

A Project Report

*on*

Learning a language from its native

*by*

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## **Abstract**

The one who has command over a language has the command over everything. Well, in today's times where knowing a language to its soul has become very important to develop as a good professional. To achieve this people, learn from different sources whether it be a teacher in physical being or it be some technologies like apps, websites or social media platforms, but in all these alternatives there is one thing which is missing and which is of utmost importance i.e. knowing the way the locals/natives speak the language in day-to-day life.

Our website focuses on connecting locals from different linguistic groups and through a means of language exchange which works very similar to barter system.

Where one end-user of a language will teach another end user willing to learn his/her language and in return the other person will also do the same. This way both of them will get the benefits of learning and a healthy learning environment could be developed.

## Introduction

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This chapter is organized as follows. Section 1.1 contains our motivation to work on this topic, Section 1.2 is about the problem statement, Section 1.3 and 1.4 is about aim of our website and its objectives.

### 1.1 Motivation

Well, me and my group partner are enthusiastic language learners of Turkish and Italian. While we are learning this language from different sources we always felt a bit incomplete and there were many words which we didn't know just because only the locals of that language use them and those words are not the official words of dictionary. This made us to work on a website which could different linguistic locals on a single platform.

### 1.2 Problem Statement

Creating a website to host/connect different linguistic people thereby making language learning as easy as abc.

### 1.3 Aim

Our aim was to create a simple, user-friendly and secured website for all the language enthusiast out there.

### 1.4 Objective

The major objective of the website was: -

- 1) Making it simple and uniform.
- 2) Making it easy and user-friendly.
- 3) Delivering other related contents and assuring user control and freedom.
- 4) Making it secured and reliable.
- 5) Giving it good aesthetics.

# Background Study

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This section covers the background theory of our work. Section 2.1 is about the existing solution for this and section 2.2 is about all the possible solutions proposed by us and finally the last section i.e. Section 2.3 is about that one key feature of our website that makes it different from other websites.

## 2.1 Background Theory

We started our work by doing intense brainstorming and wrote all the points which were coming in our minds. Later we did survey on phone calls and wrote down all the actual user needs and requirements for such website so that we can focus on the key points rather than ending up doing something which the user didn't wanted.

### 2.1.1 Brainstorming

The points which we got in the brainstorming session are as follows: -

- 1) Threat to feeling of security and privacy.
- 2) End user has lesser "choice of preference".
- 3) User doesn't have much control over the suggestions offered by website.
- 4) User doesn't have much control over the advertisements.
- 5) Loosing of interest after some period of time.
- 6) Too formal welcome messages.
- 7) Very less control over the interface, its style and design.
- 8) Fewer updates about the latest events or changes.
- 9) End user can't send invitation message while adding someone.
- 10) No weekly events to promote & enhance learning experience.
- 11) Less visibility of system status.
- 12) Error prevention using suggested keywords.
- 13) No track of user activities.

- 14) No discussion forums where end user can post their doubts and community could reply.
- 15) Text based interface, no scope of video calls or power point presentations.

### 2.1.2 User needs/Requirements

(NOTE: These points are based on Survey and interview results)

- 1) Genuine people should be registered.
- 2) The interface should be easy so that all age group can use it.
- 3) Website should show me suggestions of people.
- 4) After registration there should be a test of the person in his/her native language or the languages they know and based on that test score others could know about their command on that language.
- 5) There should be a scoreboard too.
- 6) Availability of complaint box i.e. if there is some problem with the website the end user could post it in issues section.
- 7) Availability of chat-box, audio and video calls.
- 8) Instant chat translator.
- 9) Profile pictures and bio about the person.
- 10) Availability of filters so that end user could search/connect to people based on their preferences and choice.
- 11) Image and documents sharing options should be present in the website.
- 12) User should have feeling of control and freedom i.e. at any moment if he wants to undo the things he can do that.
- 13) End user could connect to existing Google or Facebook account or using phone number rather than creating a new one.

## 2.2 Existing Systems

The few systems similar to what we are making exist in the market and they are: -

- 1) Duolingo
- 2) Speaky
- 3) Bussu
- 4) Udemy

## 2.3 Proposed Solutions

Solution (3 Conceptual sketch):

- 1) It includes Sending and receiving of connection request, Discussion forum, and achievements section of the end user along with filters to perform the various tasks but there is no availability of system status and lesser end user control. It also provides with the search option.

