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# Chapter 1: Introduction

## 1.1 Introduction

The company was established in 2015 AD at Galkot, Baglug. Since starting it has been providing local tiles at the local customer and for the different customer of big cities of the country. But till now it has been running with the phone calls and physically being presented in the company to make an order and to know details about sizes and prices of tiles as per sizes and this is the most difficult task for customers.

So, Here I will be developing a system named **Local Tiles Online Order** which can make easy to look at the information about tiles and make easy to order. The system will provide different sizes of tiles and the price of each piece of tiles according to sizes available in the company. After looking at all information customer can decide how much do they want and what sizes do they need in numbers and can get cost calculation. As they confirm order they can also select types of vehicles as their needs and wishes.

## Background of the projects

About the background of the projects, there are some system or website which provide online stores of both local and imported marbles or tiles from outside of the country and those systems also provide other online stores along with marbles.

But about my projects, **Local Tiles Online Order** will only promote or sales local tiles online within the country. And the main points about these projects is this **Local Tiles Online Order** is only be used for my company.

## Problems Statements

It was really challenging and difficult tasks to remember details of the customers like company name or customer name, sizes of tiles, the number of tiles they have order, types of vehicle they have chosen to transport. All these information were done by phone calls. And if the customers if physically present in the company then orders of customers need to be note done into papers.

## 1.4 Description of the project

### 1.4.1 Features of the project

The feature of my project are shown below:

* Login and registration.
* Register user.
* View user details.
* Insert, Update, Delete and Retrieve of the tiles details.
* Show types of vehicles.
* List of order.

## Overview of the project

This project is about an online order of local tiles where the customer can make an order of local tiles, choose types of vehicle as their needs. Payments are done after delivery of products. Customers can also provide feedback about the product. And all these can be done only if the customers register into the system providing valid and required information for the system and signing.

# Chapter 2: Scope of the project

## 2.1 Scope

As every project has its own scope, the scope of my project Local Tiles Online Order is to provide every details information of local tiles online. And by the help of Local Tiles Online Order, people who have faced difficulty for finding information about local tiles will be easy for them to look at the details of local tiles and can order online as their needs.

## 2.2 Limitation

* Online payment is not available.
* Only can be used within the country.

## 2.3 Aims

* Computerized paper-based systems.
* Design a web-based system for easy ordering of products and choosing vehicle types.
* To increase the productivity of the company.

## 2.4 Objective

* To keep details of tiles like different types of sizes, cost as per sizes and types of vehicle.
* To upgrade and enhance the existing system by increasing it’s effectiveness and efficiency.
* To design a good user interface for efficient and easy use of the system.
* To automatized functionality and features of the company.
* To design a web-based system for online order.

## 2.5 Overviews of the scope

# Chapter 3: Development Methodology

## 3.1 Description of Methodology Chosen

This system will be designed for **Shreesh Tiles Company** which is owned by my father. Hence, I have a clear and fixed requirement of the company. So, I will choose the Waterfall model as my software development methodology.

The waterfall model is a linear, sequential approach to the software development life cycle(SDLC). This is mean that any phases in the development process begin only if the previous phase in complete. In this model, the phases do not overlap, goals are set for each phase of development and can not be revisited after completion.

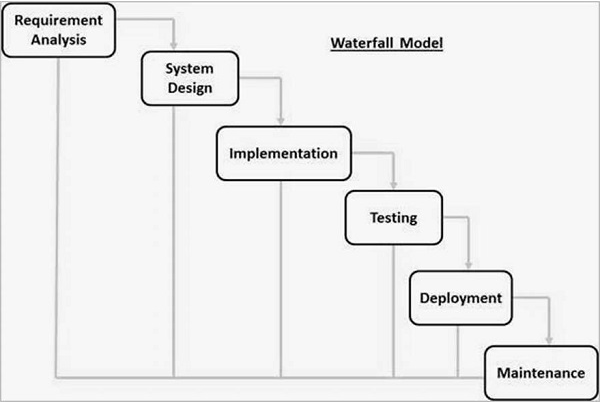


Figure: Waterfall Model

1. **Requirement Analysis:** All possible requirements, deadlines, and guidelines for the projects are analyzed and captured in this phase and documented in a requirement specification document.
2. **System Design:** Documented requirement specification from the first phase are studied in this phase and prepared the system designed.
3. **Implementation:** In this phases coding of the system is done in small programs called units.
4. **Testing:** When coding is finished once in implementation phases then the testing is done to report issues that may need to be resolved.
5. **Deployment of the system:** Once non-functional and functional testing is done. The product is deployed to a live environment or customer environment.
6. **Maintenance:** After the released into customer environment some issues arises in the software. To fix these issues, patches updates or new version are released.

The advantage of the waterfall model:

* In the waterfall model, each phase has deliverables and a review process.
* Waterfall model is easy to use and understand and simple.

The disadvantage of the waterfall model:

* This model is not suitable for projects where requirements may be changed in the middle of phases.
* Difficult to measure progress within phases or stages.

