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# **Online Tender Management System(OTMS)**

In partial fulfilment of the requirements for the degree of  
**Bachelor of Science in Computer Science**

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Department of Computer Sciences  
Bahria University, Lahore Campus

June 2018



# Certificate



We accept the work contained in the report titled  
“ONLINE TENDER MANAGEMENT SYSTEM(OTMS)”,  
written by  
USMAN BASHIR

as a confirmation to the required standard for the partial fulfilment of the degree of  
Bachelor of Science in Computer Science.

Approved by:

Supervisor: Ms. Summaira Nosheen.

\_\_\_\_\_  
(Signature)

June 4<sup>th</sup>, 2018



**DECLARATION**

I hereby declare that this project report is based on my original work except for citations and quotations which have been duly acknowledged. I also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

Enrolment	Name	Signature
<b>03-134142-090</b>	USMAN BASHIR	

Date : 4<sup>th</sup> June 2018



Specially dedicated to  
my beloved grandmother, mother and father  
(Usman Bashir)





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In addition, I would also like to express my gratitude to my loving parent and friends who had helped and given me encouragement.

Usman Bashir



## **ONLINE TENDER MANAGEMENT SYSTEM(OTMS)**

### **ABSTRACT**

For business we require tools that can automate manual processes which can be modified when required with the passage of time. Tendering is one such process which is difficult to handle manually. At present the whole process is paper-based. Tenders are posted in newspapers and bidders get access to detailed versions of those tenders after paying a certain fee. This process can be streamlined if there is a common platform where the people who post the tender and those who bid on them can communicate directly. To manage this process, a web based platform; online tender management system (OTMS) is developed. Through this platform tenders can then be viewed from anywhere and at any time. This platform provides a facility for the client to post their tenders online and for the bidders to submit their proposals for those tenders. Through this system the bidders can get access to tender details directly without any intermediate steps. To utilise these features both the clients and bidders have to register themselves on the platform. At this moment, this platform will cover only the information technology based tenders which include categories like networking, computing power and computing hardware. However, at a later date other categories can be added to further expand this system



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## **CHAPTER 1**

### **INTRODUCTION**

#### **1.1 Background**

Currently tender system is manual process which is wastage of time, manpower and money. Now days, tender are processed through document, in which advertisements are given in newspaper with required details. Bidders read the details, if interested buy the tender plan after paying the fee to submit bid. In that plan all the details of the tender are available. After that bidder submit his bid before the closing date. On the closing date, client evaluate the bidding details and award the tender to that bidder who quoted the least amount for that particular tender [1]. Manually doing this task it required a lot of time.

#### **1.2 Problem Statements**

Tendering process is complex and difficult to manage manually. In this modern age the people are following the manual process of tender in which the tender notifications are published in newspapers which involves a lot of cost, searching in newspapers is time-taken and confirmation of tenders which takes a lot of time. Currently tender system is manually process which is wastage of time, manpower and money. There is a communication gap between the client requiring the services and the rightful contractors for the job.

### **1.3 Aims and Objectives**

The objectives for developing this platform are as following:

- i) To convert current manual process into an electronic platform which can only be accessed through internet.
- ii) To provide a platform where the client can post his tender online and relevant can submit his bid.
- iii) To fill the communication gap between them.

### **1.4 Scope of Project**

This platform(OTMS) will be getting tender from different clients from different locations. Tender will be visible to the all registered members of same category of this platform till ending date after that tender will be expired. The purpose of developing this platform is that advertising in newspapers involves a lot of cost, searching in newspapers is time-taken and confirmation of tenders which takes a lot of time [2]. This platform will cover only information technology tenders which includes categories like networking, computing power and computing hardware. Through this platform the tender can be viewed anywhere and anytime. One account type can be register against a one email address. Every client and bidder have their own profile[3]. Client can post tender by login to the system. Bidder can change their categories at any point. Bidder should be able to see the new opening tenders and submit bid on them. This platform will notify bidder whenever a request is generated for tender according to their selected categories. The relevant bidders will get notifications and submit his bid. The OTMS will helps finding the accurate contractor for job in terms of price. On the closing date of tender, the system will automatically assign tender to that bidder which quoted low cost for that tender. Contractor may ask queries immediately after the request from the client. This platform will remove the communication gap between the client and bidder. User are able to contact the admin via chat service module and admin response them.

## CHAPTER 2

### SOFTWARE REQUIREMENT SPECIFICATION (SRS)

#### 2.1 User Classes and Characteristics

There will be three type of user classes which are given below

##### **Admin (OTMS)**

Admin login to the system then he/she have the full access to the system in which he/she can view all the register user, update user information, delete user, manage transections, view the tender and then logout.

##### **Client**

Initially the client will register to the system and will post his/her tender and if he/she is already a user then he/she will just post the tender. He/she can manage the accounts, modify the tender, publish more than one tender, withdraw amount, transect tender fee, and communicate with the contractor and can logout as well.

##### **Bidder**

Bidder will register to the system then he/she can view the tender, submit the bid, receive notification, apply on tender by clicking on notifications, communicate with the client, receive the payment, and can log out as well.

## 2.2 Operating Environment

While designing and developing this platform, there are following hardware and software requirements.

**Table 1 Operating Environment**

Name	Description
Operating system	Windows, OSX and Linux.
Browser	Google chrome, Mozilla Firefox, and Internet explorer.
Languages	PHP, HTML5, CSS, Bootstrap.
Tools	Adobe Dreamweaver CC,
Database	MySQL

## 2.3 Design and Implementation Constraints

For the front-end development HTML, CSS and for back-end development PHP is used. MySQL database will be used to store the data instead of purchasing and deploying a hardware server because now a day, trend is moving toward cloud databases.

## 2.4 Assumptions and Dependencies

- The performance of (OTMS) depends upon on internet of the user due to which fast internet helps to retrieve the data fast.
- Once the bid is submitted by bidder it cannot be edit or retrieved.



## 2.5 System Requirement Chart

**Table 2 System Requirement Chart**

ID	Type	Priority	Source	Title	Description
<b>FR1</b>	Functional	High	User Admin	Access	The system allows its access to the Admin. The system allows its access to the Client. The system allows its access to the Admin.
<b>FR2</b>	Functional	High	User	User registration	System will provide registration to clients. System will provide registration to bidders. System will restrict the client to register more than one account through one email address.  System will restrict the bidder to register more than one account through one email address
<b>FR3</b>	Functional	High	Client	Post Tender	Client can post one or more tenders.

<b>FR4</b>	Functional	High	Admin	Manage User account	<p>The system shall allow admin to delete the user.</p> <p>The system shall allow admin to update user.</p> <p>The system shall allow admin to view the tender detail.</p>
<b>FR5</b>	Functional	High	Admin	Manage Tender	<p>The system shall allow admin to view tender.</p> <p>The system shall allow client to view tender.</p> <p>Client can edit tender before posting the tender. Once the tender is submitted it can never be edit or delete .</p>
<b>FR6</b>	Functional	High	Bidder	pop-up notification	Bidder will receive notifications whenever a desired category tender is placed.
<b>FR7</b>	Functional	High	Bidder	Tender Assignment	System will assign tender to that bidder which quoted low price for tender.
<b>FR8</b>	<b>Manage Profile</b>				
<b>FR8.1</b>	Functional	moderate	Admin	Manage Profile	<p>Admin can view his/her profile</p> <p>Admin can edit his/her profile</p>

<b>FR8.2</b>	Functional	moderate	Client	Manage profile	client can view his profile client can edit his profile
<b>FR8.3</b>	Functional	moderate	Client	Manage profile	Bidder can view his/her profile Bidder can edit his profile
<b>FR9</b>	Functional	High	Client, Bidder	conversation/Query	Contractor may ask queries immediately after the tender request from client via chat service.
<b>FR10</b>	Functional	High	Client	Deposit tender fee	Client will have to pay tender fee to the admin account before posting tender.
<b>FR11</b>	Functional	High	Admin	Confirm Payment	The system will confirm payment status first and then post tender

## 2.6 Other Non-functional Requirements

### 2.6.1 Performance Requirements

- The system should perform all the actions correct and frequently.
- The system should give a response within reasonable time.
- internet is very essential to run the system because the websites usually rely on the internet. So the faster internet will give the better performance for the system.

- The system should display confirmation message to user in a sensible time after the submission of information to the system.

### **2.6.2 Security Requirements**

- System shall permit only to authorized user
- User should be login to the system

### **2.6.3 Software Quality Attributes**

- This is a web based application and gives users a high portability so it can be used with internet access and browser.

### **2.6.4 Other Requirements**

#### **2.6.4.1 Availability:**

The system should be available 24/7.

#### **2.6.4.2 Maintainability:**

The system should be maintained and configured easily

## **CHAPTER 3**

### **DESIGN AND METHODOLOGY**

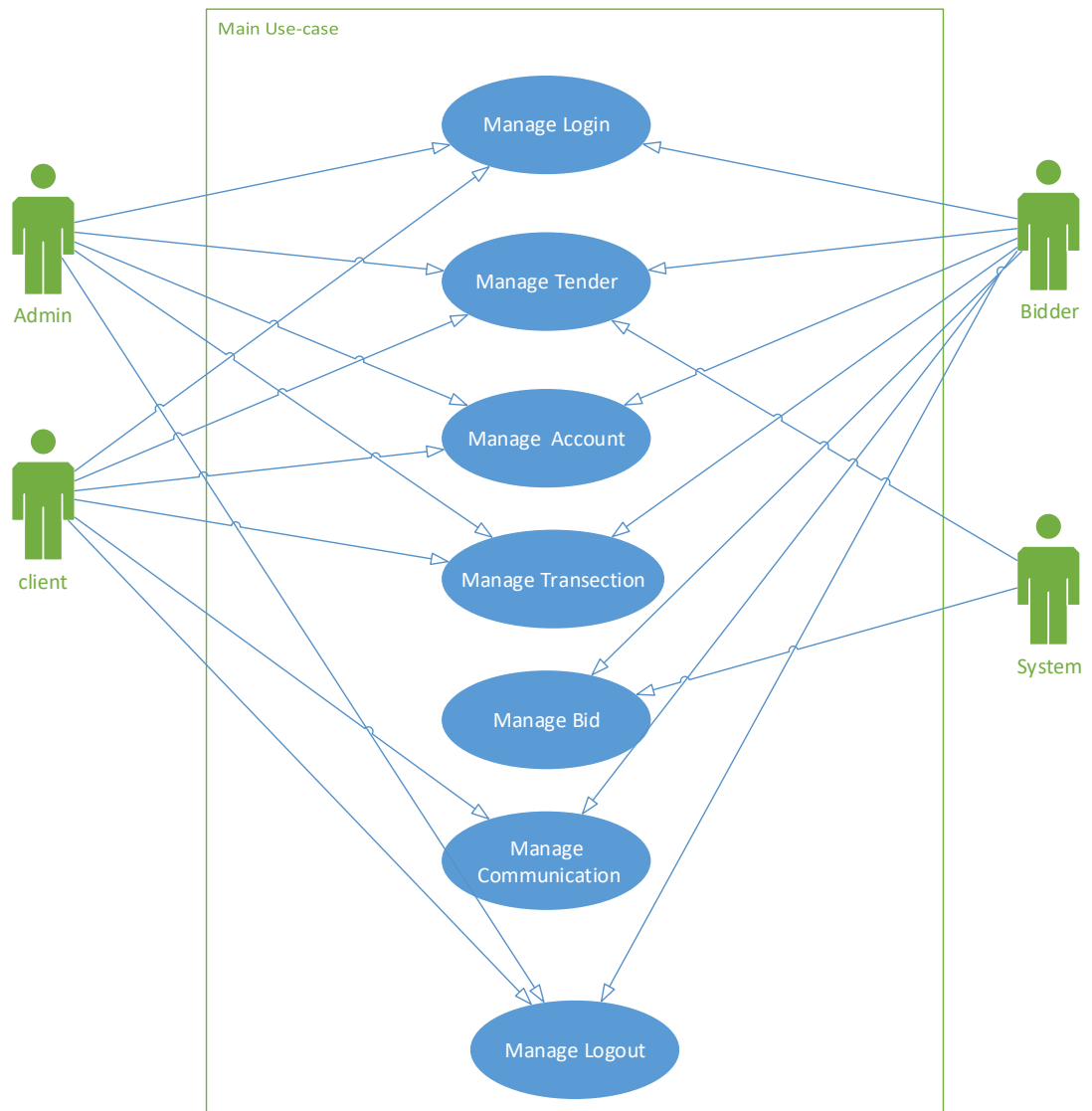
This chapter gives overview of the design of Online Tender Management System. The system architecture design gives the complete view of system. This will allow developers and users to see and check the design in detail.