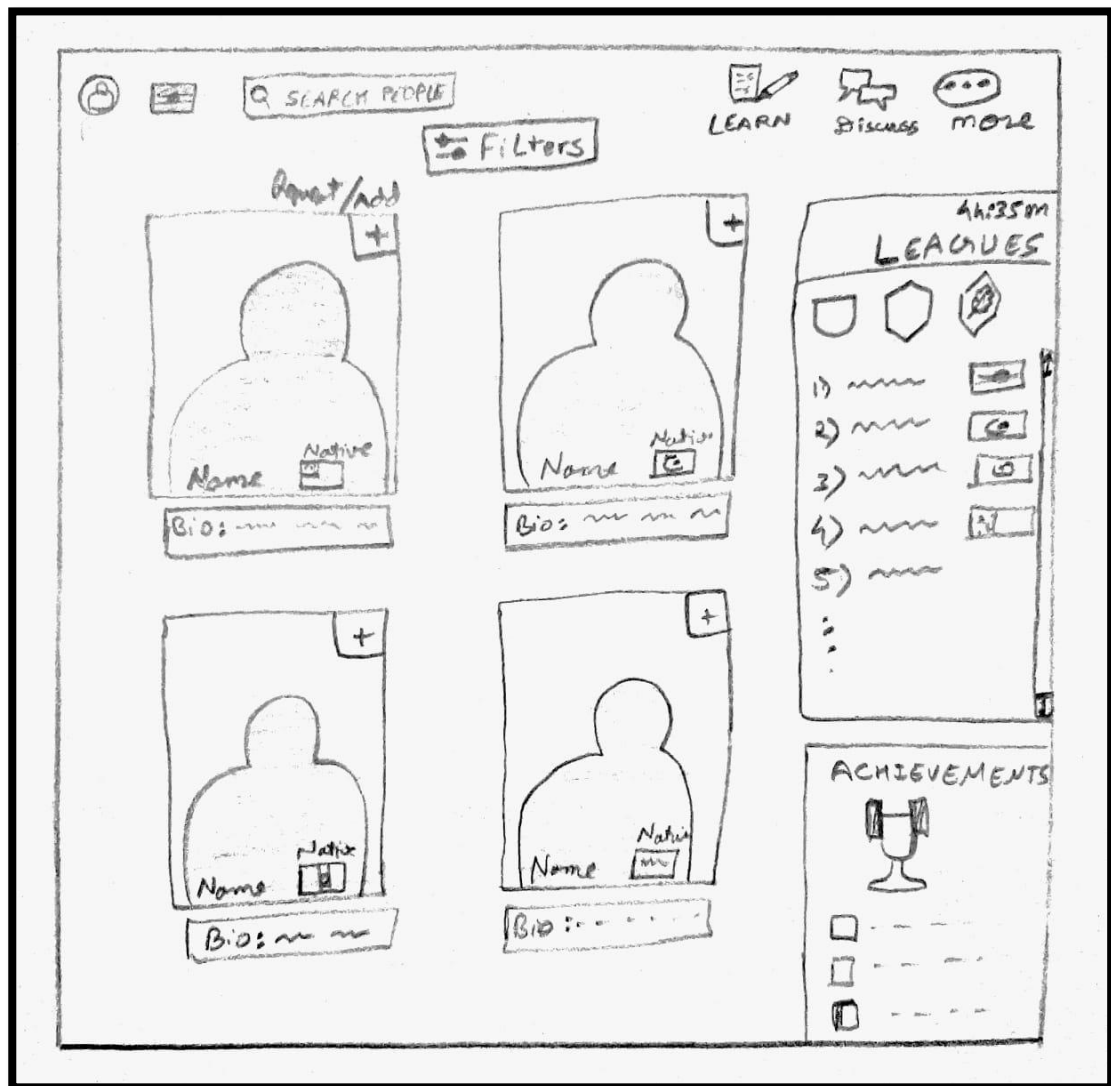


Figure 2.3 Solution 1

- 2) This concept includes the features like searching, discussion forums, help and information about the events and knowledge check test in the more section of website. Along with this it is less clutter thereby making it user friendly. It also shows suggestions and new users on the website and stores the information and activities of end user.