Comparison with other Methodology:

* A waterfall is a linear approach to software development. Whereas, Agile is an iterative, team-based approach to development. Waterfall model is a sequential model so it is completed step by step according to its development phases and does not require the participation of customers. But Agile development is an iterative approach. There is a huge interaction between customer and developers during the development of projects and it focuses on customer satisfaction. Hence, I will be using the waterfall model for my project.

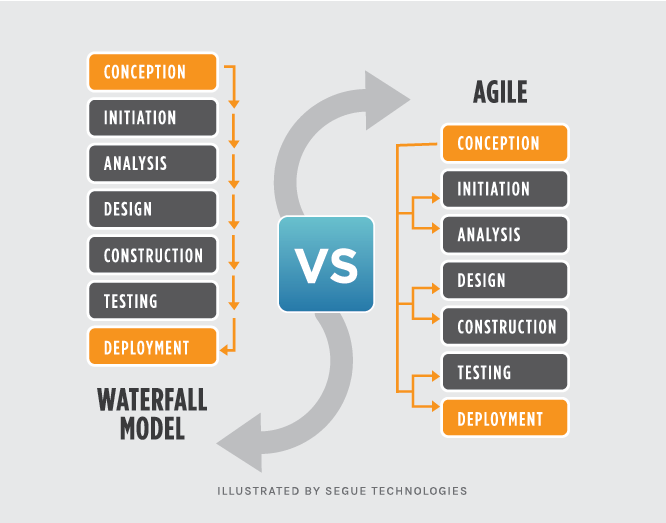


Figure: Waterfall Methodologies Vs Agile

## 3.2 Design Pattern

The Model View Controller(MVC) design pattern defined that an application consists of a Model, View, and Controller. The pattern requires that each of these is separated into different objects.

* **Model:** It does not contain logic describing how to represent the data to a user, only pure application data is contained.
* **View:** Visual representation of the model. The view knows how to access the model’s information, however, it does not know what this data means.
* **Controller:** A controller is exited between the view and the model. Controller handle events triggered by the views and execute the proper reaction to these events and the result of this action is then reflected in the views.

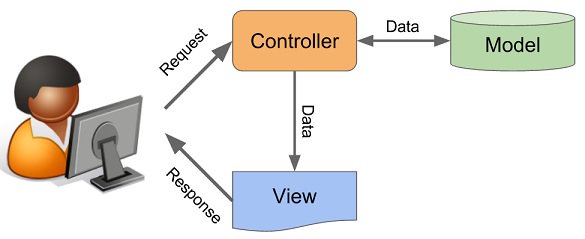


Figure: MVC Design pattern

## 3.3 Architecture

Since my system aims and focuses to provide easy services to the customer without any interruption. So, I will be using Client-server architecture. The client-server architecture is a shared architecture where loads of client-server are distributed. The server holds all the resource in a centralized resource system. The client-server gets numerous performance at its edge for sharing resources to its customers when requested. In this architecture, the client and server may be in a network or on the same. Client services will not be interrupted in this architecture since it is service oriented.

# Chapter 4: Project Planning

## 4.1 Work Breakdown Structure (WBS)

Work breakdown structure is a way to divide or breakdown of a project into a smaller portion or different stages. It is also a method of organizing and completing work in a project.

The purpose of using of WBS are:

* To identify potential risks in a project.
* To make a large project more manageable by breakdown into smaller chunks.
* To quickly developed projects schedule and budgets by allocating price and time for every stage of Work Breakdown Structure.

