Pak Ads Server

Submitted by: Mashal Farooq
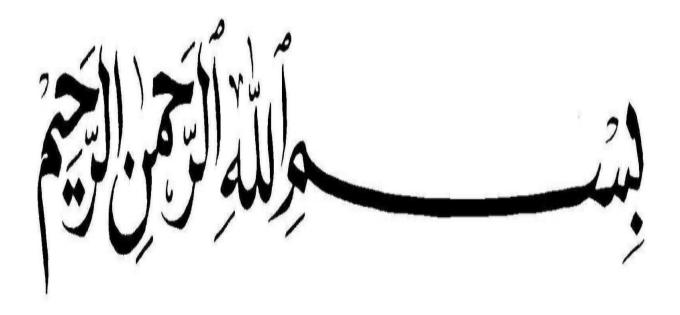
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Islamabad

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بِسْمِ اللهِ الرَّحْمٰنِ الرَّحِيْمِ

A report submitted to Department of Computer Science,

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requirements for the award of the degree of BS Computer Science.

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Mashal Farooq

2014-2018

Abstract

An ad server is a piece of advertising technology that is used by publishers and advertisers to manage and run online advertising campaigns. Ad servers are responsible for making decisions about what ads to show on a website, then serving them. Ad server stores information about ads and delivers them to one or more web sites for display to visitors.

Pak Ads server is a web-based online Ad server. A user can register on Pak Ads server and can provide space or give advertisements. If user gives Ads then he/she will act as an advertiser and if he/she provides space then he/she becomes a publisher. Advertisers upload ads and make payment then admin changes Ad status and make it visible for publishers to upload on their websites. Pak Ad server simplify the process of advertisement and save money and time of both advertiser and publisher.

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Chapter 1

Software Project Management Plan (SPMP)

1.1 Introduction

Pak Ads server is a web application. It is an online Ad server. Ad serving is the technology and software that places advertisements on websites of publishers. A user can register on Ads server and can provide space or give advertisements. If user gives Ads then he/she will act as an advertiser. If he/she provides space for Ads then he/she becomes a publisher. Advertisers upload ads and make payment then admin changes Ad status and make it visible for publishers to upload on their websites. The advantage of Pak ads server is to facilitate the user to easily register to it and to take advantage of online advertising.

1.2 Problem Definition

In modern internet world everyone wants to access to the internet and everyone who have a business, shop, company, educational institute wants to have his own website. Also, online advertising is an evolving technology in the modern world and every business entity who has a website wants to advertise his business on internet.

There is no Ad server in the Pakistan which has to serve local business organization in the country.

1.3 Scope

This system is totally web-based system. This web-based system can be used throughout the Pakistan for advertising local area business. System will provide a platform to advertiser and publisher

With this application:

- Advertiser can publish ads
- Publisher can get Ads for his website
- Administrator can manage ads.

1.4 Objectives

Objectives of this application are:

- To simplify the process of advertisement.
- To help advertiser in targeting large number of people.

- To help publisher to easily find ads for their website and earn money.

- To enable advertiser to track record of their Ads.

1.5 Project Organization

This section explains about which process model will be followed, what are major roles and responsibilities and which tools and techniques will be used in order to develop the system.

1.5.1 Software Process Model

In this project, agile process model will be used because

- Requirements are clear and well-defined.
- When new changes need to be implemented. New changes can be implemented at very little cost.
- To implement a new feature the developers need to lose only the work of few days, or even only hours, to roll back and implement it.
- In agile model very limited planning is required to get started with the project.

Figure 1.1 Agile Model

1.5.2 Roles and Responsibilities

Pak Ads Server is an individual project and there is no team member involved in this Project. So, being a single member of this project, all roles and responsibilities are on my side.

1.5.3 Tools and Techniques

Following are the tools and techniques used for this project.

Table 1.1 Tools and Techniques

MS Word 2016	For the Document Purpose
Project Libre	For Project Plan
MS Visio 2016	For UML diagrams
Draw.io	For making diagrams
MySQL	Database used for storage purpose
Notepad++	For coding purpose

1.6 Project Management Plan

Software project management plan is the art and science of planning and leading software projects. The project management plan for this project is given on below:

	ⓘ	Name	Duration	Start	Finish
1		⊟Pak Ad Server	251 days?	10/9/17 8:00 AM	6/16/18 5:00 PM
2		⊟Chapter 1: Project Introduction	21.875 days?	10/9/17 8:00 AM	10/30/17 4:00 PM
3		Introduction	5 days?	10/9/17 8:00 AM	10/13/17 5:00 PM
4		Problem Definition	2 days?	10/14/17 8:00 AM	10/15/17 5:00 PM
5		Proposed Solution	3 days?	10/16/17 8:00 AM	10/18/17 5:00 PM
6		Meeting	0.25 days?	10/16/17 2:00 PM	10/16/17 4:00 PM
7		MileStone	0 days?	10/16/17 2:00 PM	10/16/17 2:00 PM
8		Scope	2 days?	10/19/17 8:00 AM	10/20/17 5:00 PM
9		Objective	2 days?	10/21/17 8:00 AM	10/22/17 5:00 PM
10		Project Organization	1 day?	10/23/17 8:00 AM	10/23/17 5:00 PM
11		Meeting	0.25 days?	10/23/17 2:00 PM	10/23/17 4:00 PM
12		Project Management Plan	5 days?	10/24/17 8:00 AM	10/28/17 5:00 PM
13		Revise Chapter 1	1 day?	10/29/17 8:00 AM	10/29/17 5:00 PM
14		Meeting	0.25 days?	10/30/17 2:00 PM	10/30/17 4:00 PM
15		MileStone	0 days?	10/30/17 2:00 PM	10/30/17 2:00 PM
16		⊟Chapter 2: Requirements Gathering And Analysis	20 days?	11/1/17 8:00 AM	11/20/17 5:00 PM
17		⊟Introduction	2.25 days?	11/1/17 8:00 AM	11/3/17 10:00 AM
18		Product Overview	1 day?	11/1/17 8:00 AM	11/1/17 5:00 PM
19		Major Functions	0.5 days?	11/2/17 8:00 AM	11/2/17 1:00 PM
20		Supported Functions	0.25 days?	11/2/17 2:00 PM	11/2/17 4:00 PM
21		Major Inputs and Outputs	0.25 days?	11/2/17 4:00 PM	11/3/17 9:00 AM
22		Definitions, Acronyms and Abreviations	0.125 days?	11/3/17 9:00 AM	11/3/17 10:00 AM
23		⊟Overview	14 days?	11/4/17 8:00 AM	11/17/17 5:00 PM
24		User Characteristics	0.125 days?	11/4/17 8:00 AM	11/4/17 9:00 AM
25		Constraints	0.25 days?	11/4/17 9:00 AM	11/4/17 11:00 AM
26		Assumptions and Dependencies	0.25 days?	11/4/17 11:00 AM	11/4/17 2:00 PM