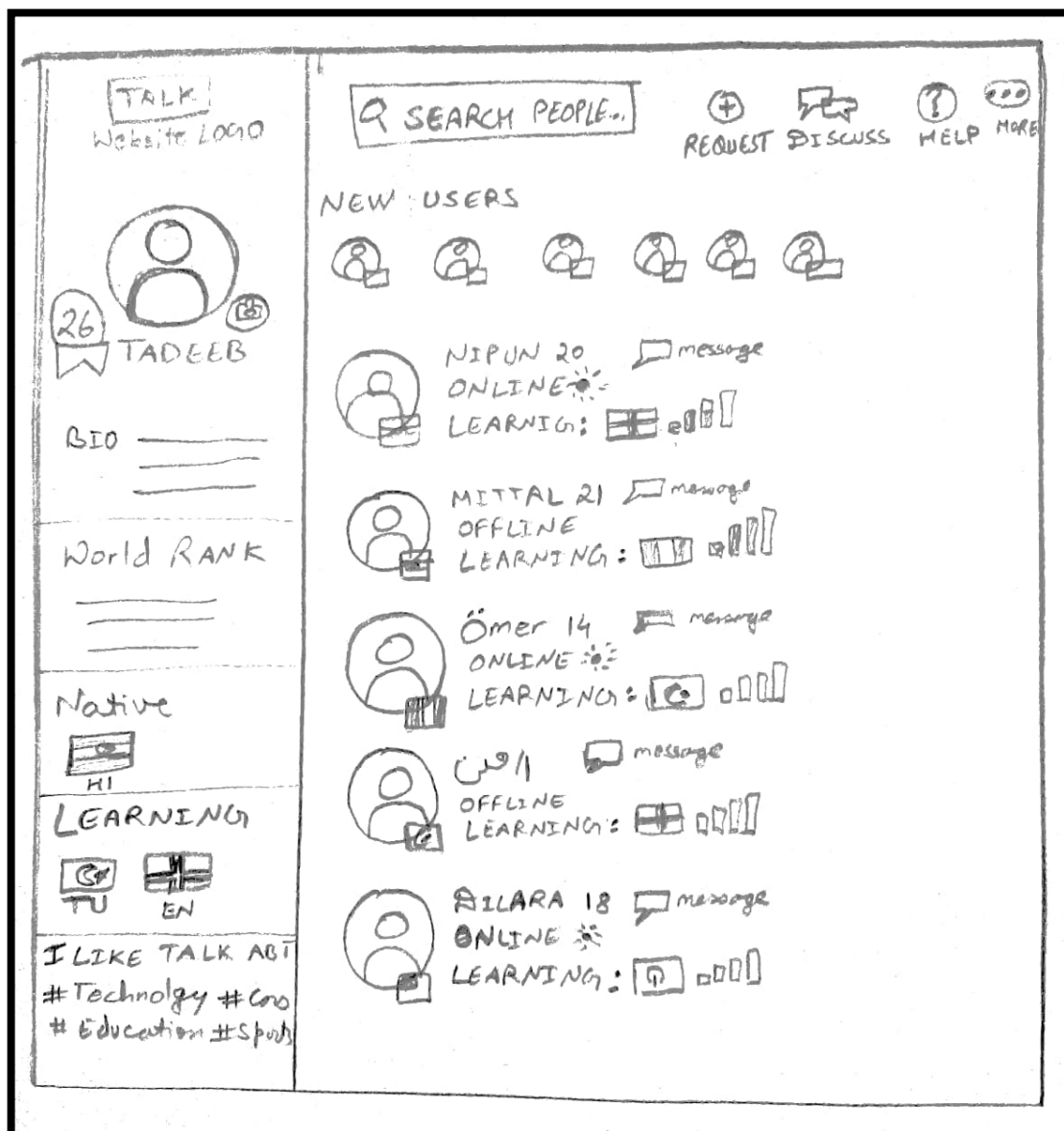


Figure 2.3 Solution 2

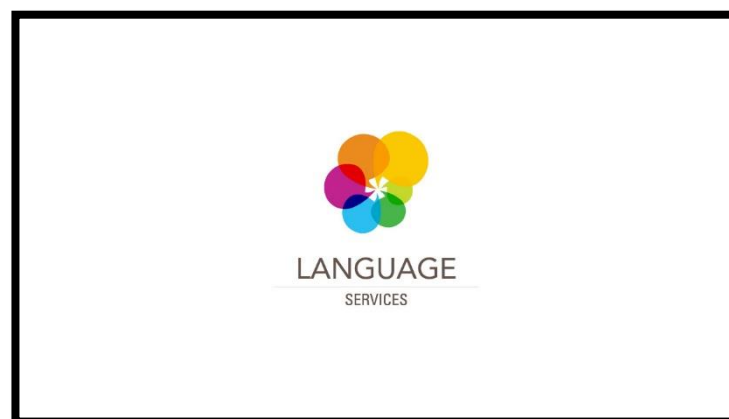


Figure 2.3 Logo idea



## **2.4 Unique Selling Point**

The things which makes our website different from existing solutions are: -

- 1) We are connecting locals of that language.
- 2) We are providing initial amount of 10,000 Rs as a gift from the website.
- 3) Easy and Secured platform.

## **Chapter 3**

# **Software Requirement Specification**

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## **3.1 Hardware Requirements**

The following hardware is used for developing the website: -

### **3.1.1 Recommended Operating Systems**

- Windows: 7 or newer.
- MAC: OS X v10.7 or higher.
- Linux: Ubuntu.

### **3.1.2 Hardware Requirements**

- Processor: Minimum 1 GHz; Recommended 2GHz or more.
- Ethernet connection (LAN) OR a wireless adapter (Wi-Fi).
- Hard Drive: Minimum 32 GB; Recommended 64 GB or more.
- Memory (RAM): Minimum 1 GB; Recommended 4 GB or above.
- Sound card w/speakers.
- A camera and microphone.

## **3.2 Software Requirements**

- Axure rp-9 (for wire framing).
- Chrome or any web-browser (for displaying website).

- Xampp (for hosting website on local server).
- Bracket (or any other editor for developing website)
- Adobe illustrator & adobe premiere pro (poster and video making).

## Chapter 4

### Assumptions

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The following are the major problems and concerns of an end-user

*Table 5 Kano-model analysis*

Problem	Cause
1) Threat to privacy.	Lesser or no security options.
2) Difficulty in operations.	Difficult/too crowded data on the website.
3) Loosing of interest.	No/fewer engaging activities and lesser availability of system status.
4) Frustration while registering.	Fewer/no alternative choice available for the user.
5) Low customer acquisition.	No trials available/high payment demand.