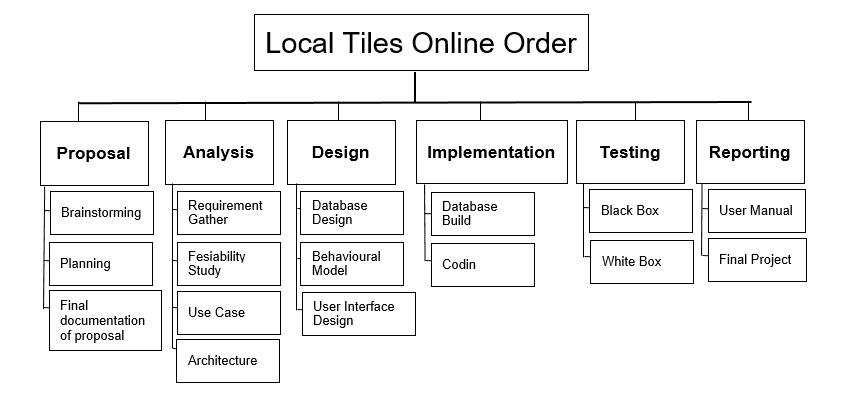


Figure: Work Breakdown Structure (WBS) of Local Tiles Online Order

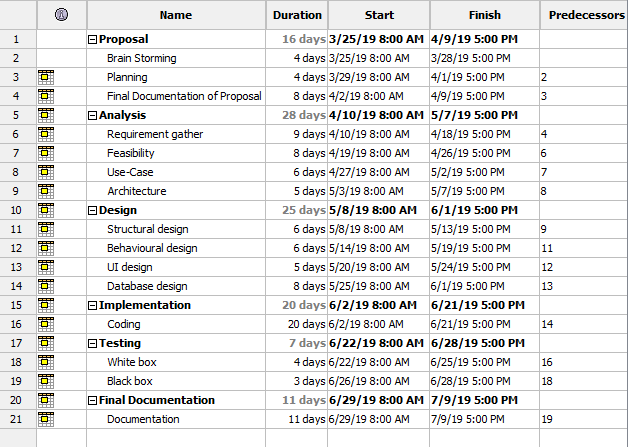
## 4.2 Milestone

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| S.N | Works | | | | | | Start Date | End Date | Days |
| 1. | **Proposal** | | | | | | 25 – March | 9 – April | 16 days. |
|  | i. | | Brain Storming | | | | 25 – March | 28 – March | 4 days |
| ii. | | Planning | | | | 29 – March | 1 – April | 4 days |
| iii. | | Final documentation of proposal. | | | | 2 – April | 9 – April | 8 days |
|  | **Analysis** | | | | | | 10 – April | 7 – May | 28 days |
|  | i. | | | | Requirement gather | | 10 – April | 18 – April | 9 days |
|  | i. | | | | Feasibility | | 19 – April | 26 – April | 8 days |
| iii. | | | | Use-Case | | 27 – April | 2 – May | 6 days |
| iv. | | | | Architecture | | 3 – May | 7 – May | 5 days |
|  | **Design** | | | | | | 8 – May | 1 – June | 25 days |
|  | i. | | | | | Structural design | 8 – May | 13 – May | 6 days |
| ii. | | | | | Behavioral design | 14 – May | 19 – May | 6 days |
| iii. | | | | | UI desing | 20 – May | 24 – May | 5 days |
|  | iv. | | | | | Database design | 25 – May | 1 – June | 8 days |
|  | **Implementation** | | | | | | 2 – June | 21 – June | 20 days |
| i. | | | Coding | | | 2 – June | 21 – June | 20 days |
|  | **Testing** | | | | | | 22 – June | 28 – June | 7 days |
| i. | White Box Testing | | | | | 22 – June | 25 – June | 4 days |
| ii. | Black Box Testing | | | | | 26 – June | 28 – June | 3 days |
|  | **Final Documentation** | | | | | | 29 – June | 9 – Jully | 11 days |
|  | Documentation | | | | | | 29 – June | 9 – July | 11 days |

Milestone is tools used in project management. Until your projects are completed. The milestone should represent a clear sequence of the stage that continuously builds up.

In this way, I will be doing a milestone for project mentioning clearly the stages, sub-stages, start date, end date and total days required for each stage of the project. Which will help to see the progress of the project

## 4.3 Grant Chart



# Chapter 5: Risk Management

The unconditional events that directly or indirectly effect to the system being developed are called risk and identifying, managing, accessing and taking action to those risk by defining possible solution is called risk management.

The different risk may occur from different sources like data theft, natural disaster, unauthorized access, legal issues, and others can happen anytime. Some of these are unavoidable whereas some of those can be controlled. So, as to be saved from those threats risk management provides an alternative solution. Which directly helps to increase the success level of projects.



Figure: Risk Management Life Cycle

For the estimate of the impact of different risk we use

**Impact = Likelihood \* Probability**

Likelihood of risk and its value

|  |  |
| --- | --- |
| **Likelihood** | **Value** |
| Low | 1 |
| Medium | 2 |
| High | 3 |

The consequence of risk and its value

|  |  |
| --- | --- |
| **Consequence** | **Value** |
| Very Low | 1 |
| Low | 2 |
| Medium | 3 |
| High | 4 |
| Very High | 5 |

Risk identification, calculating impact and alternative action for risks

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.N** | **Risk** | **Likelihood** | **Consequence** | **Impact** | **Action** |
| 1 | Limited time | 2 | 4 | 8 | Every step of the project should be completed in the assigned time. |
| 2 | Equipment failure | 1 | 5 | 5 | Backup of projects regularly in google drive and GitHub. |
| 3 | Malicious attack | 2 | 3 | 6 | Advanced security and Encryption of data. |
| 4 | Human errors | 2 | 2 | 4 | Testing and review each step of the project. |
| 5 | Unauthorized access | 2 | 5 | 10 | Secure the system with a strong password and encryption of data. |
| 6 | Data Breach | 2 | 4 | 6 | Strong rules, security policy, and implementation. |
| 7 | Cost | 1 | 2 | 2 | Proper analysis of cost before starting the project. |
| 8 | Natural calamities | 1 | 4 | 4 | Safe working environment and backup project daily. |

# Chapter 6: Configuration management

Configuration management is the collection of activities, tools, processes, and methods. That can be used by project practitioners during the project life cycle to manage items. It also ensures consistency of a products performance and its functional and physical attributes with its requirements, design and operational information throughout its life.

# Chapter 7: Conclusion

Final documentation of proposal

Final Project

User Manual

Local Tiles Online Order

Architecture

Use Case

User Interface Design

Database Build

Planning

Brainstorming

White Box

Coding

Behavioural Model

Fesiability Study

Black Box

Requirement Gather

Database Design

**Reporting**

**Testing**

**Implementation**

**Design**

**Analysis**

**Proposal**