade easily from small to large system.
2. It supports or focuses mainly on data.
3. It helps to develop the systems that cannot be damaged or spoiled by any other system components.

## **3.2 Design Pattern**

For developing my project I will be using Model View Controller (MVC) design pattern. It has three components. The model component connects to all the logic-related data with which the users work. For each and every UI logic of the application the component view is used. The controller process all the logic of business and request that are incoming acting as the interface between model and view components. Using model it manipulates the data and interacts with the views to give the final output.

The reasons to use MVC design pattern are as follows:

1. It supports multiple views.
2. It does not affect the entire system when the modification is applied.
3. It increases the speed of development process.
4. It returns the data without formatting it.

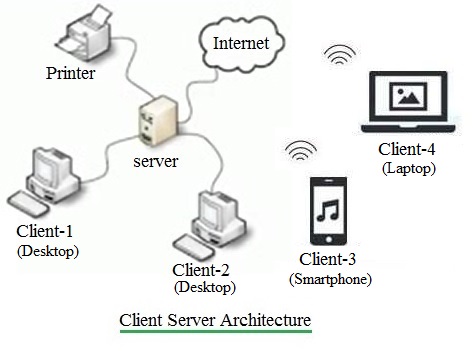


**Figure 2: Model View Controller**

## **3.3 Architecture**

I will use the client architecture for developing my system. The reason for using architecture are as follows:

1. It helps in decreases the network traffic.
2. It permits multiuser updating through a GUI front end to share the database.
3. It guarantee the data integrity.
4. The functions are possibly distributed between the nodes of network.

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**Figure 3: Client Server Architecture**