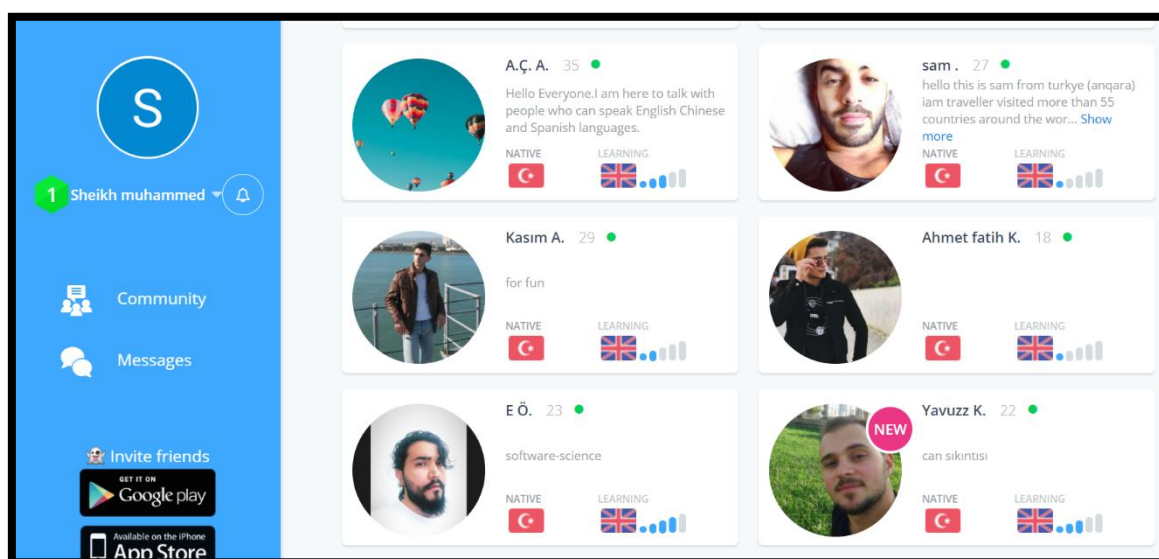
Comparison chart of our proposed solutions

*Table 4 Comparison Chart*

Features	Concept 1	Concept 2	Concept 3
Search tab	✓	✓	✓
Filters	✓	✗	✓
Suggestions	✗	✓	✗
Discussion Forums	✓	✓	✗
Help desk	✗	✓	✓
Events	✓	✓	✓

<b>Trials</b>	✗	✓	✗
<b>Achievements</b>	✓	✗	✓
<b>Recognition rather than recall</b>	✗	✓	✓
<b>Error prevention</b>	✗	✓	✓
<b>Visibility of system status</b>	✗	✓	✓
<b>Optional Knowledge check</b>	✗	✓	✗
<b>User control and freedom</b>	✓	✓	✓
<b>Chat bot</b>	✓	✓	✓
<b>Clutter</b>	✓	✗	✗
<b>Language proficiency level</b>	✗	✓	✓
<b>Reward point</b>	✗	✗	✓
<b>Certification</b>	✓	✓	✓
<b>Groups</b>	✗	✓	✓
<b>Time Scheduling</b>	✗	✗	✓

Website layout idea:

