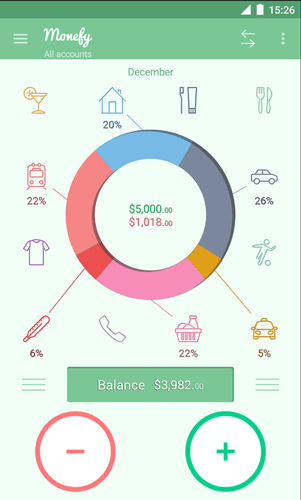
**Project Proposal On**

**Expenses Management System**



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# **Chapter1. Introduction**

## 1.1 Project Introduction

Expenses Management System is the name of my project. It will utilized for business purposes or a person to review their costs or expenses. This project enable clients to enter their salary and their expenses according to their needs. The main purpose of this project is to enable the spending thoughts of client’s expenses. It helps to recognize and analyze the overall expenses of clients and it will provides opportunities in case of cost saving and control the flow of excessive spending expenses.

## 1.2 Background of the project

People intended to live their life in smart way in present technological era. In Expenses Management System, clients enable to register and then login accordingly. Here clients can add their salary and their day-by-day expenses to maintain or control the flow of daily excessive expenses this will automatically help in saving purposes. This project will help to manage cash flow. In order to finish this project, time should managed properly according to the project needs.

## 1.3 Problem Statement

According to my view there are many problems arises without Expenses Management System. The main problem is that the clients would not noticed about excessive flow of expenses or costs.

Problem statement refers to the solution of the problem. This project will focused on individual or association who need to monitor their salary and their expenses. This project inform the clients that where the money goes or the flow of expenses. With the help of this project, we maintain the constant between day-by-day expenses.

## 1.4 Description of the Project

Description of the project include following requirements:

**Programming Language: Java**

**Tool: Android Studio**

**Platform: Android**

**Pattern: MVC (Model, View and Controller)**

**Database: SQL Lite**

## 1.4.1 Feature of the Project

Features of the Expenses Management System include following things:

* **Register**
* For register user using their Email Address, Username and Password.
* New information regarding clients will sent to Email.
* **Login**
* For login purpose, user will using their Username and Password.
* **User will edit their profile**
* Profile of user include Username, Password, Email and many other things that related to user profile.
* User can edit their salary and expenses according to their needs.
* **User will add their income**
* For calculation of salary and expenses user will add their income.
* **User will edit their income**
* If there is increase or decrease in salary user will edit their income according to their needs.
* **User will add their expenses**
* **User will view expenses**
* This feature help user to view the list of expenses.
* Provide information about where the money is going.
* **Report of the expenses**
* User will get report of the expenses by calculating all expenses.
* **Logout**

## 1.5 Overview of the Project

Expenses management system will used for business purposes or a person to record expenses of user. It helps to record how user spend money and their spending habits. Monitor costs all year to augment reasoning’s, lower assessable pay and spare your organization cash.

Here I will used different things to complete this project. Some of them are Java (programming language), Android Studio (tool), Android (platform), MVC (pattern), and SQL Lite (database).

The main theme of this project is to user make better money spend decisions with concur expense.

# Chapter2. Scope of the Project

## 2.1 Scope

Expenses Management System intended to support individual or business spending plan, track and potentially control your costs. It helps in tracing both user income and expenses. The Expenses Management System gives a coordinated arrangement to cash flow and expenses of user. It gives the capacity to gather your income into classifications and gives you a chance to set a financial plan and track costs in the classification.

## 2.2 Limitations

Individual probably will not know or recollect where they spent their pay consequently the following of the cost will be problematic. Pay of individual probably will not be customary thus, their computation may not be right. The user spending may be more than that of their income. This application will not run on IOS because this application is only for android platform.

## 2.3 Aims

* The main aim of this project is to develop application where a user can add, update and track income and expenses and to control the excessive money spending of user.
* Helps to calculate spending amount of users and to produce expenses reports of users.

## 2.4 Objectives

* To perform user based design.
* To develop user-friendly application.
* To manage time according to the user needs.
* To get better software with less bugs, the developed application should tested properly.
* To design different types of diagrams like use-case diagram, activity diagram, sequence diagram etc.
* To illustrate the flow of application with the help of diagrams.
* To perform this project as both individual and business purposes.
* To analyze the views of users regarding this project.
* For further support all the system development, development methodology, diagrams should documented properly.

## 2.5 Overview of the Scope

Overview of the scope include limitations, aims and objectives of the Expenses Management System. Limitation of the project describes that the user expenses might not managed properly because individual could not know where they spend their income and for what purposes and the spending of user could more than that of income. The main limitation of this project that it is only for android user not for IOS user. In this way, aim of this project is to calculate expenses report by calculating spending money. Finally, objectives describes how to get better software and the documentation of design pattern, development methodology used, performance of the Expenses Management System for further support.