Following artefacts included in this Chapter

1. Use case diagrams.
2. Use case descriptions.
3. Sequence Diagrams.
4. Domain Model.
5. Entity Relationship Diagram
6. Design Class Diagram.
7. Operation Contract

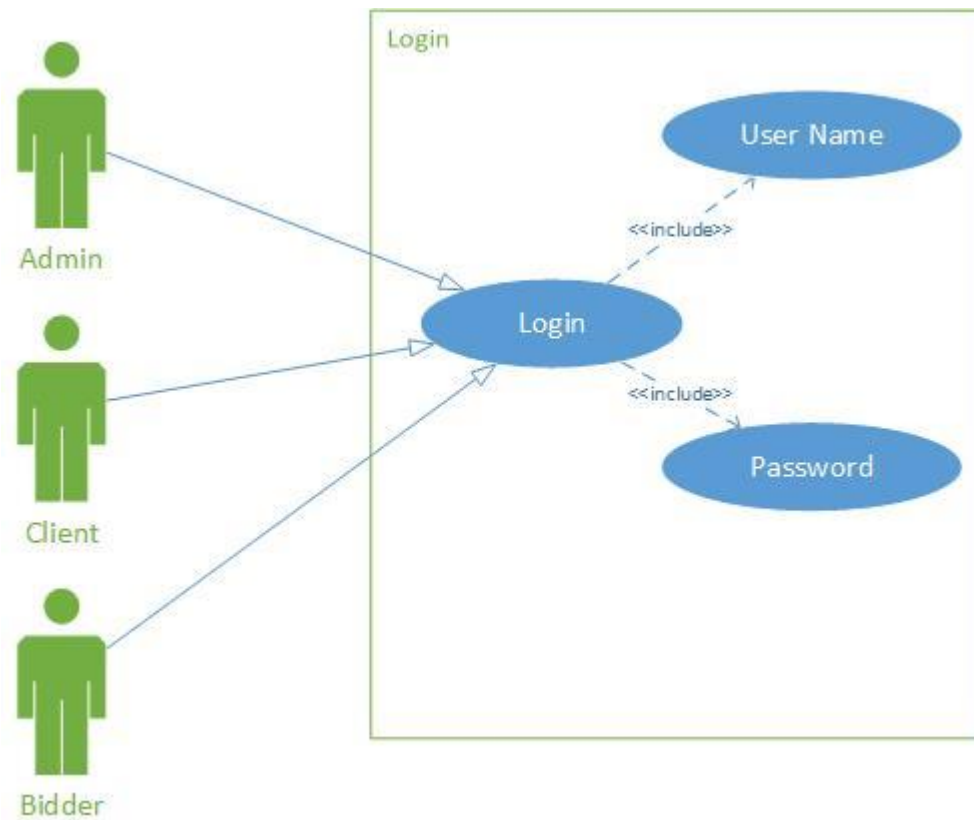
### 3.1 Use-Case Diagrams

#### 3.1.1 System Use-Case diagram



**Figure 1 System Use-Case diagram**

### 3.1.2 Login Use-Case diagram



**Figure 2 Login Use-Case diagram**

### 3.1.3 Registration Use-Case diagram

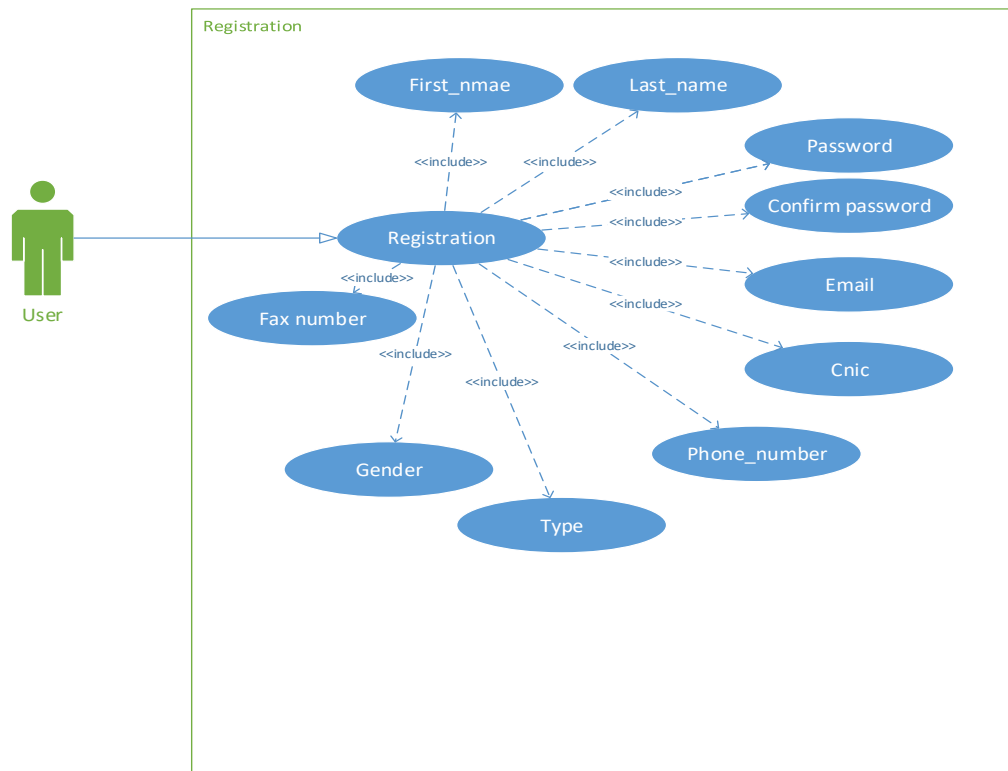


Figure 3 Registration Use-Case diagram



### 3.1.4 Manage Bid Use-Case diagram

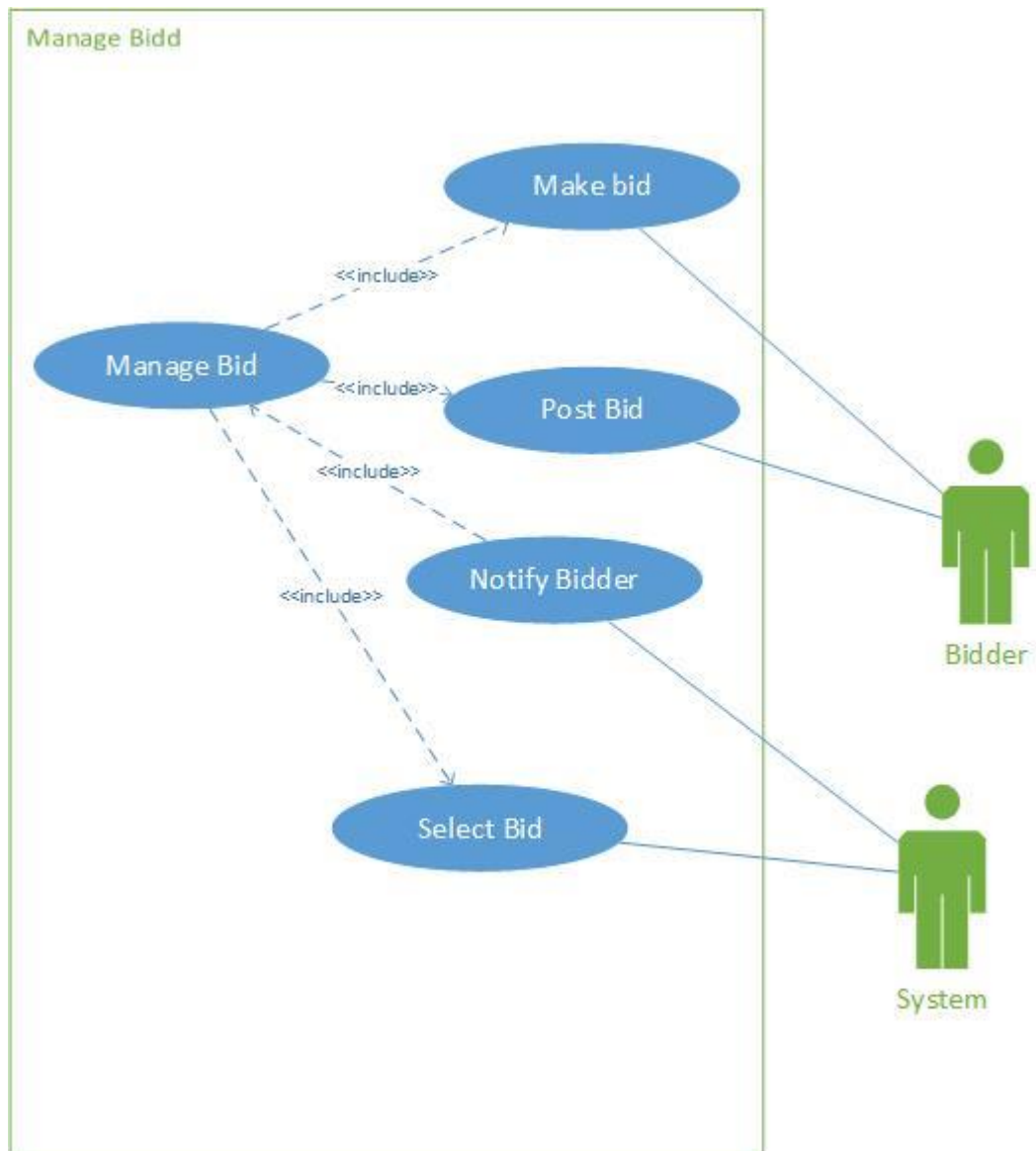


Figure 4 Manage Bid Use-Case diagram

### 3.1.5 Manage Tender Use-Case diagram

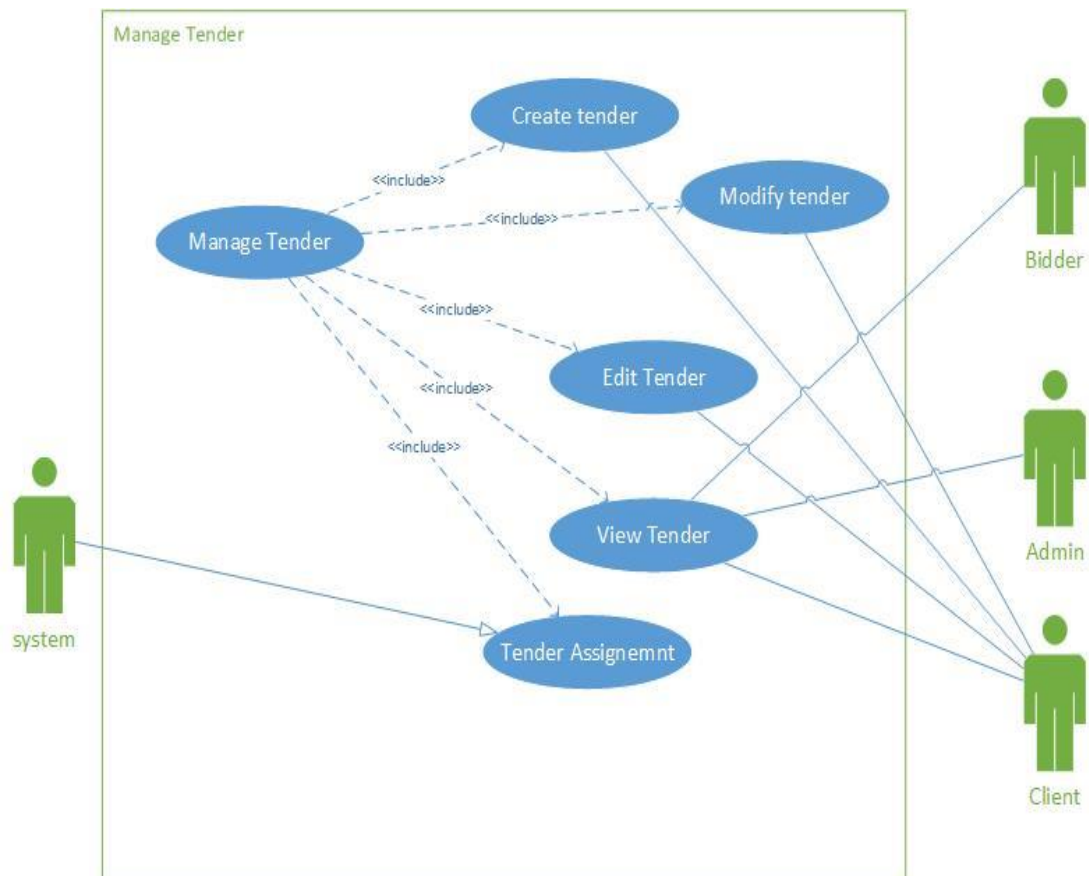
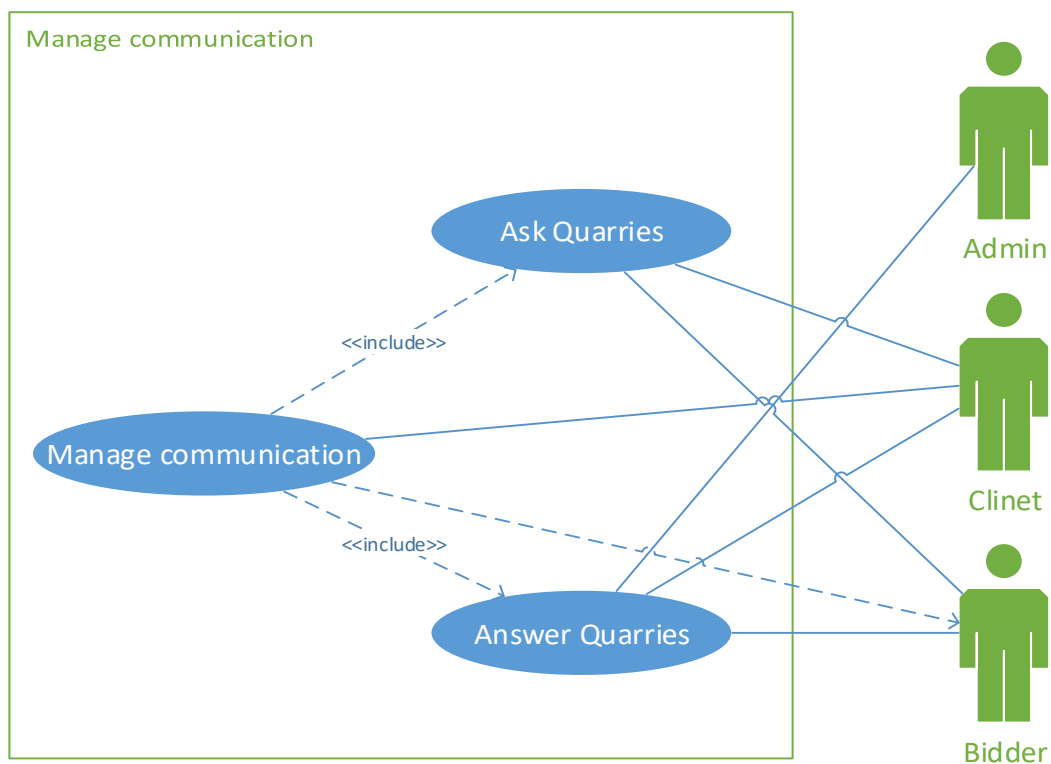