		Task Name	Duration	Start	Finish
27		⊟Specific Requirements	3 days?	11/5/17 8:00 AM	11/7/17 5:00 PM
28		Functional Requirements	2 days?	11/5/17 8:00 AM	11/6/17 5:00 PM
29		Meeting	0.25 days?	11/6/17 2:00 PM	11/6/17 4:00 PM
30		Milestone	0 days?	11/6/17 2:00 PM	11/6/17 2:00 PM
31		Non-Functional Requirements	1 day?	11/7/17 8:00 AM	11/7/17 5:00 PM
32		Product Functions	2 days?	11/8/17 8:00 AM	11/9/17 5:00 PM
33		Usecase Diagram	2 days?	11/10/17 8:00 AM	11/11/17 5:00 PM
34		Usecase Description	6 days?	11/12/17 8:00 AM	11/17/17 5:00 PM
35		Meeting	0.25 days?	11/13/17 2:00 PM	11/13/17 4:00 PM
36		Domain Model	2 days?	11/14/17 8:00 AM	11/15/17 5:00 PM
37		DataBase Requirements	4 days?	11/16/17 8:00 AM	11/19/17 5:00 PM
38		Revise Chapter 2	1 day?	11/20/17 8:00 AM	11/20/17 5:00 PM
39		Meeting	0.25 days?	11/20/17 2:00 PM	11/20/17 4:00 PM
40		MileStone	0 days?	11/20/17 2:00 PM	11/20/17 2:00 PM
41		⊟Chapter 3: Software Design Description	14 days?	12/6/17 8:00 AM	12/19/17 5:00 PM
42		Introduction	0.5 days?	12/6/17 8:00 AM	12/6/17 1:00 PM
43		Design Overview	0.5 days?	12/6/17 1:00 PM	12/6/17 5:00 PM
44		Requirement Traceability Matrix	1 day?	12/7/17 8:00 AM	12/7/17 5:00 PM
45		System Architecture Design	2 days?	12/8/17 8:00 AM	12/9/17 5:00 PM
46		User Interface Design	5 days?	12/9/17 8:00 AM	12/13/17 5:00 PM
47		Meeting	0.25 days?	12/11/17 2:00 PM	12/11/17 4:00 PM
48		MileStone	0 days?	12/11/17 2:00 PM	12/11/17 2:00 PM
49		Activity Diagrams	6 days?	12/14/17 8:00 AM	12/19/17 5:00 PM
50		Meeting	0.25 days?	12/18/17 2:00 PM	12/18/17 4:00 PM
51		MileStone	0 days?	12/18/17 2:00 PM	12/18/17 2:00 PM

52		⊟Chapter 4: Software Test Documentation	6.875 days?	12/19/17 8:00 AM	12/25/17 4:00 PM
53		Introduction	0.25 days?	12/19/17 8:00 AM	12/19/17 10:00 AM
54		Test Approach	0.25 days?	12/19/17 10:00 AM	12/19/17 1:00 PM
55		Testing Environment and Tools	0.25 days?	12/19/17 1:00 PM	12/19/17 3:00 PM
56		Test cases	5 days?	12/20/17 8:00 AM	12/24/17 5:00 PM
57		Meeting	0.25 days?	12/25/17 2:00 PM	12/25/17 4:00 PM
58		MileStone	0 days?	12/25/17 2:00 PM	12/25/17 2:00 PM
59		⊟Implementation	95 days?	2/20/18 8:00 AM	5/25/18 5:00 PM
60		Coding	95 days?	2/20/18 8:00 AM	5/25/18 5:00 PM
61		Meeting	0.25 days?	2/26/18 2:00 PM	2/26/18 4:00 PM
62		Meeting	0.25 days?	3/5/18 2:00 PM	3/5/18 4:00 PM
63		Meeting	0.25 days?	3/12/18 2:00 PM	3/12/18 4:00 PM
64		Meeting	0.25 days?	3/19/18 2:00 PM	3/19/18 4:00 PM
65		Meeting	0.25 days?	3/26/18 2:00 PM	3/26/18 4:00 PM
66		Meeting	0.25 days?	4/2/18 2:00 PM	4/2/18 4:00 PM
67		Meeting	0.25 days?	4/9/18 2:00 PM	4/9/18 4:00 PM
68		Meeting	0.25 days?	4/16/18 2:00 PM	4/16/18 4:00 PM
69		Meeting	0.25 days?	4/23/18 2:00 PM	4/23/18 4:00 PM
70		Meeting	0.25 days?	4/30/18 2:00 PM	4/30/18 4:00 PM
71		Meeting	0.25 days?	5/7/18 2:00 PM	5/7/18 4:00 PM
72		Meeting	0.25 days?	5/14/18 2:00 PM	5/14/18 4:00 PM
73		Meeting	0.25 days?	5/21/18 2:00 PM	5/21/18 4:00 PM
74		Meeting	0.25 days?	5/25/18 2:00 PM	5/25/18 4:00 PM
75		MileStone	0 days	5/25/18 2:00 PM	5/25/18 2:00 PM