# **Chapter3. Development Methodology**

## 3.1 Description of the Methodology

### Waterfall Model

The waterfall model was first process model and it is very simple to understand and use. In a Waterfall model, each phase must completed before the next phase can begin and there is no overlapping on the phase. It is the earliest SDLC approach that used for software development. (Tussen de Vaarten, 2013-2018)

Phases of Waterfall model includes following points:

* Requirements analysis
* Design
* Implementation
* Verification
* Maintenance



Screenshot 1: Waterfall Model

I have chosen Waterfall Methodology due to following reason:

* This methodology is easy to understand and use.
* This methodology is mainly for small project.

Advantage of using Waterfall Model:

* Phases are proceed and completed one at a time. Therefore, that phase do not overlap.
* Clear estimation of cost according to the requirements.
* In this model, process of testing is more efficient and simpler.

Disadvantage of using Waterfall Model:

* Does not suitable for randomly change requirements.
* Going back to a phase is more difficult and costly efficient.
* Testing time comes very later. This is against the rule of software development.

## 3.2 Design Pattern

I will used **Model View Controller (MVC)** design pattern.

**Model:** Within the pattern, the model is the main components and the main purpose of the model is to manage the data, logics and rules of the application.

**View:** Output representation of the data in the form of a screen or user interface (UX).

**Controller:** Both model and view updates by controller. It control the data flow into model and updates the view if data changes. (Gootooru, 2019)



Screenshot 2: MVC design pattern

**Advantages of using MVC design pattern:**

* Rapid and parallel development process i.e. faster development process.
* Ability to create multiple views for a model.
* Supports TDD (Test Driven Development).
* The entire model does not affected by modification because both model part and view part are different.

**Disadvantages of using MVC design pattern:**

* Complexity will increase.
* Multiple technologies knowledge is required.
* Multiple number of programmers needed.
* In view, there is inefficiency of data access.

## 3.3 System Architecture

**Three Tier Architecture**

The three-tier architecture consists of three tier. They are:

* Presentation Tier
* Application Tier
* Data Tier

Presentation Tier:

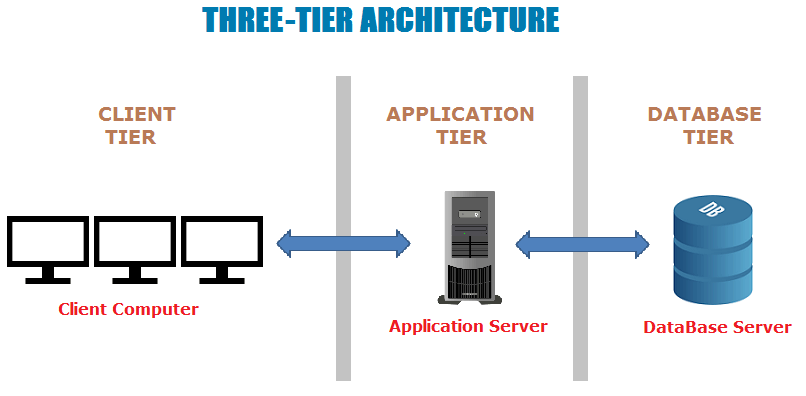
In the three-tier system, presentation tier represents the front-end layer and consists of the user interface. This tier build on web based technologies or other popular web development frameworks and communicates with others layers through API calls.

Application Tier:

The application tier consists functional business logic and it has often written in java and other programming language.

Data Tier:

The data tier consists database, data storage system and data access layer. Data accessed with the help of application layer via API calls. Examples of data storage system includes MYSQL, Oracle, and SQL Lite etc.

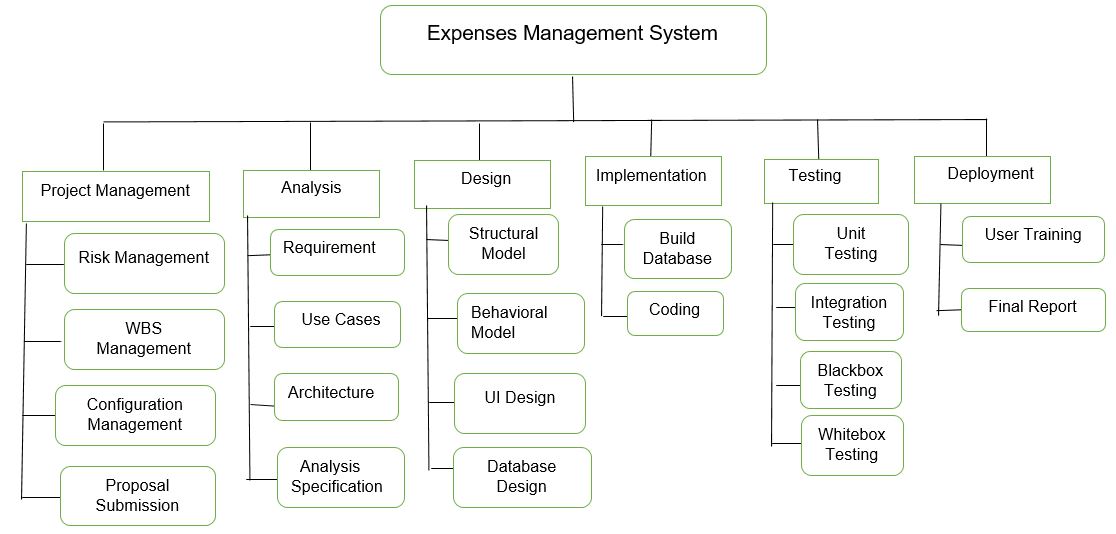
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Screenshot 3: Three-tier Architecture