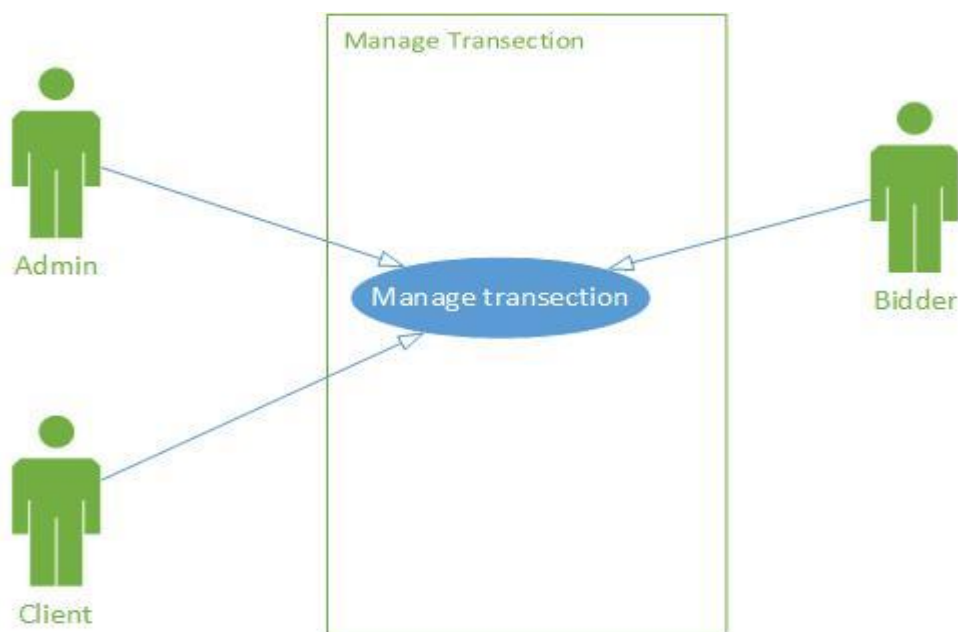
Figure 5 Manage Tender Use-Case diagram

**3.1.6 Manage Communication Use-Case diagram**



**Figure 6 Manage Communication Use-Case diagram**

**3.1.7 Manage Transection Use-Case diagram**



**Figure 7 Manage Transection Use-Case diagram**

### 3.1.8 Manage Logout Use-Case diagram

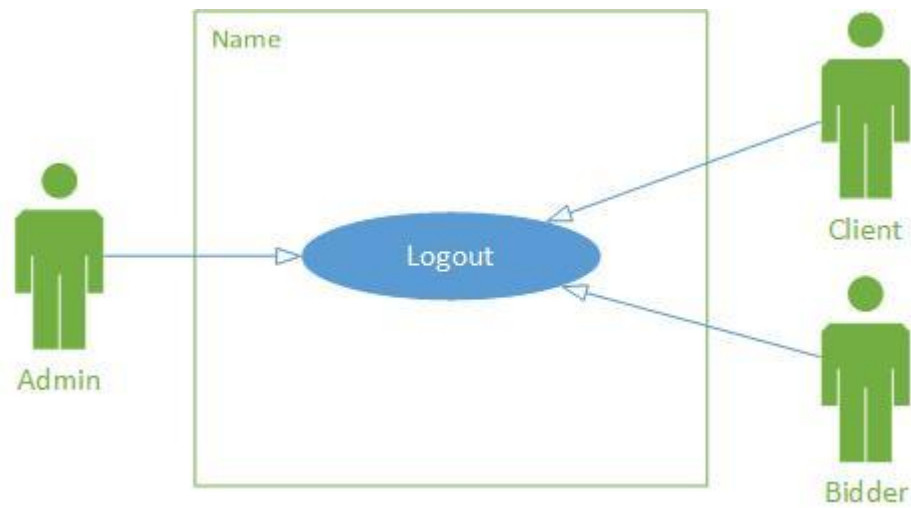









Figure 8 Manage Logout Use-Case diagram

## 3.2 Use Case Descriptions

### 3.2.1 Main use-case description

**Table 3 Main use-case description**

<b>Use case name:</b> Online Tender Management System	<b>Id:</b> OTMS-1	<b>Priority:</b> High
<b>Actor:</b> User, Admin		
<b>Description:</b> This is the main use case of the Online Tender Management System		
<b>Trigger:</b> This use-case will describe the overall working of the system.		
<b>Type :</b> External		
<b>Pre-Condition:</b> The user must be visit the website.		
<p><b>Normal Course</b></p> <p>1. Customer fill the registration form.</p> <p>1.1 User request for registration.</p> <p>1.2 System ask user to confirm email otherwise he can't login to the system.</p> <p>1.2 System send request to the database to save registration</p> <p>1.3 System database save the creational.</p> <p>2. User request for login </p> <p>2.1 System approved the request  for login</p> <p>3. System allow the client to place tender</p> <p>3.1 Client fill tender form </p> <p>3.2 System will check whether the  client payment is made for that tender.</p> <p>3.3 System publish the tender if  client submit the tender fee.</p> <p>4. System send notification to bidder</p> <p>4.1. Relevant bidder will receive notification when the request of same category tender is generated.</p> <p>4.2. Interested bidder submits bid. </p> <p>5. System assign tender to the bidder </p>	<p><b>Information for steps</b></p> <p>Username and Password</p> <p>Confirm login and redirect to the profile</p> <p>Notification of submission.</p> <p>Return status of payment</p> <p>Request status.</p> <p>Notification of submission.</p> <p>Tender assignment</p>	

<p>which quoted less price for that tender.</p> <p><b>5.1</b> Database save all the information of tender</p> <p><b>6.</b> Bidder shall be able to ask quarries. ←</p> <p><b>7.</b> Client rate the contractor after → tender completion</p> <p><b>7.1</b> System added the feedback to the bidder profile.</p> <p><b>8.</b> Customer request to manage his/her profile</p> <p><b>8.1</b> System update the information of user in database</p> <p><b>9.</b> System admin will keep track of all information of tender and user of system.</p> <p><b>9.1</b> Admin can delete bidder on the basic of negative feedback form client.</p> <p><b>9.2</b> Admin can view all the running ← tender.</p> <p><b>10.</b> User request to manage his/her ← profile.</p> <p><b>10.1.</b> System send detail to database ← for update information.</p> <p><b>11.</b> Admin and user can logout.</p>	<p>Response quarries</p> <p>Submit feedback</p> <p>System will display all the continue tender</p> <p>Display updated notification</p> <p>Database update.</p>
<p><b>Alternative Course</b></p> <p><b>1.</b> Desire category bidder may be not available to this platform because the system will only accept technology tender</p>	
<p><b>Post condition:</b></p> <p><b>1.</b> Cleint request for tender is successfully stored in database.</p> <p><b>2.</b> Contractor successfully completed the tender and add to contractor profile.</p>	
<p><b>Exception:</b></p> <p><b>1.</b> Desire category bidder may be not available to this platform.</p>	

### 3.2.2 Login Use Case description

**Table 4 Login Use Case description**

Use Case ID:	OTMS-2	
Use Case Name:	Manage Login	
Created By:	Usman Bashir	
Date Created:	December 20, 2017	
Actors:	Admin, User	
Description:	This use case will trigger when the user wants to login to the system	
Preconditions:	User should be registered first.	
Post conditions:	User login is successful then show the profile page to them.	
Normal Flow:		
<b>User Action</b>	<b>System Response</b>	
1. User click the login button.	1. The System shows login page.	
2. Give login credentials	2 The System show profile page after correct credentials verification.	
Exceptions:	User entered wrong credentials	
Includes:	None	
Priority:	High	
Special Requirements:	Interface should user friendly and easy to use.	

### 3.2.3 Registration Use-Case description

**Table 5 Registration Use-Case description**

Use Case ID:	OTMS-3	
Use Case Name:	Manage registration	
Created By:	Usman Bashir	
Date Created:	December 20, 2017	
Actors:	User	
Description:	This use case describe when the user visits the application for registration.	
Preconditions:	<ol style="list-style-type: none"> <li>1. Internet connectivity is available</li> <li>2. User click the registration button</li> <li>3. Give registration credentials.</li> </ol>	
Post conditions:	Successfully User registration and show the login page.	
Normal Flow:		
<b>User Action</b>	<b>System Response</b>	
1. User click the registration button.	1. The System shows registration page.	
2. Give registration credentials	2. The System show successfully registration of user and ask to confirm their email. After the confirmation the client can login to the system.	
Exceptions:	Only one account can be register on one email address so there is a possibility the email is associated with another account already.	
Includes:	None	
Priority:	High	
Special Requirements:	Interface should user friendly and easy to use.	



### 3.2.4 Manage bid Use-Case descriptions

**Table 6 Manage bid Use-Case description**

<b>Use case name:</b> Manage Bid	<b>ID:</b> OTMS 4	<b>Priority:</b> High
<b>Actor:</b> User		
<b>Description:</b> This use case begins when client place tender and relevant category bidder want to submit bid.		
<b>Trigger:</b> This use-case will trigger when client place tender		
<b>Type :</b> Internal		
<b>Pre-Condition:</b>		
<ul style="list-style-type: none"> <li>• The user must be logged in to the system.</li> <li>• Client should place tender first.</li> </ul>		
<b>Normal Course</b>		<b>Information for steps</b>
1. Bidder create bid.	←	System will display bidding form
1.1 Bidder will fill the form and Post bid.	←	confirmation of bid submission.
2. System receive bid		
2.1 System select bid and assign tender to that bidder which quoted low price for that tender.	→	Save information in database.
<b>Alternative Course</b>		
1. Client have not submitted any tender.		
<b>Post condition:</b>		
1.Bid has been submitted successfully.		
<b>Exception:</b>		<b>None</b>

### 3.2.5 Manage Tender Use-Case description

**Table 7 Manage Tender Use-Case description**

<b>Use case name:</b> Manage Tender	<b>ID:</b> OTMS 5	<b>Priority:</b> High
<b>Actor:</b> User, Admin		
<b>Description:</b> This use case will explain the tender management according to user and admin		
<b>Trigger:</b> This use-case will trigger when client want to place tender		
<b>Type :</b> Internal		
<b>Pre-Condition:</b>		
<ol style="list-style-type: none"> <li>1. The user must be register to the system</li> <li>2. The user must be logged in to the system.</li> <li>3. The admin must be logged in to the system.</li> </ol>		
<b>Normal Course</b>		<b>Information for steps</b>
1.User and admin request system for Login	→	Username and password
1.1System approved or disapproved the Request by sending creational to database for login	←	Confirmation
2.Management of tender according to client		
2.1 Client can create tender	←	Request for tender creation
2.2 Client can modify the tender before posting	←	Modification of tender
2.4 client can view tender	←	Tender Details
3. Management of tender according to bidder		
3.1 Bidder can view tender.	←	Tender Details
3.2 Bidder submit bid on tender.		
4. Management of tender according to admin		
4.1. Admin can view tender.	←	Tender Details
5. Management of tender according to system		
5.1. System assign the tender to that bidder which quoted less amount for that tender.		
<b>Alternative Course</b>		
1. Desire category bidder may be not available to this platform because the system will only accept technology tender		
<b>Post condition:</b>		
1.Cleint request for tender is successfully stored in database and visible to admin and users.		
<b>Exception:</b>		
1. Desire category bidder may be not available to this platform.		