76		⊟Testing	7 days?	5/26/18 8:00 AM	6/1/18 5:00 PM
77		Test Cases	5 days?	5/26/18 8:00 AM	5/30/18 5:00 PM
78		Conclusion and Future work	1 day?	6/1/18 8:00 AM	6/1/18 5:00 PM
79		MileStone	0 days?	6/1/18 8:00 AM	6/1/18 8:00 AM
80		⊟Review	10 days?	6/7/18 8:00 AM	6/16/18 5:00 PM
81		Review 1	5 days?	6/7/18 8:00 AM	6/11/18 5:00 PM
82		Review 2	5 days?	6/12/18 8:00 AM	6/16/18 5:00 PM

Figure 1.2 Project Plan

Chapter 2

Requirements Gathering and Analysis

This section specifying the general factors that affects the product and its requirements, providing a background for the requirements of the software. It also describes the summary of the functions that the software will perform.

2.1 Introduction

Requirements gathering and analysis is very important for the project. In this chapter I discuss the functional and non-functional requirements of Pak ads server.

2.1.1 Major Functions

It is an online ads server where first users can get registered and then logs into web application by using his/her email and password. This server allows the advertisers to advertise their ads and publishers to provide space for ads to earn money.

2.1.2 Definitions, Acronyms and Abbreviations

Table 2.1 Acronyms and Abbreviations

SRS	Software Requirement Specification
SPMP	Software Project Management Plan
SD	Sequence Diagram
UI	User Interface
UC	Use case

2.1.3 Users Characteristics

1. **Administrator**
   Admin can manage (active/inactive) user Ads.
2. **Publisher**
   Charge advertisers for displaying their Ads.
   E.g Google AdSense and OpenX has publishers.
3. **Advertiser**
   Making people aware of its product and increased revenue
   E.g Google AdSense and OpenX has Advertisers.

2.2 Product Functions

The product functions are:

- Login

- Provide space for Ad

- Upload Ad

- Select Banner Category

- Choose Banner setup

- Select Pricing method

2.3 Specific Requirements

Specific requirements covering interface, functional, non-functional requirements. The requirements may document external interfaces, describe system functionality and performance, and specify logical database requirements, design constraints, emergent system properties and quality requirements.

2.3.1 External Interface Requirements
2.3.1.1 User Interfaces

- The system is user friendly.

- Interface of the system is easily understandable.

- User need not take any additional effort to understand the functionality and navigation in our application.

2.3.1.2 Software Interfaces

The application requires the support of the following software for the database and other requirements.

- Any updated browser like Opera, Google Chrome, IE9, Firefox etc.

- Hosting on web server.

2.3.1.3 Communication Protocol

Communication protocols required for this system are; Hypertext transfer protocol [http] for communication over the internet.

2.3.2 Functional Requirements

Functional requirements are those requirements which focus on the functionality of the system.

2.3.2.1 Use Case Diagram

Figure 2.1 use case diagram

2.3.2.2 Use Case Descriptions

The use - case diagram is a graphical representation of a user's interaction with the system. Use-case diagram can portray the different types of users of a system and ways that they interact with the system. A list of use-cases mentioned in use-case diagram are described in detail, so that we are able to look more precisely that how user can interact with the system to perform tasks. As this application is multiple users based and there are two main types of users such that advertiser and publisher

UC-1: Register Account

Table 2.2 UC-1 Register Account

UC-1	Register Account
Primary Actor**:**	User (Advertiser, Publisher, Admin)
Pre-conditions**:**	User visits Pak Ads server.
Post-conditions**:**	User has been successfully registered.
Main success scenario:	1. User select the option of registration. 2. System asks to enter the information of user. 3. User enters the required information and system prompts the message of successful submission.
Alternative scenario:	A*. System fails at any time. - Refresh the website. 3a. User left some field unfilled. - Asks user to fill in required fields.

UC-2: Login

Table 2.3 UC-2: Login

UC-2	Login
Primary Actor**:**	Advertiser, Publisher, Admin
Pre-conditions**:**	User has registered to the Ads server.
Post-conditions**:**	User logged in to the ads server and is redirected to user/admin dashboard.

Main success scenario:	1. User/admin visits Pak Ads server and enters username and password.
	2. System will check user name and password.
	3. User will be logged in.
Alternative scenario:	A*. System fails at any time.
	- Refresh the website.
	3a. Username or password is incorrect.
	a) System redirect user to re-login page.

UC-3: Manage Profile

Table 2.4 UC-3: Manage Profile

UC-3	Manage Profile
Primary Actor:	Advertiser, Publisher, admin
Pre-conditions:	User has already registered.
Post-conditions:	User has updated the profile successfully.
Main success scenario:	1. User is redirected to the user/admin dashboard and the system display relevant panel to the user/admin.
	2. User clicks on account setting option, make changes in the profile and clicks Ok button.
	3. The system prompts the message your profile is update successfully.
Alternative scenario:	A*. The system fails at any time.
	- Refresh the website.
	3a. User has made the changes but does not click submit button.

UC-4: Submit Ad

Table 2.4 UC-4: Submit Ad

UC-4	Submit Ad
<u>Primary Actor</u>**:**	Advertiser
<u>Pre-conditions</u>**:**	Advertiser has authenticated and logged in.
<u>Post-conditions</u>**:**	Advertiser successfully submitted new advertisement.
<u>Main success scenario:</u>	1. Advertiser presses the option of post new ads. 2. System Show the Form to submit new advertisement. 3. Advertiser fills the form and click on submit button. 4. System saves new advertisement in the database.
<u>Alternative scenario:</u>	A*. The system fails at any time. - Refresh the website. 3a. advertiser submits form without filling all required fields. a) Systems prompts advertiser to fill all required fields.