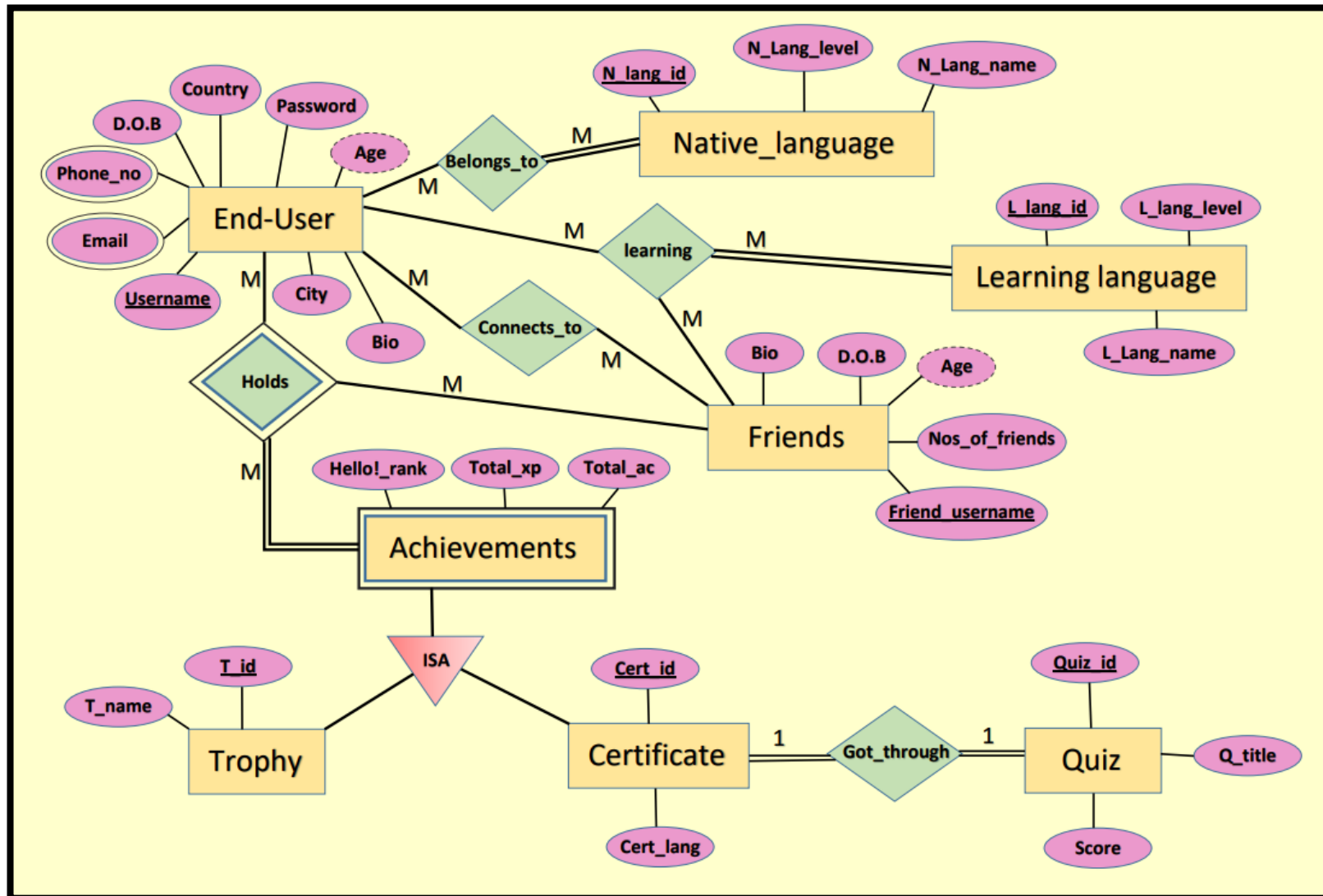


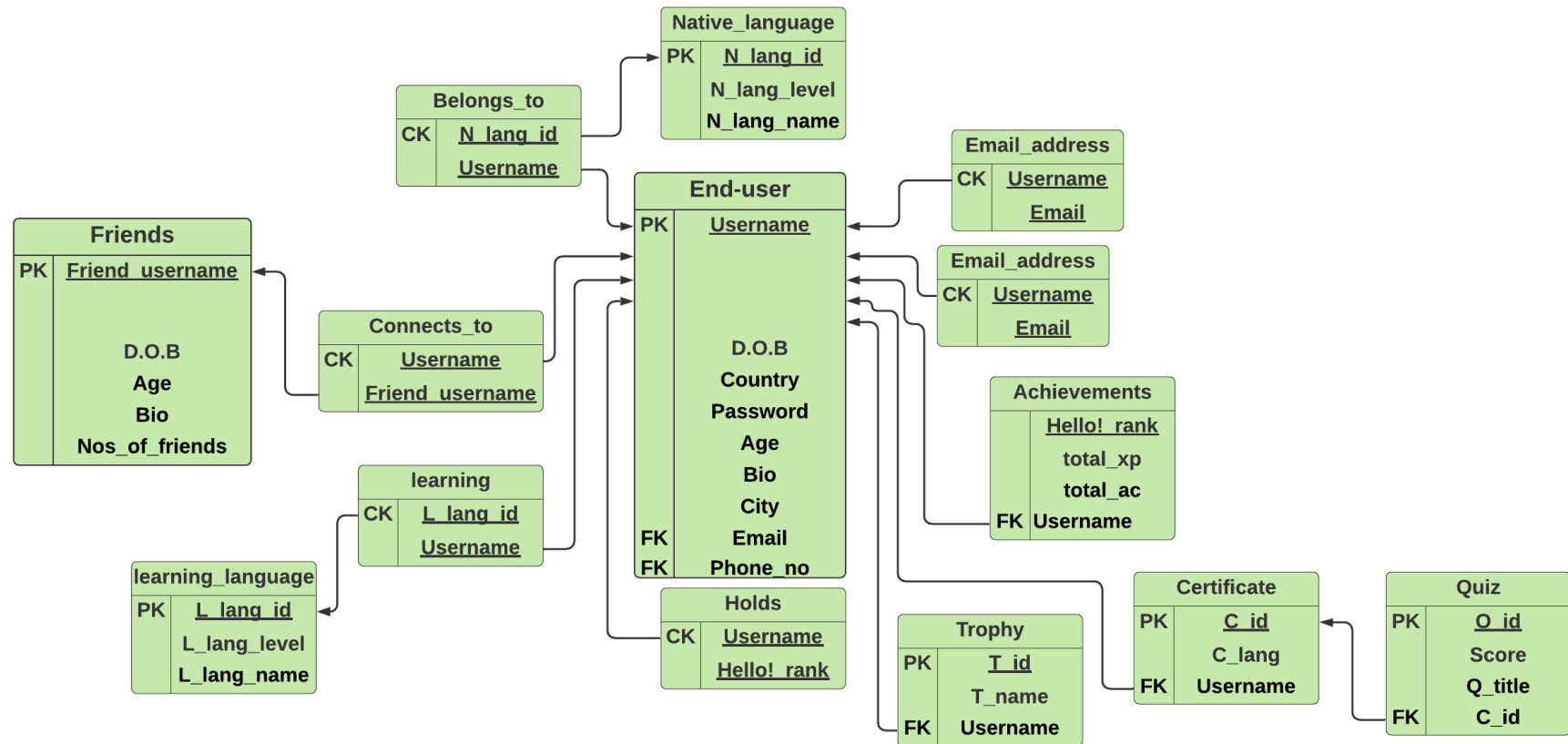
## System Functional Requirements

Based on brainstorming and noting the user needs and requirements we divided the points using a technique known as Kano-model analysis.