### 3.2.6 Manage Communication Use-Case description

**Table 8 Manage Communication Use-Case description**

Use Case ID:	OTMS-6	
Use Case Name:	Manage communication	
Created By:	Usman Bashir	
Date Created:	December 20, 2017	
Actors:	Admin, User	
Description:	This use case will trigger when the client place tender, relevant bidder receives notifications and want to communicate with each other. If the user have any quarry then he/she can ask quarries to admin via chat service module.	
Preconditions:	<ol style="list-style-type: none"> <li>1. User registered successfully.</li> <li>2. Client should place tender first.</li> <li>3. User should click the quarry button.</li> </ol>	
Post conditions:	Query respond successfully.	
Normal Flow		
<b>User Action</b>	<b>System Response</b>	
1. User click the quarry button	1. The System shows Quarry page .	
2. User or admin writes the reply and clicks the send button.	2. The System sends the query reply to the clients and bidder.	
Exceptions:	User may not ask any quarry.	
Includes:	None	
Priority:	High	
Special Requirements:	User must ask quarry first for response. .	

### 3.2.7 Manage Transection Use-Case description

**Table 9 Manage Transection Use-Case description**

Use Case ID:	OTMS-7	
Use Case Name:	Manage Transection	
Created By:	Usman Bashir	
Date Created:	December 20, 2017	
Actors:	Admin, User	
Description:	This use case will trigger when there is need of transection of amount.	
Preconditions:	Client place tender first and want to transect its fee.	
Post conditions:	Transection is successfully done.	
Normal Flow:		
<b>User Action</b>	<b>System Response</b>	
1. Client enter the tender details	1. The System allow client to transect tender fee.	
1. Client login with PayPal account to transect tender fee to admin account.	2. System confirm the tender fee and publish the tender.	
2. When contractor successfully completed tender and submit.	3. System will transect amount to contractor account.	
Exceptions:	Client enter the tender may not publish it .	
Includes:	None	
Priority:	High	
Special Requirements:	Client should place tender first and tender fee.	

### 3.2.8 Manage Logout Use-Case description

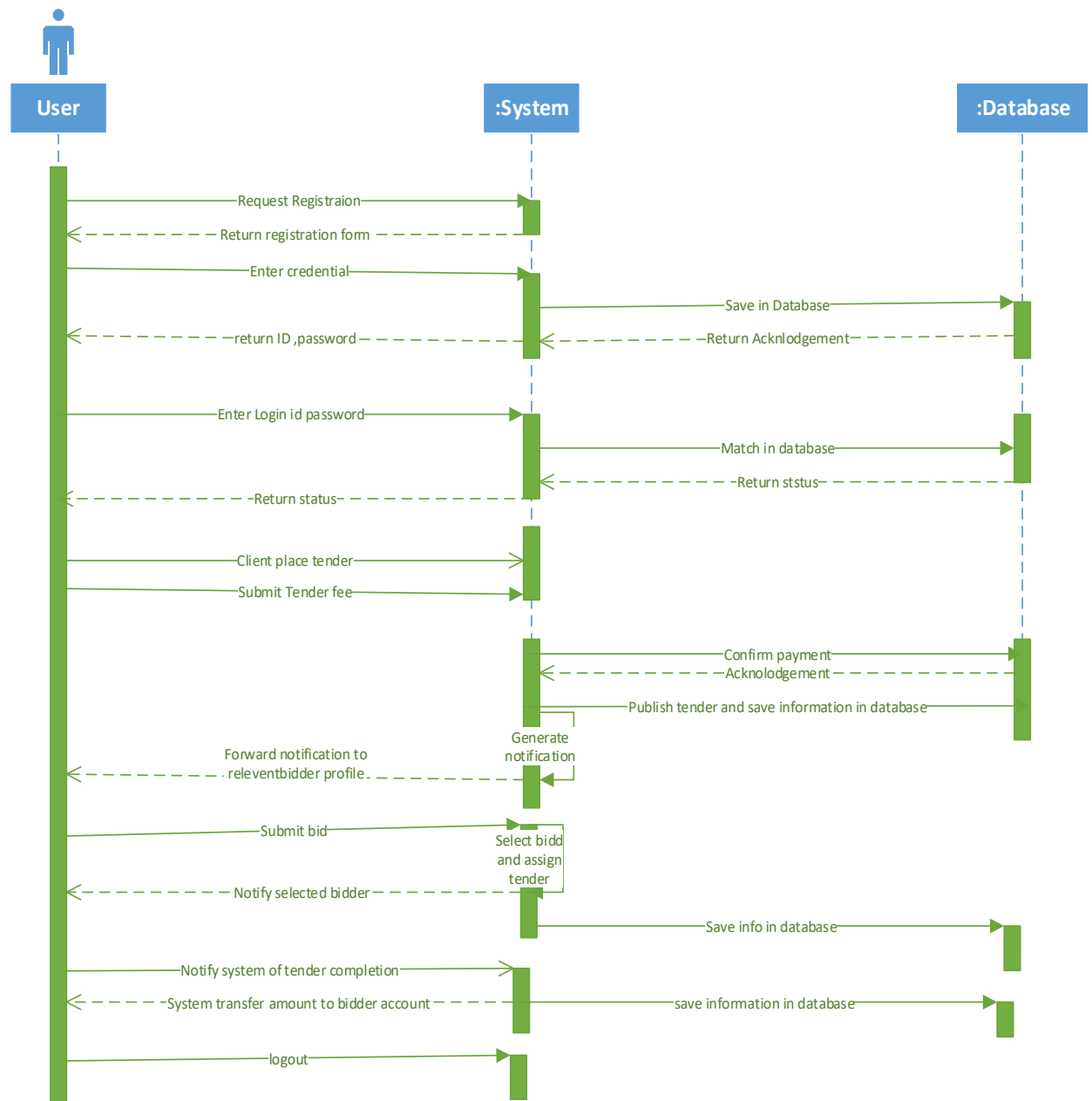
**Table 10 Manage Logout Use-Case description**

Use Case ID:	OTMS-8	
Use Case Name:	Manage Logout	
Created By:	Usman Bashir	
Date Created:	December 20, 2017	
Actors:	Admin, User	
Description:	This use case describe when the user and admin want to logout .	
Preconditions:	User should be login to the website.	
Post conditions:	User and admin logout successfully.	
Normal Flow:		
<b>User Action</b>	<b>System Response</b>	
<b>1.</b> User click the logout button.	<b>1.</b> User logout successfully.	
Exceptions:	None	
Includes:	None	
Priority:	High	
Special Requirements:	User should be login first.	



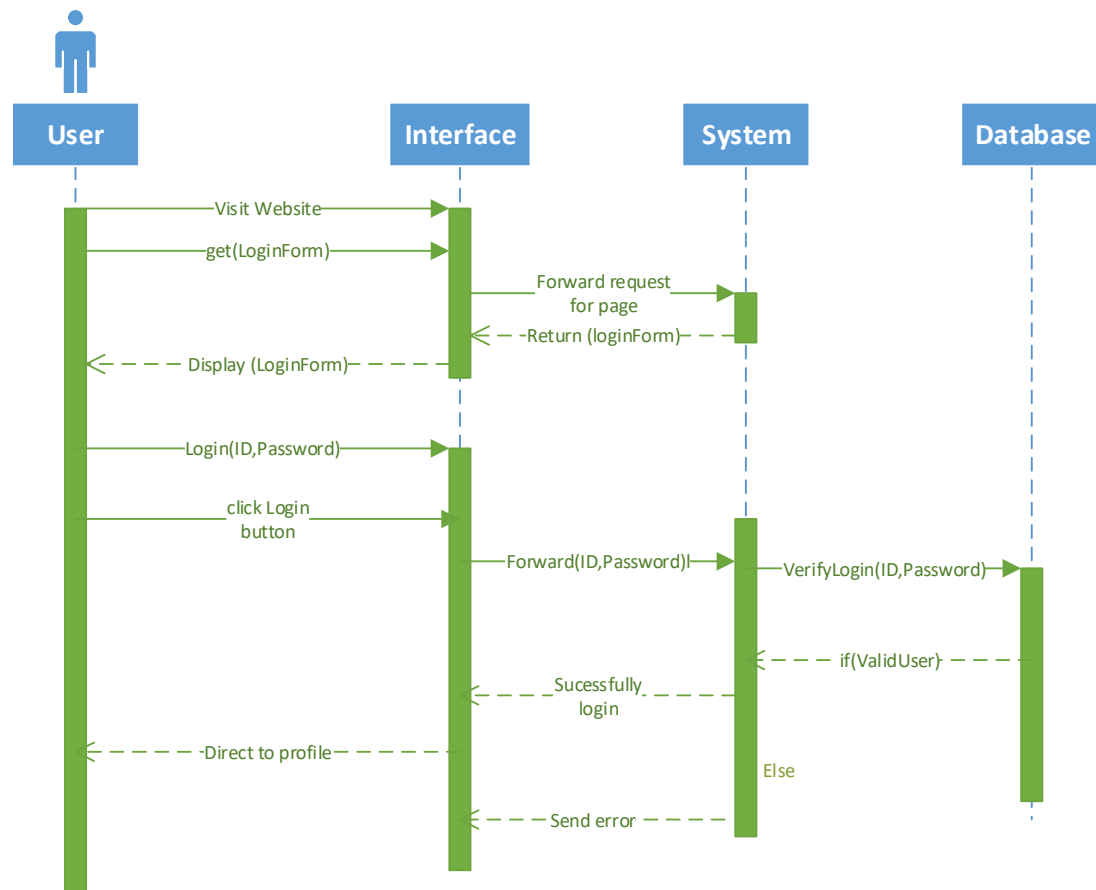
### 3.3 Sequence Diagrams

#### 3.3.1 Sequence diagram of system



**Figure 9** Sequence diagram of system

### 3.3.2 Sequence Diagram for login

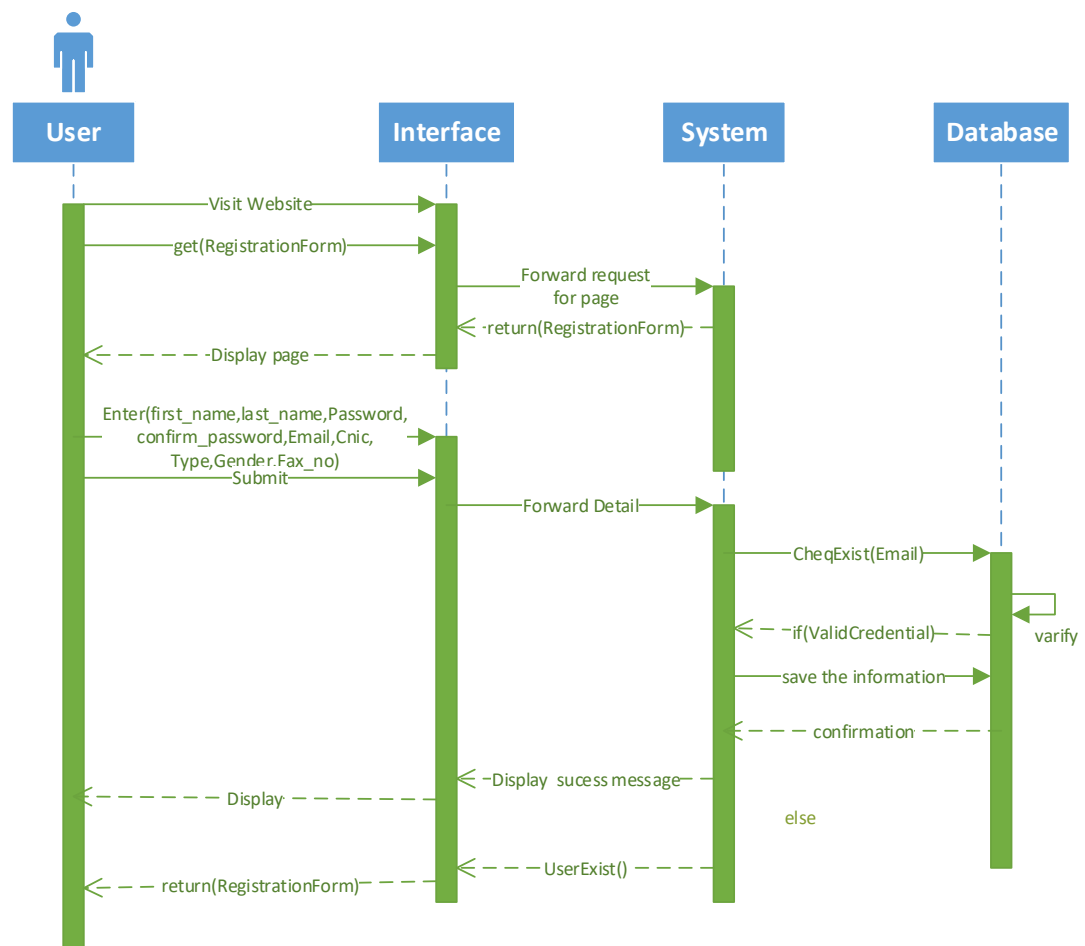


**Figure 10 Sequence Diagram for login**

The user visits the website and click the login button to get login form. Then the interface forward a request to the system for login form. Interface forward the request of form to the system and system display login form on interface. Then user enter login credential and the system will verify the log in email, password and type from the database which is saved during registration process. The database will match whether the user is information is matched or not. If the user is valid then it direct to profile page. if the user's data not match with the data which has stored in the database then the system display error message and redirect to login page.