UC-5: Publish Ads

Table 2.6 UC-5: Publish Ads

UC-5	Publish Ads
<u>Primary Actor</u>**:**	Publisher
<u>Pre-conditions</u>**:**	Publisher has authenticated and logged in.
<u>Post-conditions</u>**:**	Publisher has successfully published ads.

Main success scenario:	1. System displays uploaded Ads to publisher for advertisement.
	2. Publisher provides space for ads and display Ads on his/her website.
	3. System manages the time duration of these ads.
Alternative scenario:	A*. System fails at any time.
	- Refresh the website.

UC-6: Manage users

Table 2.7 UC-6 Manage users

UC-6	Manage users
Primary Actor:	Admin
Pre-conditions:	Admin has authenticated and logged in.
Post-conditions:	Admin has successfully deleted/viewed users
Main success scenario:	1. Admin presses manage users.
	2. System displays all registered users.
	3. Admin view/delete user.
	4. System display message of user deleted successfully.
Alternative scenario:	A*. The system fails at any time.

UC-7: Make Payment

Table 2.8 UC-7: Make Payment

UC-7	Payment
Primary Actor:	Advertiser
Pre-conditions:	Advertiser has uploaded the Ad.

Post-conditions**:**	Admin receives payment and Ad has been changed ad status to active.
Main success scenario:	1. System displays form to be filled for uploading Ad. 2. After upload system asks advertiser to make payment. 3. Payment is made through easy paisa and admin changes Ad status.
Alternative scenario:	A*. System fails at any time. - Refresh the website. 1a. user left some field empty. - Ask user to fill in required fields. 3a. advertiser transfers money on wrong CNIC and phone number.

UC-8: Logout

Table 2.9 UC-8: Logout

UC-8	Logout
Primary Actor**:**	User (Admin, Advertiser, Publisher)
Pre-conditions**:**	User will be able to logout account.
Post-conditions**:**	User has been logged out successfully.
Main success scenario:	1. User presses logout button. 2. System displays login screen.
Alternative scenario:	A*. System fails at any time. - Refresh the website.

UC-9: Manage User Ads

Table 2.8 UC-9: Manage User Ads

UC-9	Manage User Ads
Primary Actor**:**	Admin
Pre-conditions**:**	Admin is authenticated and logged in.
Post-conditions**:**	Admin has edited (active/inactive)/deleted Ad successfully.
Main success scenario:	1. Admin presses Manage user's ad. 2. System display user Ads. 3. Admin edit /delete user's ad and click on update button. 4. System display update user Ad message.
Alternative scenario:	A*. The system fails at any time. - Refresh the website.

UC-10: Manage categories

Table 2.11 UC-10: Manage categories

UC-10	Admin manage categories
Primary Actor**:**	Admin
Pre-conditions**:**	Admin is authenticated and logged in.
Post-conditions**:**	Admin successfully added/deleted/edited Ad categories.
Main success scenario:	1. Admin presses manage categories. 2. System displays ad categories. 3. Admin edit/add/delete Ad category. 4. System displays message of category edited successfully or category deleted successfully.

Alternative scenario:	A*. The system fails at any time.
	- Refresh the website.

UC-11: Manage Banners

Table 2.12 UC-11: Manage Banners

UC-11	Manage Banners
Primary Actor**:**	Admin
Pre-conditions**:**	Admin is authenticated and logged in.
Post-conditions**:**	Admin has been successfully added/deleted/edited banners.
Main success scenario:	1. Admin presses manage banners. 2. System displays banners. 3. Admin edit/add/delete banner. 4. System displays message of banner edited successfully or banner deleted successfully.
Alternative scenario:	A*. The system fails at any time. - Refresh the website.

2.4 Domain Model

Domain model is an object model of problem domain. It is based on real world classes/concepts and their relationships, that is used to identify the relationship among all the entities within the scope of problem domain.
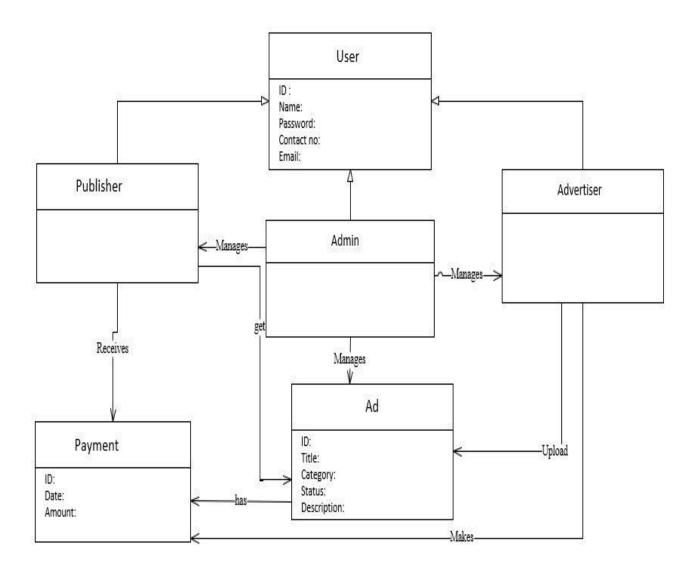