*Table 5 Kano-model analysis*

Must Be	Satisfactory	Delighters
Registration.	Language proficiency test.	Interface customisation based on users choice.
Search panel.	Profile suggestions.	
Friendly welcoming message.	Track of user activities.	
User control and freedom.	Bonus points.	
File/image/doc sharing options.	Visibility of system status.	
Send/Accept connection request.	Weekly events.	
Score board availability.	Connecting with Facebook/Google/Phone number.	
Filters.	Availability help desk/option.	
Chat/Video and audio availability.	—	
Discussion forum.	—	
Chat translator.	—	





# Implementation Details

---

## 8.1 PHP & MY-SQL Connectivity

```
<?php
$servername = 'localhost';
$username = 'root';
$password = '';
$dbname = 'web';

// Create connection
$conn = mysqli_connect($servername,$username,$password,$dbname);

?>
```

## 8.2 Data fetching via jQuery/Ajax/PHP

```
<?php
include "connection.php";

if (isset($_POST['register'])) {
    $name = $_POST['name'];
    $email = $_POST['email'];
    $username = $_POST['username'];
    $password = $_POST['password'];
    $age = $_POST['age'];
    $country = $_POST['country'];
    $gender = $_POST['r1'];
    $bio = "--" ;

    $phash = password_hash($password,PASSWORD_BCRYPT);

    $sql_insert = "INSERT INTO end_user (`name`, `email`, `username`, `password`, `age`, `country`, `gender`, `bio`) VALUES
    ('$name','$email','$username','$phash','$age','$country','$gender','$bio')";

    $res = mysqli_query($conn,$sql_insert);

    if ($res){
        ?>
        <script>
            location.href = "user_login.php";
        </script>
        <?php
        } else {
            ?>
            <script>
                /* location.href = "learning.htm";*/
                alert('failed');
            </script>
        <?php } } ?>
    }
```

## 8.3 Form-Validation

```
<script type="text/javascript">

// Getting all error display objects
var email_error = document.getElementById("email_error");
var username_error = document.getElementById("username_error");
var country_error = document.getElementById("country_error");
var password_error = document.getElementById("password_error");
var name_error = document.getElementById("name_error");
var age_error = document.getElementById("age_error");

// Validation function
function validate()
{

    // Getting all the input text objects.
    var email = document.forms["myform"]["email"];
    var username = document.forms["myform"]["username"];
    var password = document.forms["myform"]["password"];
    var cpassword = document.forms["myform"]["password_confirm"];
    var name = document.forms["myform"]["name"];
    var age = document.forms["myform"]["age"];

    // email validation
    if (email.value == ""){
        document.getElementById("email_error").innerHTML = "Email is required";
        email.style.border = "5px solid red";
        email.focus();
        return false;
    }

    // username validation
    if (username.value == ""){
        document.getElementById("username_error").innerHTML = "Username is required";
        username.style.border = "1px solid red";
        username.focus();
        return false;
    }

    // password validation
    if (password.value == ""){
        document.getElementById("password_error").innerHTML = "Password is required";
        password.style.border = "1px solid red";
        password.focus();
        return false;
    }

    // Checking whether the two password are equal or not
    if (password.value != cpassword.value) {
        password.style.border = "1px solid red";
        cpassword.style.border = "1px solid red";
        document.getElementById("password_error").innerHTML = "The two password do not match";
        return false;
    }

    // age validation
    if (age.value == "") {
        age.style.border = "1px solid red";
        document.getElementById("age_error").innerHTML = "Age is required";
        age.focus();
        return false;
    }

}

</script>
```