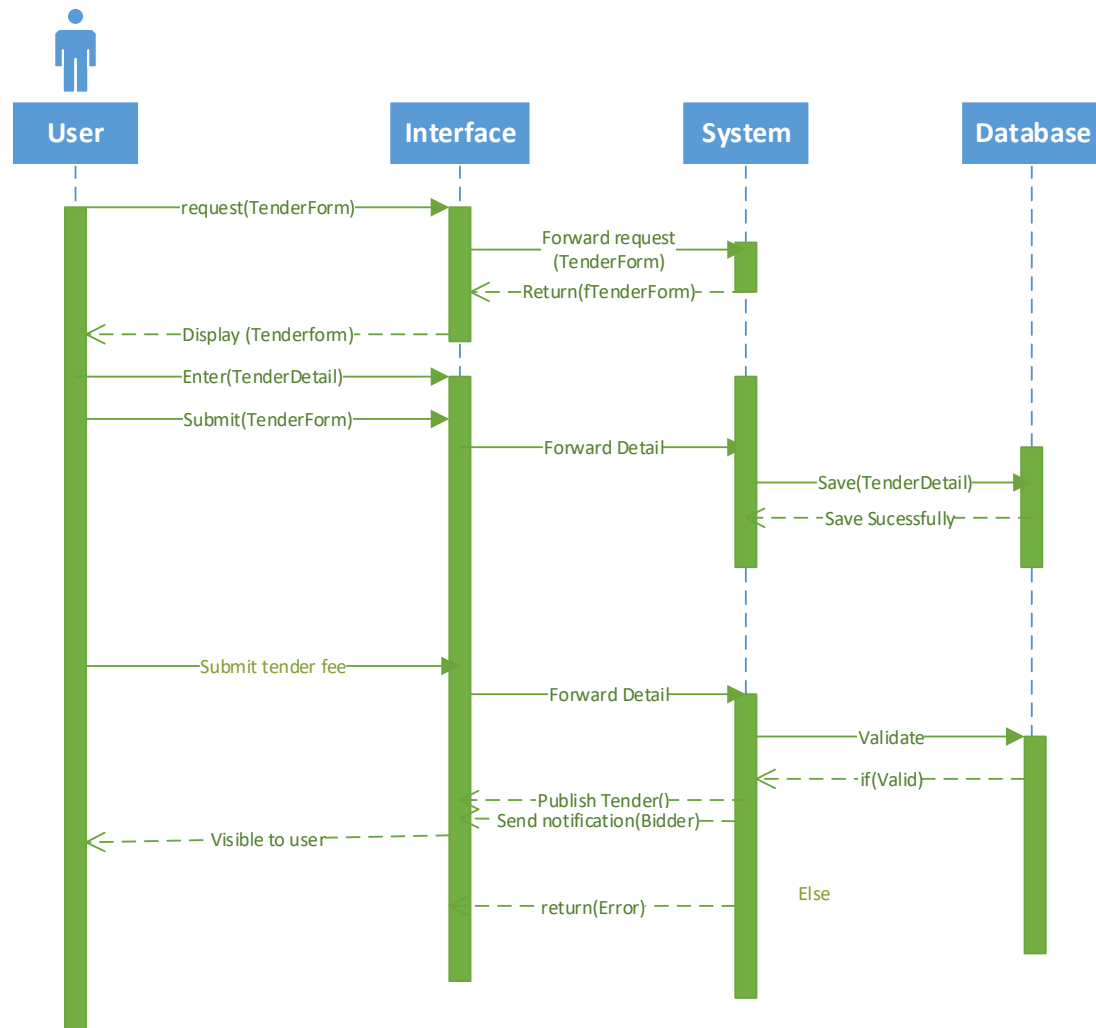
### 3.3.3 Sequence diagram for registration



**Figure 11** Sequence diagram for registration

The user will visit the website and click on a registration button to and then system will display the registration form to the user. The user will fill the registration form and submit it and then system will save the details in the database after the confirmation of email which is entered during registration process.

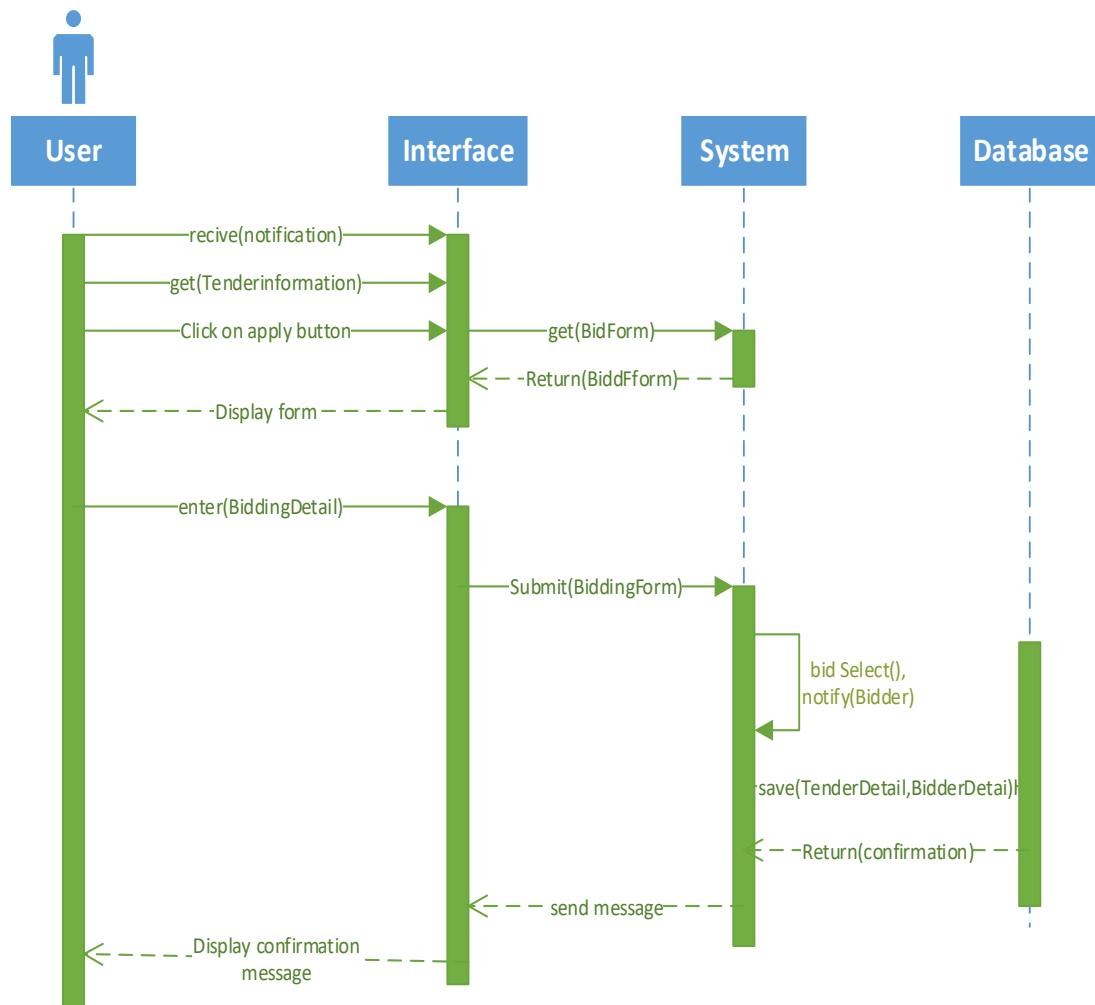
### 3.3.4 Sequence Diagram for manage tender



**Figure 12 Sequence Diagram for manage tender**

This diagram explains the process of placement of tender. When the client wants to place tender he or she will click on tender form by clicking the tender button and then the system will display tender form to the client. Client enter the tender details and that tender information is saved in database. when the tender information is saved in database then the client can edit then tender or publish by paying tender fee. Client pay tender fee to the admin account. After that the system publish the tender and bidder can view them.

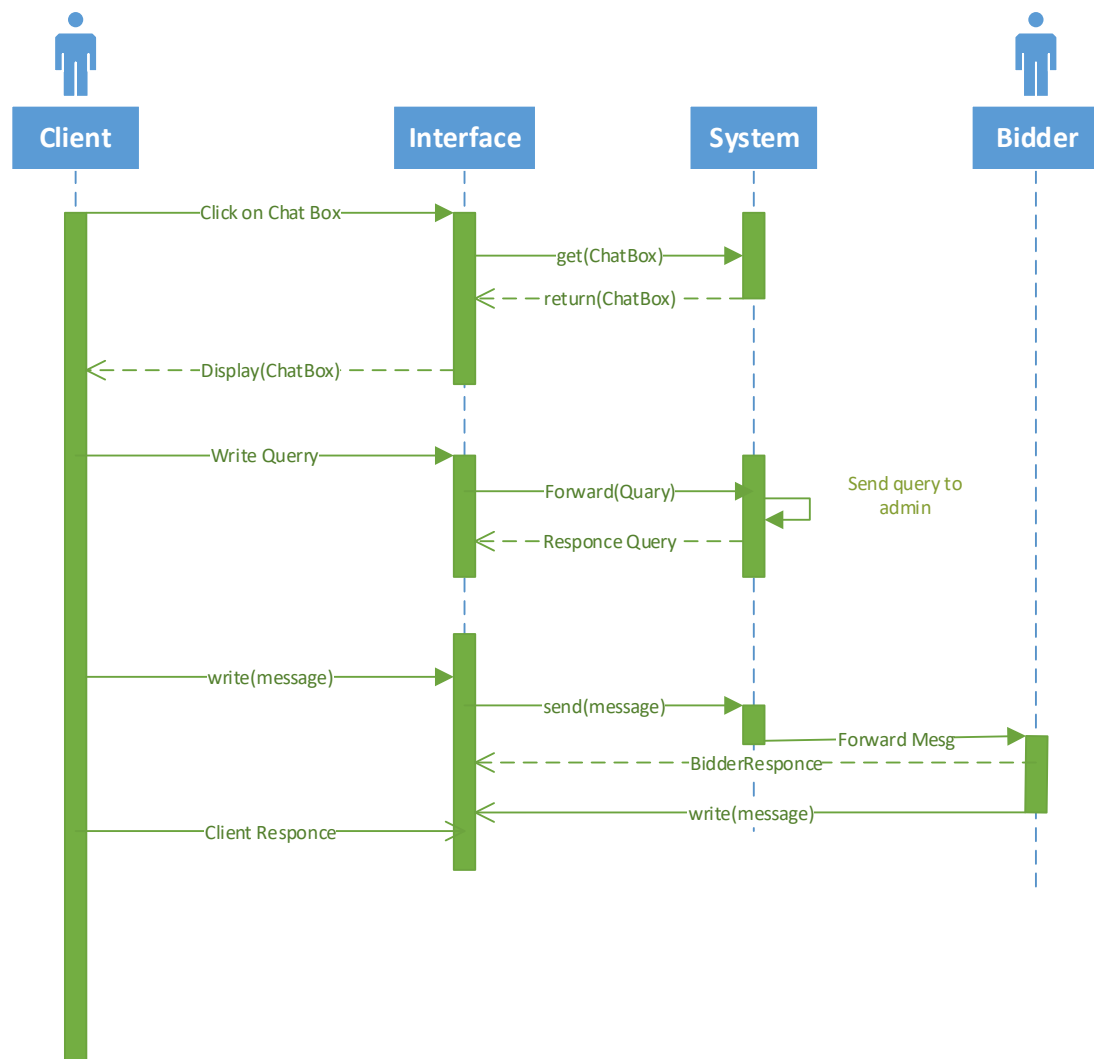
### 3.3.5 Sequence Diagram for manage bid



**Figure 13 Sequence Diagram for manage bid**

This diagram explains the management of bid when client place tender and bidder view it by clicking my\_tender tab. Bidder will get the tender information and apply on it by fill the bidding form and submit it and that bidding detail is saved in database. Than the system will selected that bidder which quoted less price for that tender and assign tender to that bidder.

### 3.3.6 Sequence Diagram for manage communication

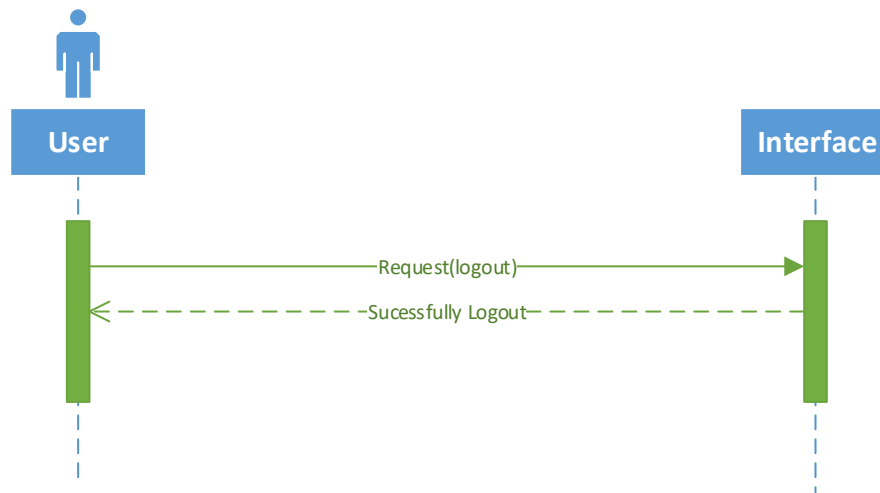


**Figure 14 Sequence Diagram for manage communication**

This diagram explains the management of communication of user and admin through chat box. The user clicks on the chat button and the system return the chat box and display the chat box window to the user. User write the query and admin respond them. Client and bidder also communicate with each other.