Figure 2.2 Domain model

2.5 Entity Relationship Diagram

ERD is a top down approach to database design that begins by identifying the important data called entities and relationships between data and must be represented in the model. We then add more details such as the information we want to hold about the entities and relationships called attributes and any constraints on the entities, relationships and attributes.
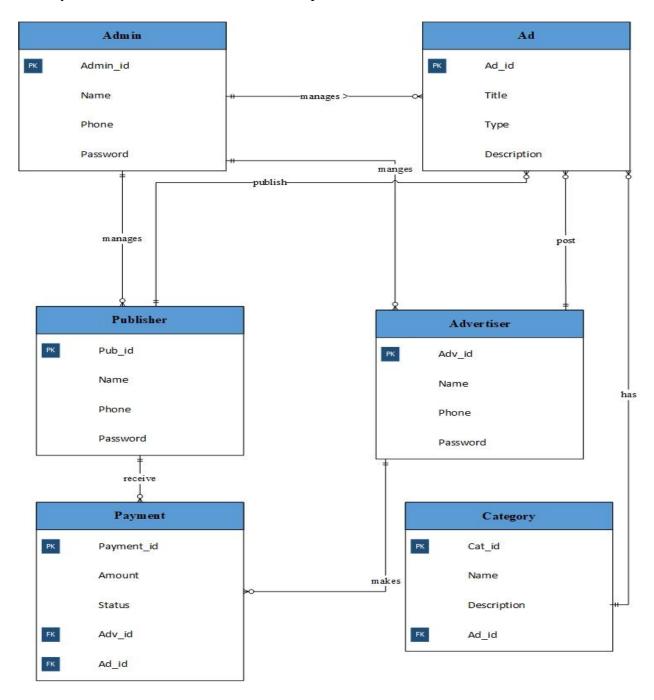

Figure 2.3 Entity Relationship Diagram

Chapter 3

Software Design Description

This chapter specifies the general factors that can affects the product and its requirements, providing a background for the requirements of the software. To describe the key concepts of the problem domain and data items used in our system, activity diagram and architecture diagram has been used.

Software Design Description (SDD) is a representation of a system that how the users can interact with the system. This can be shown with the help of diagrams. The SSD shows that the system is completely fulfill the requirement.

3.1 Design Overview

In the design overview, we can describe the system at architecture level and the complete structure of the system. In this we can explain how the user interacts with the system.

3.1.1 Requirements Traceability Matrix

Table 3.1 Requirement Traceability Matrix

Requirement id	Requirement name	Test case	Interface
UC:1	Registration	Fig 5.2.2	Fig 3.5
UC:2	Login	Fig 5.2.1	Fig 3.4
UC:3	Account setting	Fig 5.2.7	Fig 3.11
UC:4	Post new Ad	Fig 5.2.3	Fig 3.8
UC:5	Get Ad	Fig 5.2.5	Fig 3.9
UC:6	Manage users	Fig 5.2.9	Fig 3.15
UC:7	Payment	Fig 5.2.6	Fig 3.
UC:8	Logout	Fig 5.2.4	Fig 3.10
UC:9	Manage user Ads	Fig 5.2.10	Fig 3.14
UC:10	Manage Categories	Fig 5.2.11	Fig 3.13
UC:11	Manage banners	Fig 5.2.12	Fig 3.12

3.2 Activity Diagram

An activity is a state of doing something. The activity diagram describes the sequencing of activities. Activity diagram depicts the dynamic behavior of a system or part of a system through the flow of control between actions that the system performs. It is similar to a flowchart except that an activity diagram can show concurrent flows.
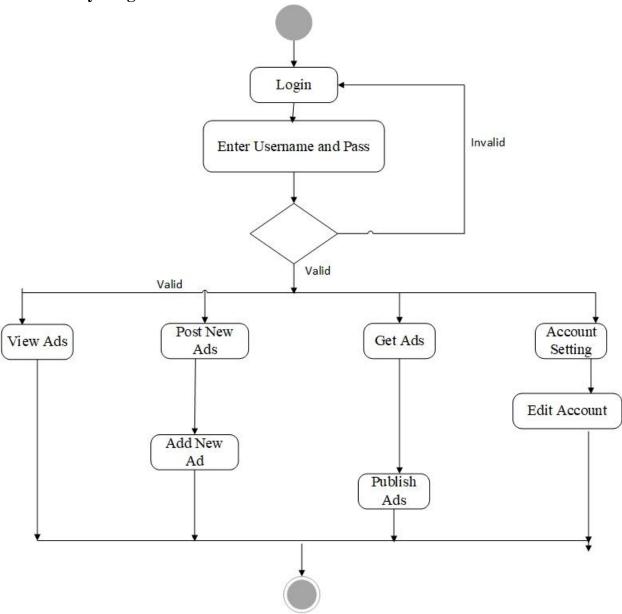
3.2.1 Activity Diagram for user dashboard

Figure 3.1 Activity diagram for user dashboard

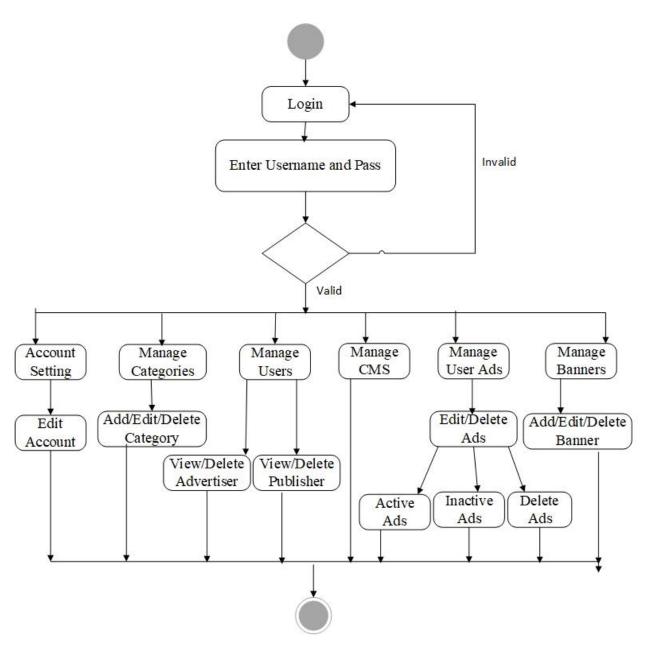### 3.2.2 Activity Diagram for admin dashboard