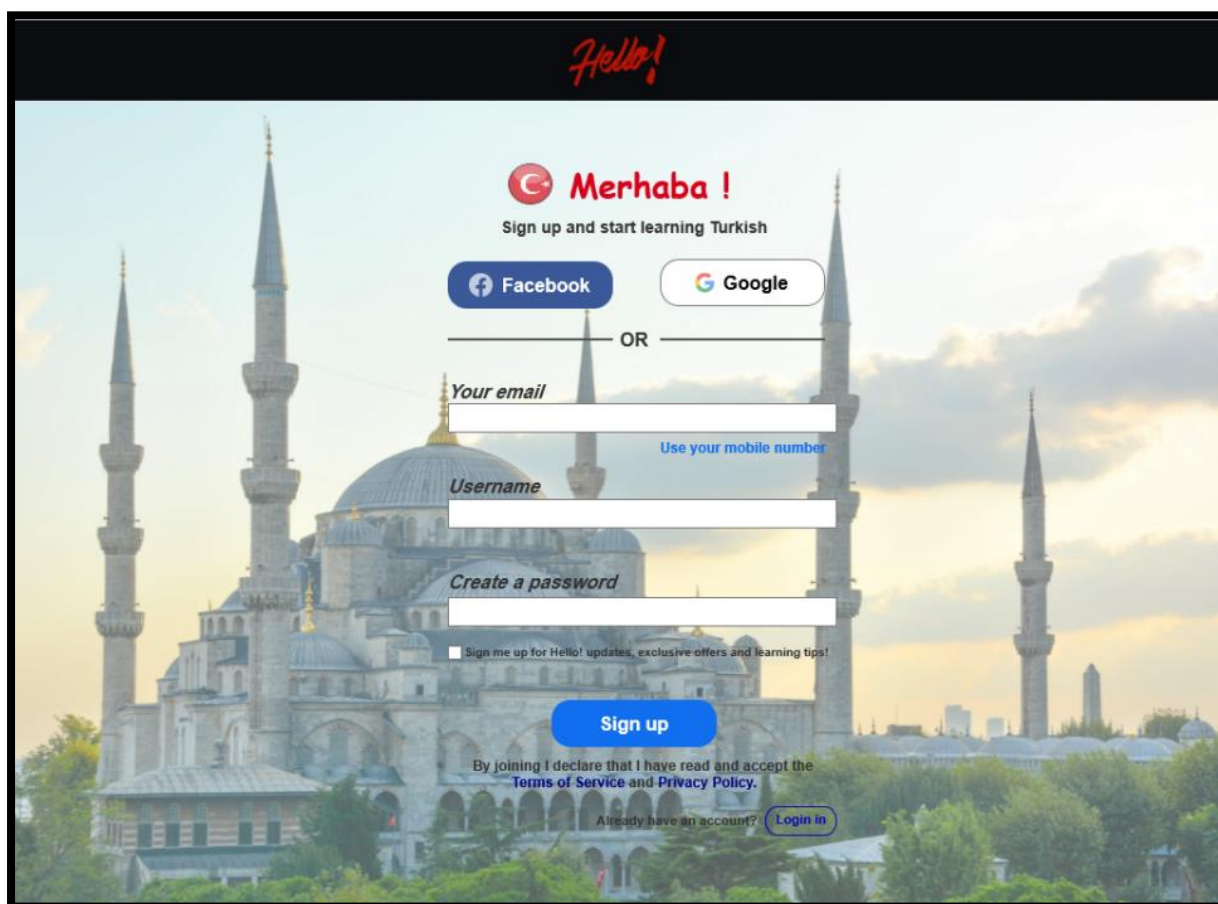
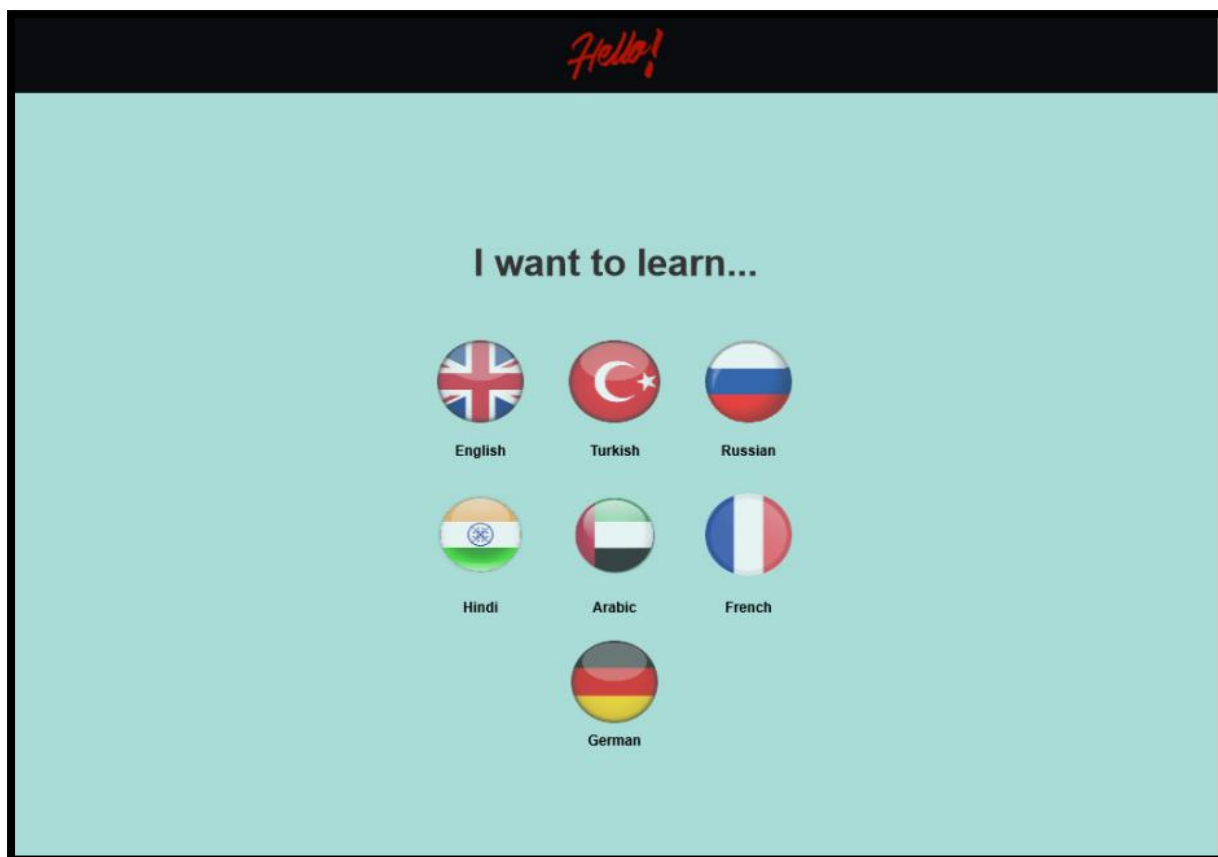