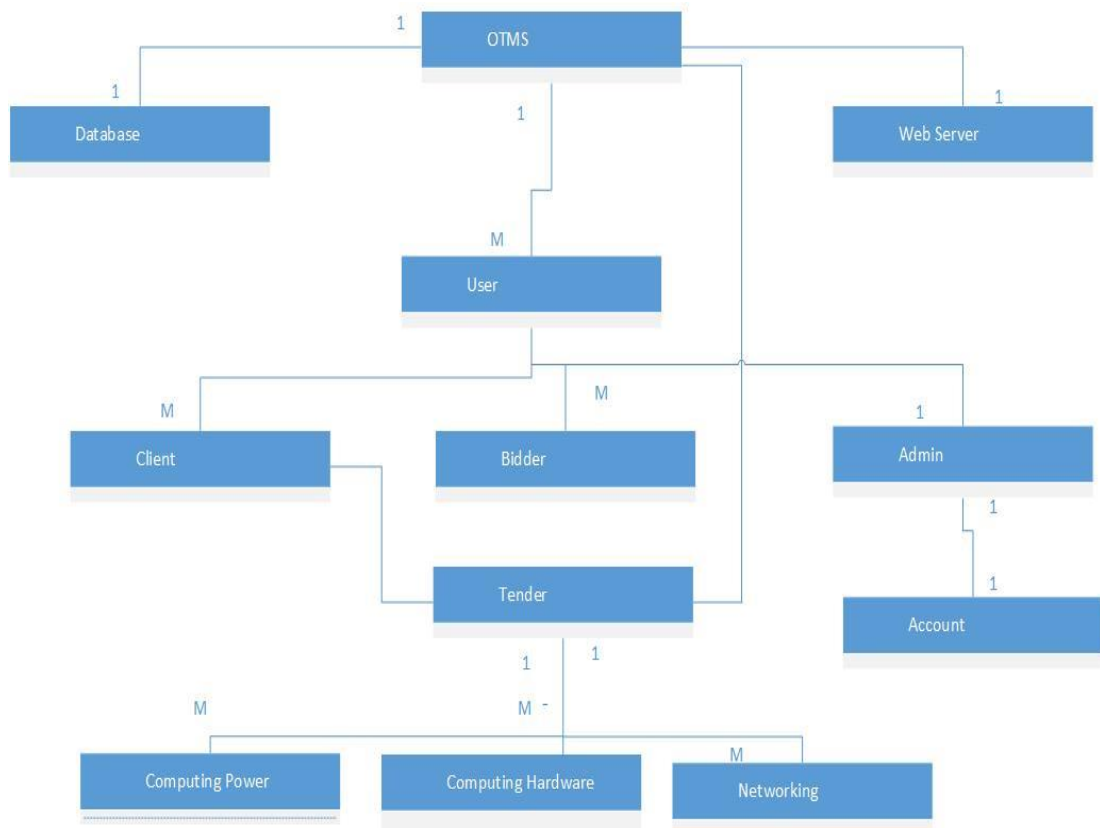
### 3.3.7 Sequence Diagram for logout



**Figure 15 Sequence Diagram for logout**

This diagram explains the process of logout. The user can send a request to the interface for log out, then the interface will respond the user by successfully allows them to log out.

### 3.4 Domain Model



**Figure 16 Domain Model**

### 3.5 Entity Relationship Diagram

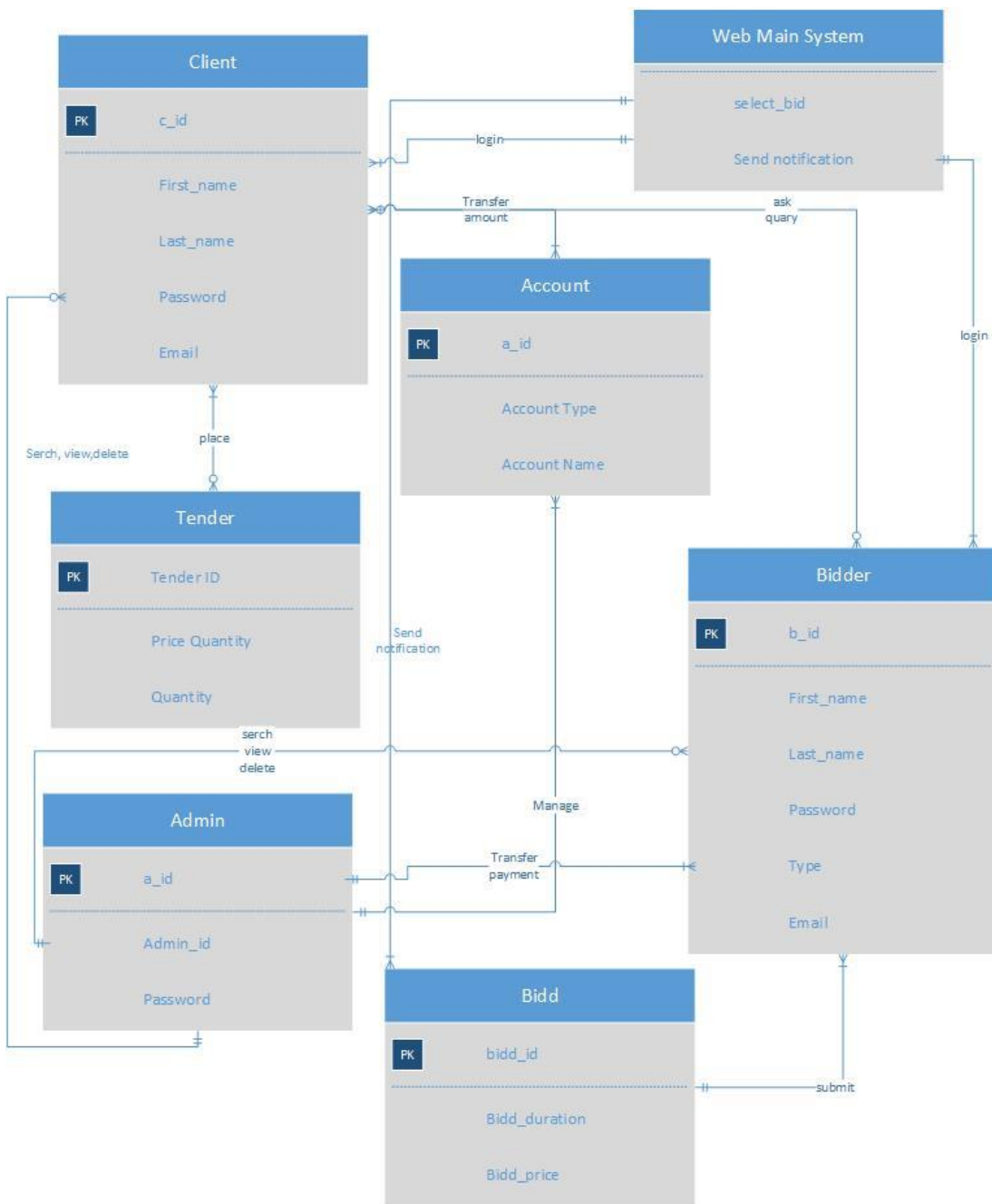


Figure 17 Entity Relationship Diagram



### 3.6 Class Diagram

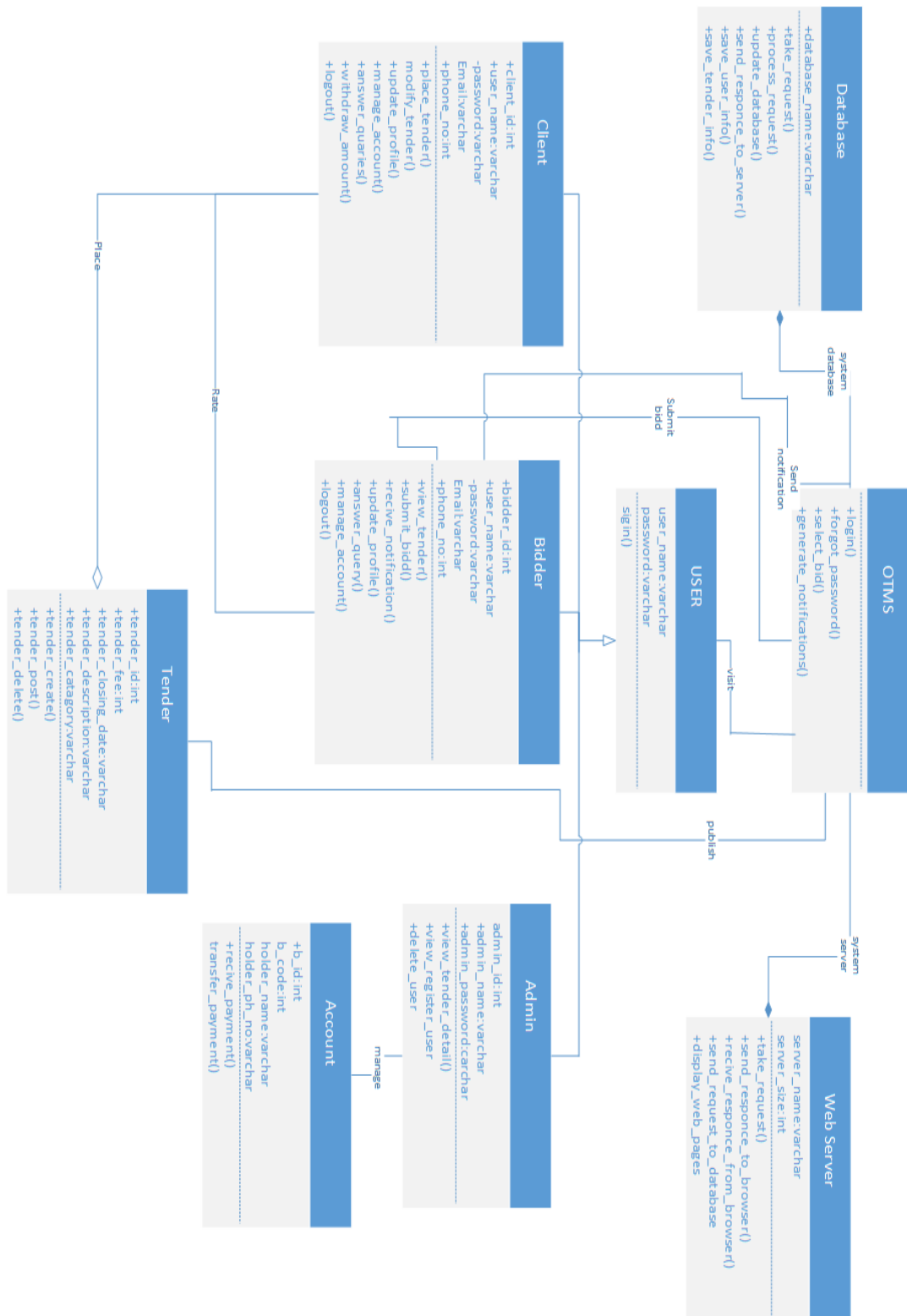


Figure 18 Class Diagram

### 3.7 Operation Contracts

#### 3.7.1 Registration

**Table 11 Registration**

Name	Registration
Responsibilities	Register the user
Cross Reference	None
Exception	System not respond properly in case of when server and link is down.
Preconditions	<ol style="list-style-type: none"> <li>4. Internet connectivity is available</li> <li>5. User click the registration button</li> <li>6. Give registration credentials.</li> </ol>
Post conditions	Successfully User registration and show the login page.

#### 3.7.2 Login

**Table 12 Login**

Name	Login
Responsibilities	Login of user to the system
Cross Reference	None
Exception	User entered wrong credentials
Preconditions	First the user done with the registration and wants to login to the system.
Post conditions	User login is successful then show the profile page to them.

### 3.7.3 Manage Bid

**Table 13 Manage Bid**

Name	Manage Bid
Responsibilities	Management of bid when the bidder submit bid.
Cross Reference	None
Exception	None
Preconditions	<ol style="list-style-type: none"> <li>1. The user must be logged in to the system.</li> <li>2. Client should place tender first.</li> </ol>
Post conditions	Bid has been submitted successfully..

### 3.7.4 Manage Tender

**Table 14 Manage Tender**

Name	Manage Tender
Responsibilities	Management of Tender when the client place Tender.
Cross Reference	None
Exception	Client may not have place any Tender.
Preconditions	<ol style="list-style-type: none"> <li>1. The user must be register to the system</li> <li>2. The user must be logged in to the system.</li> <li>3. The admin must be logged in to the system.</li> </ol>
Post conditions	<ol style="list-style-type: none"> <li>1. Client request for tender is successfully stored in database.</li> <li>2. Publish tender is visible to the admin and users.</li> </ol>

### 3.7.5 Manage Bid

**Table 15 Manage Bid**

Name	Manage Bid
Responsibilities	Management of bid when the bidder submit bid.
Cross Reference	None
Exception	None
Preconditions	<ol style="list-style-type: none"> <li>1. The user must be logged in to the system.</li> <li>2. Client should place tender first.</li> </ol>
Post conditions	Bid has been submitted successfully..