Figure 3.2 activity diagram for admin dashboard

3.3 Architecture Diagram

Three-tier architecture allows any one of the three tiers to be upgraded or replaced independently. The user interface is implemented on a desktop PC and uses a standard graphical user interface with different modules running on the application server. The relational database management system on the database server contains the computer data storage logic.
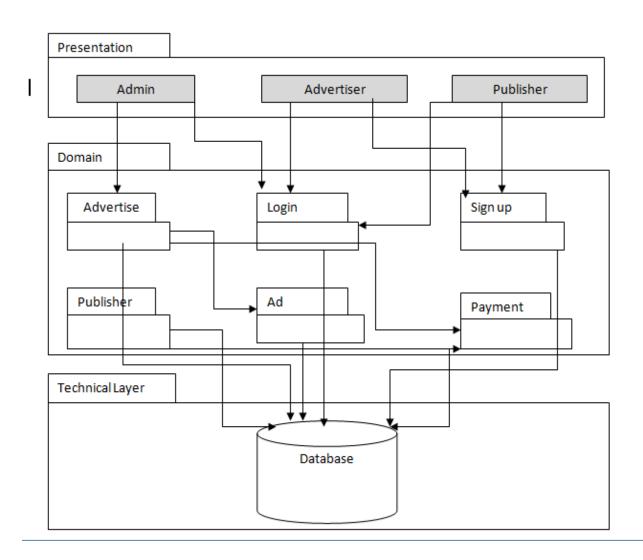

Figure 3.3 Architecture Diagram

3.4 User Interface design

Pak Ads Server has user friendly interface. The interface of Pak Ads Server is simple to use, a naive user can also use it very easily and efficiently to get their required information. The interface is responsive this means it can adjust its size according to device's display Like (small screens, large screens) etc.

3.4.1 Interfaces

Pak Ads Server has following interfaces:

3.4.1.1 Login Interface

This picture will show the interface of login screen. It contains two field of username and password.
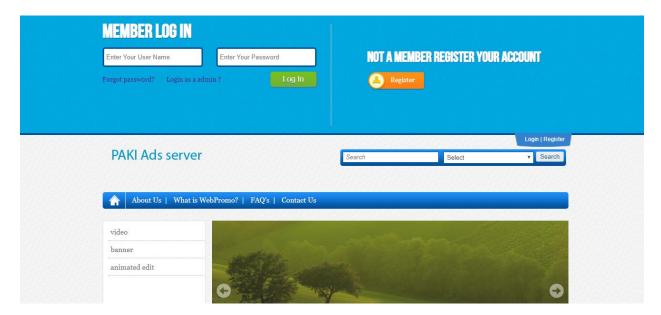

Figure 3.4 Login interface

3.4.1.2 Registration Interface

When user clicks on registration button then he/she will be redirected to the below registration interface.
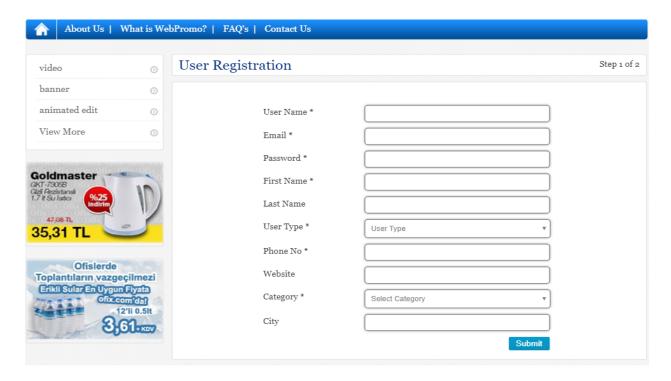

Figure 3.5 Registration interface

3.4.1.3 User dashboard Interface

When user login he will be redirected to user dashboard.
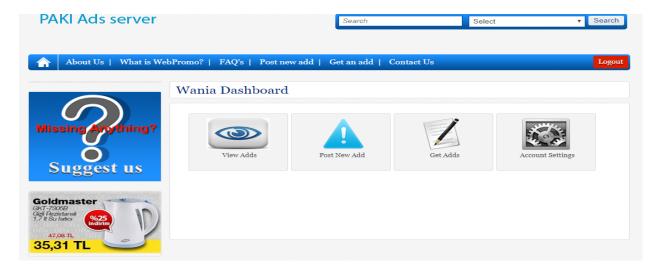

Figure 3.6 User dashboard Interface

3.4.1.4 Admin dashboard Interface

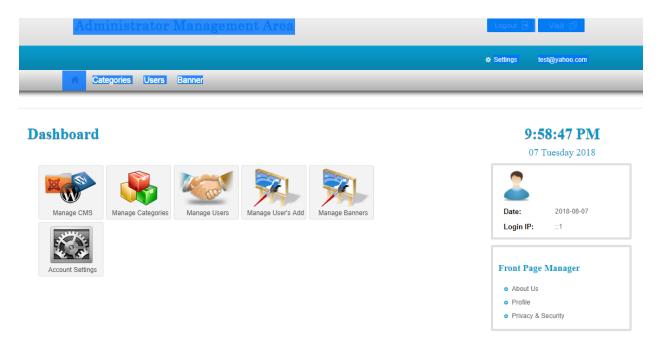This is the admin dashboard where admin can manage ads and manage users.

Figure 3.7 Admin dashboard Interface

3.4.1.5 Post Ad Interface

When user clicks on post new Ad button in dashboard then the following interface will be shown.

Figure 3.8 Post Ad interface

3.4.1.6 Get Ad Interface

Publisher clicks on Get Ads and the following interface will be shown.

Figure 3.9 Get Ad interface

3.4.1.7 Logout Interface

When user logout the following interface will be shown.

Figure 3.10 Logout interface

3.4.1.8 Account setting Interface

Using these interfaces admin and user can edit their profiles.