# **Chapter4. Project Planning**

## 4.1 Work Breakdown Structure (WBS)

To remove complexity and for manageable purpose a project is breakdown into smaller components called Work Breakdown Structure (WBS). It provides a hierarchical and incremental decomposition of a project into phases, deliverables and work packages. It breakdown the entire project into meaningful components. The Work Breakdown Structure for Expenses Management System are as given below:

* Project Management
* Analysis
* Design
* Implementation
* Deployment

Screenshot 4: Work Breakdown Structure for Expenses Management System

## 4.2 Milestones

**Milestones Table:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.N** | **Milestones** | **Start Date** | **End Date** | **Total Days (115)** |
| 1. | **Project Management**  Risk Management  WBS  Configuration Management  Proposal Submission | **03/25/2019**  03/25/2019  03/30/2019  04/04/2019  04/07/2019 | **04/09/2019**  03/29/2019  04/03/2019  04/06/2019  04/09/2019 | **16**  5  5  3  3 |
| 2 | **Analysis**  Requirement analysis  Use Case  Architecture  Analysis specification | **04/10/2019**  04/10/2019  04/18/2019  04/25/2019  05/04/2019 | **05/08/2019**  04/17/2019  04/24/2019  05/03/2019  05/08/2019 | **28**  8  7  9  5 |
| 3 | **Design**  Structural Diagram  Behavioral Diagram  UI Design  Database Design (ER, Data Dictionary) | **05/09/2019**  05/09/2019  05/14/2019  05/21/2019  05/28/2019 | **06/03/2019**  05/13/2019  05/20/2019  05/27/2019  06/03/2019 | **25**  5  7  7  7 |
| 4 | **Implementation**  Building Database  Coding | **06/04/2019**  06/04/2019  06/09/2019 | **06/23/2019**  06/08/2019  06/23/2019 | **20**  5  15 |
| 5 | **Testing**  Unit Testing  Integration Testing  Blackbox Testing  Whitebox Testing | **06/24/2019**  06/24/2019  06/28/2019  07/02/2019  07/06/2019 | **07/09/2019**  06/27/2019  07/01/2019  07/05/2019  07/09/2019 | **16**  4  4  4  4 |
| 6 | **Deployment**  User Training  Final Report | **07/10/2019**  07/10/2019  07/15/2019 | **07/19/2019**  07/14/2019  07/19/2019 | **10**  5  5 |

To complete my project I have evaluated total 115 days. I have a short period to complete this project .So to build a project there is a combination of different phases or milestones. Each phases or milestones have their own duration.

* To complete project management phase I have evaluated total 16 days.
* To complete analysis phase I have evaluated total 28 days.
* To complete design phase I have evaluated total 25 days.
* To complete implementation phase I have evaluated total 20 days.
* To complete testing phase I have evaluated total 16 days.
* To complete deployment phase I have evaluated total 10 days.

# 4.3 Gantt Chart

# Chapter5. Risk Management

Risk management is the technique of identifying, assessing and controlling threats to a business using insurance, safety measures etc. The main purpose of risk management is to control or minimize the flow of unexpected risk, extra time and money. To get impact of risk on project we have mathematical calculation i.e.

Impact = Likelihood \* Consequences

Likelihood values of risk are as given below:

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

Consequences values of risk are as given below:

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

## 

**Risk Table:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.N** | **Risks** | **Likelihood** | **Consequences** | **Impact** | **Solution** |
| 1 | Lack of resources | 2 | 3 | 6 | Resources needed for the project must be available. |
| 2 | Operating System failure | 2 | 4 | 8 | Do not overuse computer and provide file backup system. |
| 3 |  | 1 | 5 | 5 | UPS must be set up and backup should be done. |
| 4 | Human mistakes | 3 | 3 | 9 | Provide training to the users.d |
| 5 | Virus, Threats | 2 | 4 | 8 | Regular scheduled scans with the use of installed anti-virus software. |
| 6 | Human illness | 3 | 2 | 6 | Time should be managed properly. Extra hour should be done at the end. |
| 7 | Hard disk failure | 1 | 4 | 4 | Cloud back up should be done. |