### 3.7.6 Manage Communication

**Table 16 Manage Communication**

Name	Manage Communication
Responsibilities	Management of communication when the client place tender, relevant bidder receive notifications and want to communicate with each other.
Cross Reference	None
Exception	User may not ask any quarry.
Preconditions	<ol style="list-style-type: none"> <li>1. User registered successfully.</li> <li>2. Client should place tender first.</li> <li>3. User should click the quarry button.</li> </ol>
Post conditions	Query respond successfully.

### 3.7.7 Manage Feedback

**Table 17 Manage Feedback**

Name	Manage Feedback
Responsibilities	when the bidder successfully completed tender and client want to rate the bidder and then feedback added to bidder profile.
Cross Reference	None
Exception	User may not ask any quarry.
Preconditions	<ol style="list-style-type: none"> <li>1. Client should place tender first.</li> <li>2. Bidder submit bid to get tender and completed successfully</li> </ol>
Post conditions	Feedback submitted by client is successfully added to contractor profile.

### 3.7.8 Manage Transection

**Table 18 Manage Transection**

Name	Manage Transection
Responsibilities	Management of transection.
Cross Reference	None
Exception	User card may be expired.
Preconditions	Client place tender first and want to transect its fee.
Post conditions	Transection is successfully done.

### 3.7.9 Manage Logout

**Table 19 Manage Logout**

Name	Manage Logout
Responsibilities	Logout from system
Cross Reference	None
Exception	None
Preconditions	User must logged in before
Post conditions	Successfully logout



## **CHAPTER 4**

### **DATA AND EXPERIMENTS**

#### **4.1 Languages used for implementation**

##### **4.1.1 Html**

Html stands for hypertext mark-up language (HTML) is a language which is used to create web pages and web applications. This is the front end language used to show content on web pages.

##### **4.1.2 CSS**

CSS stands for cascading style sheet .CSS define how HTML elements are shown on screen and used for the styling of front-end content.

##### **4.1.3 Java script**

Java script is a programming language which describe the behaviour of web pages. JavaScript code is written between starting and ending tag of script. It is used for the event handling.

##### **4.1.4 SQL**

SQL stands for structure quarry language used for storing, manipulating and retrieving data from database. That is why it is being used in this project because there are certain forms which are used to store and manipulate information.

##### **4.1.5 PHP**

PHP stands for hypertext pre-processor. PHP is open source scripting language. PHP

code is written between starting and ending tag of PHP. For backend of this project, PHP is used.

## **4.2 Tools used for Implementation**

### **4.2.1 Dreamweaver(Editor)**

Dreamweaver is basically an editor. All the code of project will be written in this editor.

### **4.2.2 XAMPP**

In this project it is used for the local host of data. This host is counting the database of the project in which there are collection of tables and each tables holds data.

## **4.3 Framework**

### **4.3.1 Code igniter (v 3.1.7)**

Code ignitor is a PHP framework which works on the MVC (Model, View, Controller). view section contains the views of web pages, controller section counting the function and load the views and in model section we write the quarries of SQL. for insertion, manipulation, and retrieving the data form database.

### **4.3.2 Bootstrap**

Bootstrap is the framework which is used to make responsive websites. In bootstrap screen in divided into grid view system.it contains the files i.e. Bootstrap.css, Bootstrap.css.

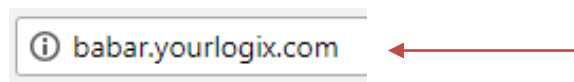


## CHAPTER 5

### RESULTS AND DISCUSSIONS (or USER MANUAL)

#### 5.1 How to access OTMS Web

Open internet browser and type in this URL <http://babar.yourlogix.com/> on the browser address bar and press 'Enter key' (As shown in figure).



**Figure 19 How to access OTMS Web**

#### 5.2 Registration at OTMS Web

##### Registration

First Name *	<input type="text" value="Farhan"/>	Last Name *	<input type="text" value="Jamel"/>	Phone Number *	<input type="text" value="03041497235"/>
Email *	<input type="text" value="farhan@gmail.com"/>	Password *	<input type="password" value="*****"/>	Confirm Password *	<input type="password" value="*****"/>
Cnic *	<input type="text" value="34603-2118030-7"/>	Fax Number *	<input type="text" value="456"/>	Gender *	<input checked="" type="radio"/> Male <input type="radio"/> Female
Type *	<input checked="" type="radio"/> Client <input type="radio"/> Bidder				

**Figure 20 Registration at OTMS Web**

After clicking the registration button Registration screen will display than enter the required information for registration. Password and confirm password should be

matched for registration. For confirmation of registration user should be confirm his/her email which is used for registration by clicking the confirmation link which is send on his/her email address. By clicking the reset button all the input field are set empty.

### 5.3 Login at OTMS

## Login

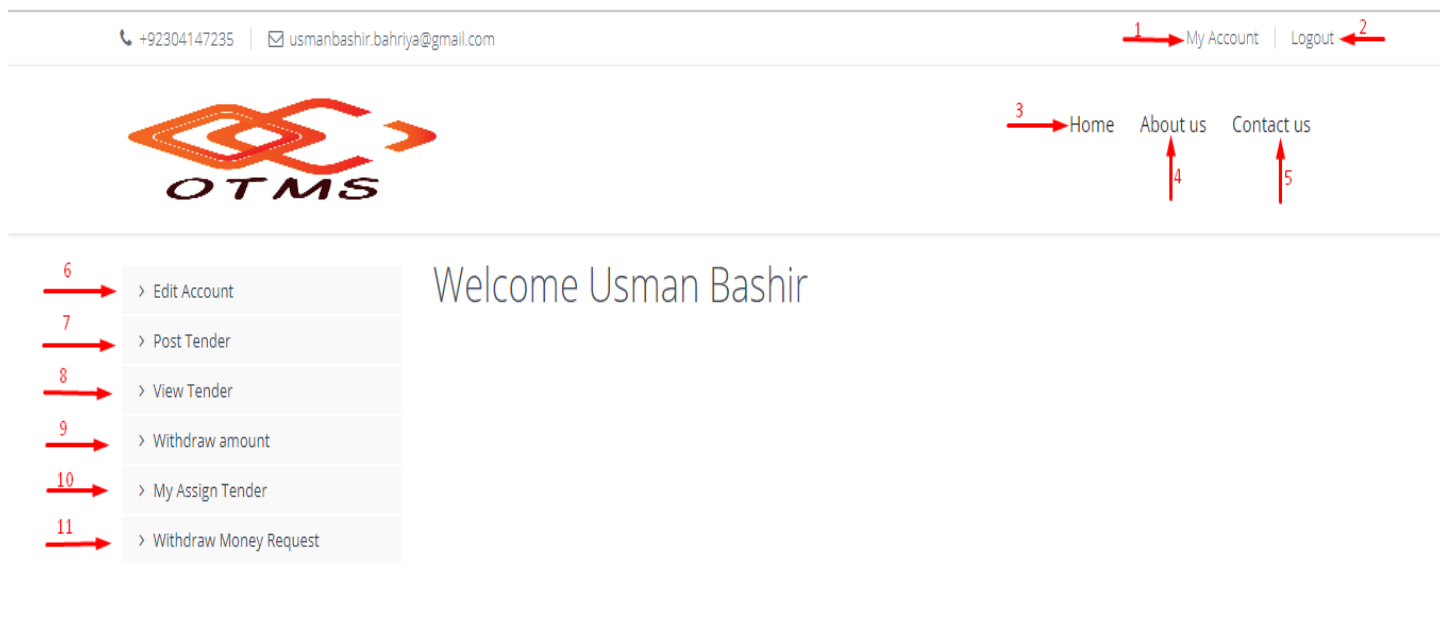
The screenshot shows a login form with the following elements:

- Email \***: Input field containing "aliali@gmail.com".
- Password \***: Input field containing "\*\*\*\*\*".
- Type \***: Radio buttons for "Client" (selected) and "Bidder".
- Forget Password?**: A link with a red arrow labeled "3" pointing to it from the right.
- Login**: A red button with a red arrow labeled "1" pointing to it from the left.
- Reset**: A red button with a red arrow labeled "2" pointing to it from the right.

**Figure 21 Login at OTMS**

- 1) Enter login credentials for login to OTMS if you are registered user otherwise you should register yourself by clicking the registration button, then fill the required information. System verify the login credentials. if the login credentials are match the credentials which are saved in database then the user direct to profile page otherwise the system ask user to enter the credentials again.
- 2) By clicking the reset all are input fields are set to be empty.
- 3) By clicking the forget password the user shall be able to reset password.

## 5.4 Profile for Client



**Figure 23 Profile for Client**

This is the profile page for client

- 1) By clicking the 'My Account' the client will redirect to the same page.
- 2) By clicking the 'Logout' the system displays the login page.
- 3) By clicking the 'Home' the system displays the main page of website.
- 4) By clicking 'About us' the system displays the introduction page to the them.
- 5) By clicking 'Contact us' the system displays contact information.
- 6) By clicking 'Edit Account' the client shall be able to edit personal information.
- 7) By clicking 'Post Tender' the client shall be able to post tender.
- 8) By clicking 'View Tender' the client shall be able to view tenders.
- 9) By clicking 'Withdraw Amount' the client shall be able to withdrawing amount which is remaining in account.
- 10) By clicking 'Assign Tender' the client shall be able to view assign tender.
- 11) By clicking 'withdraw Money Request' the client shall be able to view the status of payment.

### 5.4.1 Edit Account

## Edit Account

First Name *	<input type="text" value="Usman"/>	Last Name *	<input type="text" value="Bashir"/>
Phone No *	<input type="text" value="0304-1497235"/>	Fax No *	<input type="text" value="12345"/>
Email *	<input type="text" value="usman@gmail.com"/>		



**Figure 24 Edit Account**

- 1) When the client clicks the 'Edit Account' Tab, all the information which is saved during the registration will show to the client and can update them easily.

### 5.4.2 Post Tender

## Post Tender

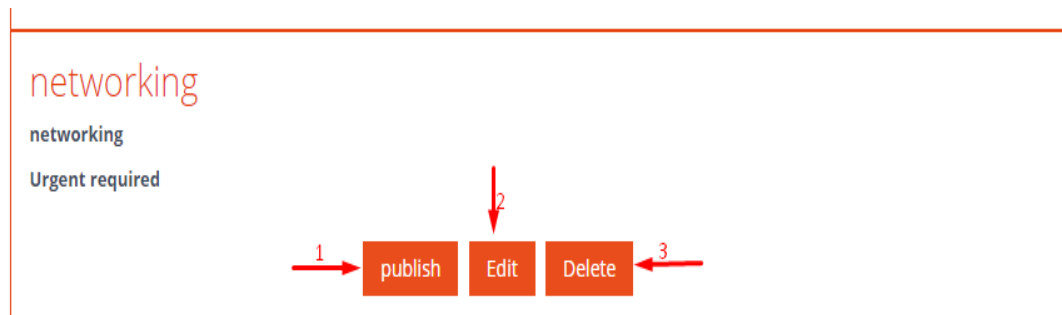
Tender Title *	<input type="text" value="Tender Title"/>		
Tender Catagory *	<input type="text" value="Computing power"/>		
Tender Opening Date *	<input type="text" value="dd/mm/yyyy"/>	Tender closing Date *	<input type="text" value="dd/mm/yyyy"/>
Contact Email *	<input type="text" value="Contact Email"/>	Tender Price *	<input type="text" value="Price in USD"/>
Item Quantity *	<input type="text" value="Item Quantity"/>		
Tender Discription *	<input type="text" value="Tender Discription"/>		



**Figure 25 Post Tender**

- 1) By clicking the save button tender information will be save in 'My Tender' tab where the user can see the tender.

### 5.4.3 View Tender



**Figure 26 View Tender**

- 1) After save the tender information client can publish.
- 2) Client can edit the tender details.
- 3) Delete tender by clicking the delete button.

Once the tender publish it can never be edit or delete.

### 5.4.4 Withdraw Amount

Remaining Balance : USD 20

Withdraw Amount \*

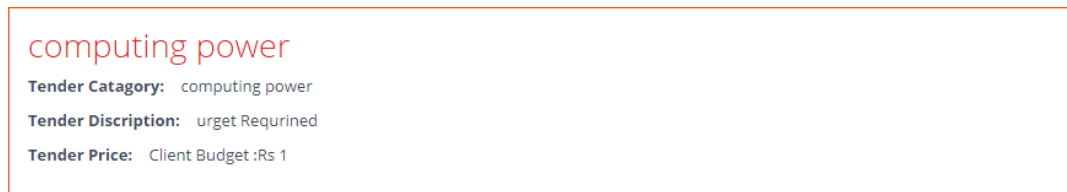


**Figure 27 Withdraw Amount**

- 1) Enter the amount in the text box and click on the withdraw button to withdraw amount.

### 5.4.5 My Assigned Tender

By clicking the view assign tender tab, the client can view the assign tender to the bidder.