Figure 3.11 Account setting interface

3.4.1.9 Manage banners Interface

Figure 3.12 manage banners

3.4.1.10 Manage category Interface
Admin can Add/ edit/ delete category using this interface.

Figure 3.13 manage category

3.4.1.11 Manage user Ads Interface
Admin can Add/delete user's Ads using this interface.

Figure 3.14 manage user Ads

3.4.1.12 Manage Users Interface
Admin can search/view/delete users.

Figure 3.15 manage users

Chapter 4

Implementation

After the design phase, the implementation phase comes. This chapter is related to system implementation. The chapter mentions tools, framework, platforms and database used to develop the application. In this phase we decide how to implement our design and which technique to use. At last some interfaces are provided to visualize the application.

4.1 System Definition

System is mainly composed of two parts

- Database server
- Web Application

4.1.1 Database Server

System requires of a database server which is used to store all data about advertisers, publishers, banners, and Ads.
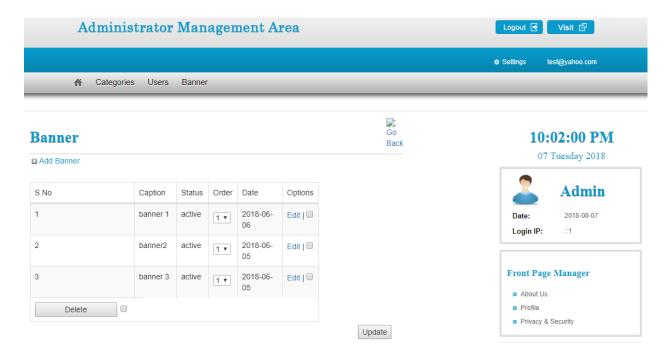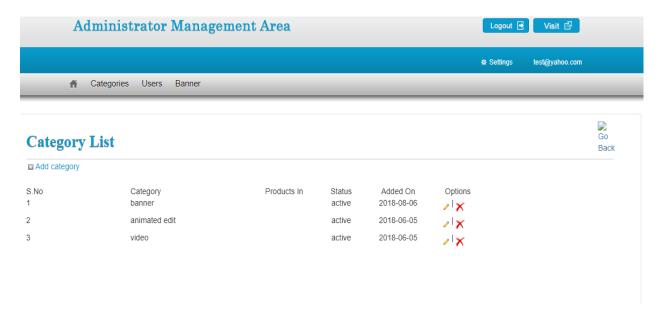
4.1.2 Web Application

System consists of web application which will be used as UI (user interface). User will be able to access data from server using this web application, and will upload/get Ads.

4.2 Development Tools

4.2.1 Language Selection

The project implements in the following languages.

- **PHP5**

  PHP is a general-purpose scripting language that is especially suited to
  Server-side web development.

- **MySQL 5.6.15**

  Used for database

- **HTML/CSS**

  Used for designing of web pages

- **JavaScript/jQuery**

  Use for scripting and validation.

Chapter 5

Software Test Document

5.1 Introduction

Testing is the process of evaluating a system or its component(s) with the intent to find whether it satisfies the specified requirements or not. This chapter specifying the test approach, test plan which include features to be tested, testing tools and techniques and test cases that involve a set of steps that can be used while performing testing tasks.

5.2 Test Strategy

Test approaches or test strategy is one of the most powerful factors in the success of the test effort and the accuracy of the test plans and estimates. I will use **Acceptance test** approach for testing the NAA. Acceptance test is a test conducted to determine if the requirements of a specification are met. The main purpose of this test is to evaluate the system's compliance with the business requirements and verify if it has met the required criteria for delivery to end users.

5.3 Test Plan

A test plan describes how testing will be accomplished on a software product, together with the resources and schedule needed. It is the most important activity to ensure that there is initially a list of tasks and milestones in a baseline plan to track the progress of the project. It also defines the size of the test effort.

It also describes that which features to be tested and which features are not to be tested.

5.3.1 Features to be Tested

All the major functions (functional requirements) of Pak Ads Server are to be tested.

Following are the list of features to be tested:

- User Registration
- Login
- Manage Profile
- Submit Ad
- Publish Ad
- Manage Users
- Make Payment
- Manage User Ads
- Manage Categories
- Manage Banners
- Logout

5.3.2 Testing Tool and Environment

Testing environment consists on those tools which will be used to conduct the actual testing. As this System is an Android application therefore we will use the Android studio for the testing purpose because the Android studio also provides the separate environment to test the Application.

Test Cases

A test case is a set of conditions or variables under which a tester will determine whether a system under test satisfies requirements or works correctly. The process of developing test cases can also help find problems in the requirements or design of an application. It is good practice to make your test cases atomic.

5.2.1 TC-1: Login

This test case will describe the success scenario of user login. The user enters the username and password. The system matches the username and password from the database. If it is matching the user login successfully.

Table 5.1 TC-1: Login

ID	T001
Description	User can login to the system.
Tester	User
Setup	Register user with Email mishal@gmail.com and password mishal1234 and user name mishal.

Input	1. Enter the following credentials
	   • Enter user name mishal
	   • Enter password "mishal1234".
	   • Press login Button.
	2. Enter the following credentials
	   • Enter user name mashal
	   • Enter password "mishal1234".
	   • Press login Button.

Expected results	1. User with user name mishal should be logged in. 2. User with ID mishal@gmail.com. Should not be logged in. There is error in the user name or password.
verdict	Pass

5.2.2 TC:2 Register User

This test case tells us about the success scenario of registration of user. If the user fills the all fields correctly then the user successful registered on the system.

Table 5.2 TC-2: Register user

ID	T002
Description	User can register to the server.
Tester	User
Setup	1. Create user account with following credentials: Username: mashal. Password: mishal1234 Email: mishaktk1995@gmail.com 2.Create user account with following credentials: Username: mashal Password: mishal1234 Email: mishaktk2519@gmail.com
Input	Enter Username: mashal Password: mishal1234 Email: mishaktk1995@gmail.com. Click on create account button. Create next account with Username: mashal, Password: mishal1234, Email: mishaktk2519@gmail.com Click on create account button.