**Figure 28 My Assign Tender**

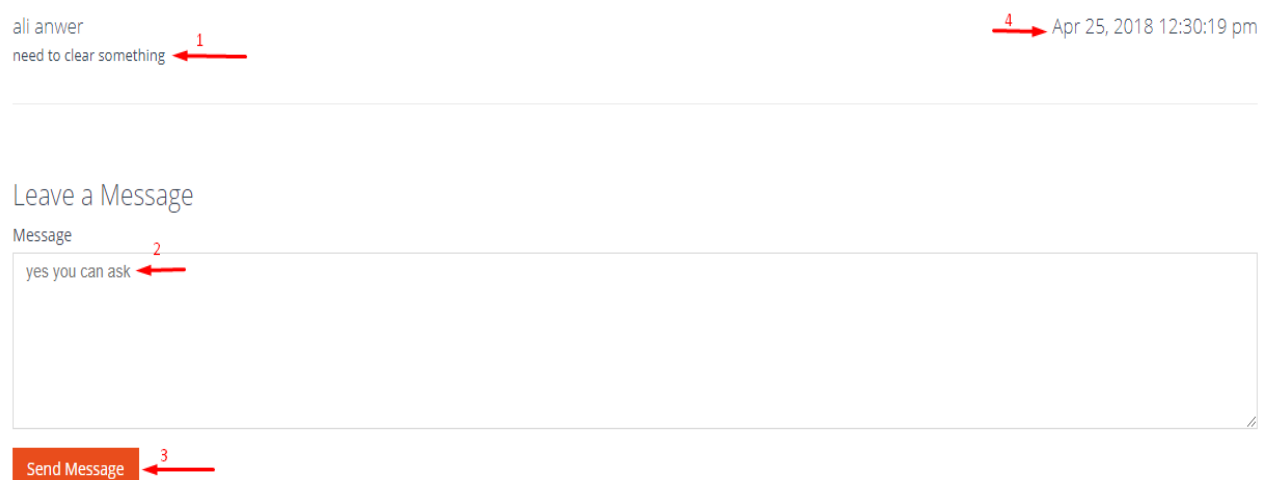
### 5.4.6 Withdraw Money Request

Request Amount	Status
USD 10	Complete

**Figure 29 Withdraw Money Request**

By clicking the withdraw money request the client can view the status of payment

### 5.4.7 User Communication

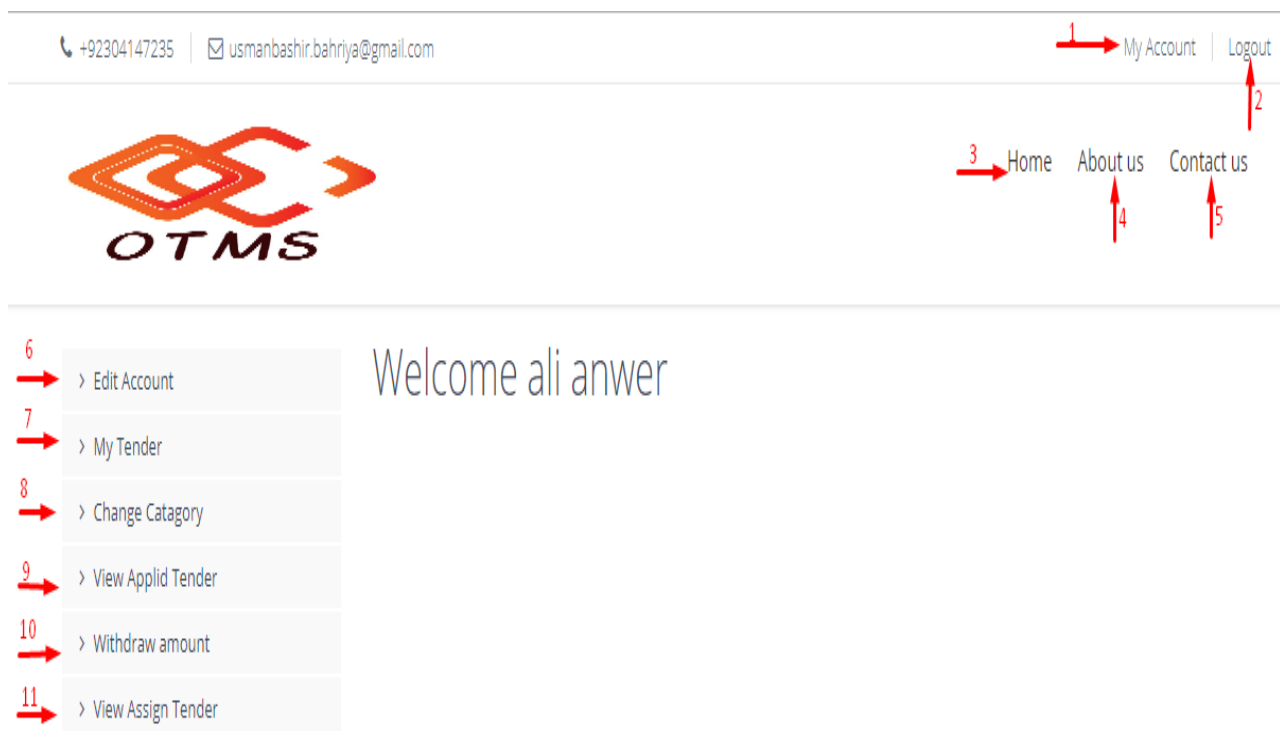


**Figure 30 User Communication**

- 1) User chat is saved in database and display on screen
- 2) User write message here

- 3) By clicking the write message is visible to user.

## 5.5 Profile for bidder



**Figure 31 Profile for bidder**

This is the profile page for bidder

- 1) By clicking the 'My Account' the bidder will redirect to the same page.
- 2) By clicking the 'Logout' the system displays the login page.
- 3) By clicking the 'Home' the system displays the main page of website.
- 4) By clicking 'About us' the system displays the introduction page to the them.
- 5) By clicking 'Contact us' the system displays contact information.
- 6) By clicking 'Edit Account' the bidder shall be able to edit personal information.
- 7) By clicking 'My Tender' the bidder shall be able to view tenders which has been published by the clients.
- 8) By clicking 'Change Category' the bidder shall be able to edit category.
- 9) By clicking 'View Applied Tender' the bidder shall be able view the applied tender.
- 10) By clicking 'Withdraw Amount' the bidder shall be able to withdraw amount.
- 11) By clicking 'Assign Tender' the bidder shall be able to view the assign tender.

### 5.5.1 Edit Account

## Edit Account

First Name *	<input type="text" value="Usman"/>	Last Name *	<input type="text" value="Bashir"/>
Phone No *	<input type="text" value="0304-1497235"/>	Fax No*	<input type="text" value="12345"/>
Email*	<input type="text" value="usman@gmail.com"/>		



**Figure 32 Edit Account**

- 1) When the bidder clicks the 'Edit Account' Tab, all the information which is saved during the registration will show to the bidder and can update them easily.

### 5.5.2 View Tender

**Computer Cables are Required urgent**

computing power

The environment of our website will be the e-commerce websites, the features we will include in the website will based on the area or a marriage hall which would be well established as well as hotels ...

**Apply Now** ← 1

**Figure 33 View Tender**

- 1) By clicking the apply now button bidder will get all the information of tender which is required by the client

System will show that tender to bidder which category match with bidder category.



### 5.5.3 Submit Bid

#### Computer Cables are Required urgent

Tender Category: computing power

Tender Title: Computer Cables are Required urgent

Tender Price: 10000

Tender Publish Date: 2018-05-02 00:00:00

Contact Email: usman@gmail.com

Item Quantity: 20

Tender Description: The environment of our website will be the e-commerce websites, the features we will include in the website will be based on the area or a marriage hall which would be well established as well as hotels where the customer can perform online booking and contact the vendors related to the area occupied. Our website will be supportive for the latest and the compatible browsers like Google chrome, Mozilla Firefox, and Internet explorer. We have selected these browsers because these are up to date browsers and never obsoletes so that the usability of the product will be more [7]. The user will register to the system, selects the option either its customer or vendor. If the user will select customer option, system will ask its personal information (name, email, contact etc.). After registration process, the customer will get password through email. The customer will login to the system and can have the access of vendor's ads and also can book the venue by clicking the book option on the Graphic User Interface [8].

Tender Closing Date: 2018-06-02 00:00:00

**Figure 34 Submit Bid**

- 1) Bidder write the bidding price here.
- 2) Select the bid duration in which the bidder completes the tender.
- 3) By clicking the submit button, the bid details have been submit and on the evaluation date the system assign tender to that bidder which quoted low price for tender.

### 5.5.4 Change Category

**Figure 35 Change Category**

Bidder can change category his category by selecting on of them.

### 5.5.5 View Applied Tender

Computer Cables are Required urgent

**Tender Category:** computing power

**Tender Discription:** The environment of our website will be the e-commerce websites, the features we will include in the website will based on the area or a marriage hall which would be well established as well as hotels where the customer can perform online booking and contact the vendors related to the area occupied. Our website will be supportive for the latest and the compatible browsers like Google chrome, Mozilla Firefox, and Internet explorer. We have selected these browsers because these are up to date browsers and never obsoletes so that the usability of the product will be more [7]. The user will register to the system, selects the option either its customer or vendor. If the user will select customer option, system will ask its personal information (name, email, contact etc.). After registration process, the customer will get password through email. The customer will login to the system and can have the access of vendor's ads and also can book the venue by clicking the book option on the Graphic User Interface [8].

**Tender Price:** Client Budget :Rs 10000

**Your Bid :** USD 100

**Figure 36 View Applied Tender**

### 5.5.6 Withdraw Amount

Withdraw Amount \*

withdraw

**Figure 37 Withdraw Amount**

Bidder can withdraw amount by adding the amount in textbox and click on withdraw button.

### 5.5.7 View Assign Tender

computing power

**Tender Catagory:** computing power

**Tender Discription:** urget Required

**Tender Price:** Client Budget :Rs 1

**Figure 38 Withdraw Amount**

### View Assign Tender

Bidder can view his assign tender.

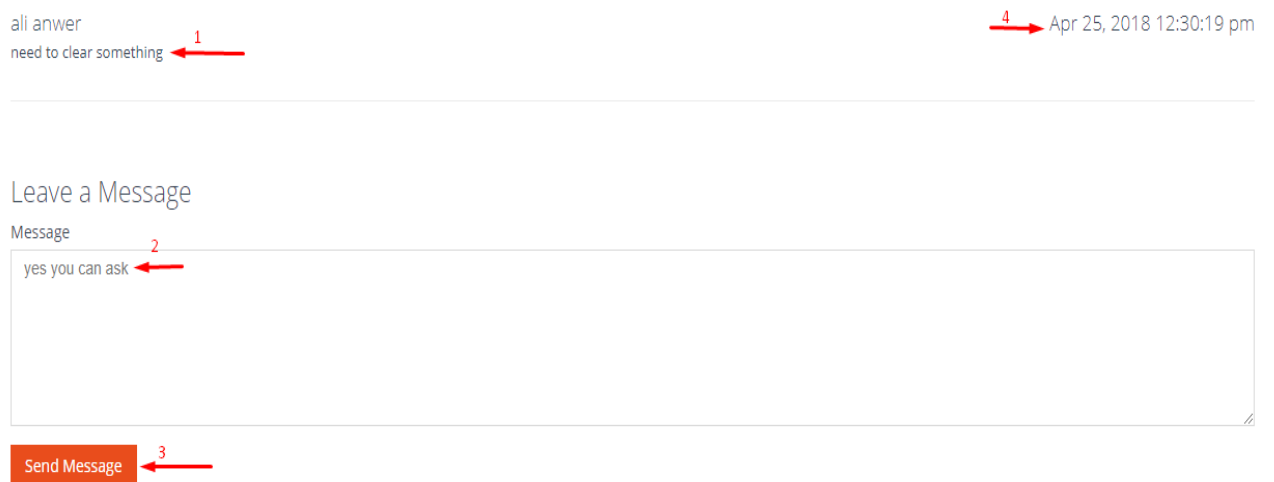
## 5.6 Chat service



**Figure 39 Chat service**

- 1) By clicking on Online tab the user asks quarries to the admin and admin response them.

## 5.7 User communication



**Figure 40 User communication**

- 4) User chat is saved in database and display on screen
- 5) User write message here
- 6) By clicking the write message is visible to user.



## **CHAPTER 6**

### **CONCLUSION AND RECOMMENDATIONS**

#### **6.1 Conclusion**

The implementation OTMS will focus on security, scalability and reliability for user. The primary objective is to provide the helpful service to all the users. Different types of services are delivered to both the client and buyer. This system can also handle multiple tender documents at one time i.e. the user can access various tenders from at a time, receive notification of relevant category tender, submit bid and then the system automatically assign tender to the most top-rated bidder. Client are closely linked with bidder and can communicate directly. This system provides a platform which is helpful for both the client and bidder for working efficiently.

#### **6.2 Recommendation**

This is a web base application only so in future it can be expanded as android and IOS application which is available on different platform for Android and IOS. Furthermore, features can be added on the suggestions of the users. In future android and IOS developers can also take advantage from this. till now this platform is only depending upon one category but in future further categories can be added in to this.



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