Expected result	First time account with username: mashal should be created successfully and mail would be sent to user.
	Second time account with username: mashal should not be created because account with username: mashal already exists. System
	Should give message that "Username is not available".
Verdict	Pass

5.2.3 TC-3: Post New Ads

This use case tells us the success scenario how user can upload advertisement. The system shows the form to the user. User fill the form. If the user fills the form correctly then successfully upload the advertisement.

Table 5.3 TC-3: Post New Ads

ID	T003
Description	Advertisement will be uploaded.
Tester	Advertiser
Setup	Login as an advertiser.
Input	Login as an advertiser by entering username and password.
	Enter Title of advertisement.
	Enter start and end date.
	Selects advertisement type.
	Enter URL.
	Select category.
	Enter the description.
	Press submit button.
Expected result	Ads will be uploaded on the system.
verdict	Pass

5.2.4 TC-4: Logout
This test case is a test for logout. This test case tells us about testing of logout scenario.

Table 5.4 TC-4: Logout

ID	T004
Description	Logout from system
Tester	User (publisher, advertiser, admin)
Setup	User/admin login to the server.
Input	1. user/admin click on logout button
Expected results	Index page will appear.
Verdict	Pass

5.2.5 TC-5: Get Ads
This use case tells us how the publisher can publish ads.

Table 5.5 TC-5: Get Ads

ID	T005
Description	Ads will be published on different websites
Tester	Publisher
Setup	User login as publisher.
Input	1. Publisher clicks on Get Ads 2. press on Click to get Ad option 3. copy html code and paste on his/her website
Expected result	Ads will be successfully published at publisher's website.
Verdict	Pass

5.2.6 TC-6: Make Payment

This use case tells us about the payment made by advertiser.

Table 5.6 TC-6: Make Payment

ID	T006
Description	Advertiser makes payment
Tester	Advertiser
Setup	1. Advertiser login to the ads server.
Input	1. Advertiser upload the Ad. 2. System display message to make payment 3. Advertiser make payment through easy paisa.
Expected result	Publisher receives payment.
verdict	Pass

5.2.7 TC-7: Manage profile

User login as advertiser/publisher and can manage his profile.

Table 5.7 TC-8: Manage Profile

ID	T007
Description	User manages his profile.
Tester	User
Setup	User changes the account with the following credentials: First Name: Hira Last name: Farooq Username: Hira Password: 1234 Email: hira@gmail.com Phone: 0311-4372923 City: Nowshera

Input	1. User clicks on account setting option.
	2. User change the first name, last name, user name, email, password, contact and city.
	3. Clicks on submit button.
Expected result	User profile updated successfully.
verdict	Pass

5.2.8 TC-8: Manage profile
Admin login and can manage his profile.

Table 5.8 TC-8: Manage Profile

ID	T008
Description	User manages his profile.
Tester	User
Setup	User changes the account with the following credentials: Name: Mashal Farooq Username: Mashal. Password: 1234 Email: mashal@gmail.com Joining date: 12-5-2018 Phone: 0321-6679991
Input	1. User clicks on account setting option. 2. User change the name, username, email, password and contact and joining date. 3. Clicks on submit button.
Expected result	Admin profile updated successfully.
verdict	pass

5.2.9 TC-9: Manage users

This use case tells us about the how admin manages users.

Table 5.9 TC-9: Manage User

ID	T009
Description	Admin manage users.
Tester	Admin
Setup	Admin should login to the system.
Input	1. Admin clicks on manage users. 2. Admin clicks on view/delete users. 3. Admin click on ok button.
Expected results	Admin deleted the user successfully.
Verdict	pass

5.2.10 TC-10: Manage User's Ads

This use case tells us about the how admin manage users

Table 5.10 TC-10: Manage User's Ads

ID	T010
Description	Admin manage user Ads
Tester	Admin
Setup	Admin should login to the system.
Input	1. Admin clicks on manage user Ads 2. Admin clicks on edit (active/inactive)/delete user Ads. 3. Admin clicks on ok button.
Expected results	Admin edited/deleted user Ads successfully.

Verdict	pass

5.2.11 TC-11: Manage Categories
This use case tells us about the how admin manage categories.

Table 5.11 TC-11: Manage Categories

ID	T011
Description	Admin manage categories
Tester	Admin
Setup	Admin should login to the system.
Input	1. Admin presses manage categories. 2. Admin can edit/add/delete a category. 3. Admin clicks on ok button.
Expected results	Category is successfully added/edited/deleted.
Verdict	pass

5.2.12 TC-12: Admin Manage Banners
This use case tells us about the how admin manage banners

Table 5.12 TC-12: Manage Banners

ID	T012
Description	Admin manage banners
Tester	Admin
Setup	Admin should login to the system.
Input	1. Admin presses manage banners. 2. Admin can edit/add/delete banners. 3. Admin clicks on Ok button
Expected results	Banner is successfully added/edited/deleted.
verdict	Pass

Chapter 6

Conclusion and Future Enhancement

6.1 Introduction
This document describes the project conclusion and future enhancements.

6.2 Conclusion
The basic purpose of Pak Ads Server Web-based application is to provide a platform to the people for advertising their products. This application facilitate advertiser to advertise their products over internet without spending much more on advertisement. Application also provide opportunity to websites owners to earn money by providing space to ads on their website. It saves user time and money.

6.3 Future Enhancement
It is possible to enhance the application in future. Here are some features that can be added to application:

- This could be Android App in future.
- It will support Multiple Languages.
- In future, more payment method will be provided to user.
- It will also provide custom banner size.

References

[1] Roger S. Pressman, Software Engineering - A Practitioner's Approach, McGraw Hill, 7th Edition, 2010

[2] Applying UML and Patterns, Craig Larman, Second Edition.

[3] Thomas M. Connolly and Carolyn E. Begg, Database Systems, A Practical Approach to Design, Implementation and Management, Fourth Edition, 2005.