## 8.4 Session Handling

```
<?php
session_start();
if (!isset($_SESSION['username'])) {
    header('location:user_login.php');
}
```

## 8.5 Wire framing designs







## 8.6 Pseudo-Code

```
1 <?php
2 session_start();
3 if (!isset($_SESSION['username'])){
4     header('location:user_login.php');
5 }
6
7 include('connection.php');
8 global $conn;
9 $user=$_SESSION['username'];
10 $points = mysqli_query($conn, "select reward from end_user where username='".$user."'");
11
12 while($reward=mysqli_fetch_assoc($points)){
13
14     $winner=$reward['reward'];
15 }
16 ?>
17 <html>
18 <head><title>Hello profile</title>
19 <link rel="stylesheet" href="CSS/profile.css">
20 <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/4.7.0/css/font-awesome.min.css">
21 <meta charset="utf-8">
22
23 <Style>
24 |
25 /* transaction 3200*/
26
27 .popup1 {...}
44 .popup1.active1 {...}
51 .popup1 .title1 {...}
57 .popup1 .description1 {...}
62 .popup1 .close_button1 {...}
66 .popup1 .close_button1 .btn {...}
78 .popup1 .close_button1 button:hover {...}
82 .popup1 > div {...}
87 .popup1.active1 > div {...}
91
```

```
<div class="head">
  <form action="search.php" method="post">
    <input type="search" name="search" id="search" placeholder="Search...">
    <button type="submit"><i class="fa fa-search" style="font-size:26px; width:24px; height:27px;
    cursor:pointer;"></i></button>
  </form>
  <h3>REWARD POINTS :</h3>

  <input type="text" name="points" id="points" value="<?php echo $winner;?>" readonly style="font-size:25px;
  font-weight: bold; width: 150px;">

</div>

<div class="buttons">

  <a href="logout.php"><button type="submit" value="Logout" style="width: 90px; height: 30px; font: Arial;
  font-size: 15px; font-weight: bold; cursor: pointer; background-color: aquamarine; border-radius:
  7px;">LOGOUT</button></a>

</div>

<div>

  <i class="fa fa-bell" style="font-size:36px; color: dodgerblue; margin-left: 1085px; margin-top: -35px; cursor:
  pointer;"></i>
</div>

<div>

  <i class="fa fa-video-camera" style="font-size:36px; color: dodgerblue; margin-left: 1155px; margin-top:
  -36px; cursor: pointer;"></i>

</div>
</div>
```

```

<!-- Transaction 3200.....-->

<div class="popup1 center">

<div class="title1">Transaction Alert !</div>

<div class="description1"><span class="point1">3200 points</span> will get deducted from your wallet for this purchase.</div>

<div class="close_button1">

    <button class="btn" id="close_popup1">close</button>

</div>

<div class="verify1">

    <form action="transaction3200.php" method="post">

        <label for="username">Username</label>
        <input type="text" name="username" placeholder="username" required style="margin-left:0px;">

        <br><br><label for="password">Password</label>
        <input type="password" name="password" placeholder="password" required>

        <br><br><button type="submit" name="transact">Transact</button>

    </form>

</div>

</div>

```

```

<div class="verify1">

    <form action="transaction3200.php" method="post">

        <label for="username">Username</label>
        <input type="text" name="username" placeholder="username" required style="margin-left:0px;">

        <br><br><label for="password">Password</label>
        <input type="password" name="password" placeholder="password" required>

        <br><br><button type="submit" name="transact">Transact</button>

    </form>

</div>

</div>

<script>

    document.getElementById("open_popup1").addEventListener("click",function(){

        document.getElementsByClassName("popup1")[0].classList.add("active1");

    });

    document.getElementById("close_popup1").addEventListener("click",function(){

        document.getElementsByClassName("popup1")[0].classList.remove("active1");

    });

</script>

```

```

<script>

    function triggerClick(){
        document.querySelector('#profileImage').click();
    }

    function displayImage(e){
        if(e.files[0]){
            var reader = new FileReader();
            reader.onload = function(e){
                document.querySelector('#profileDisplay').setAttribute('src',e.target.result);
            }

            reader.readAsDataURL(e.files[0]);
        }
    }

</script>

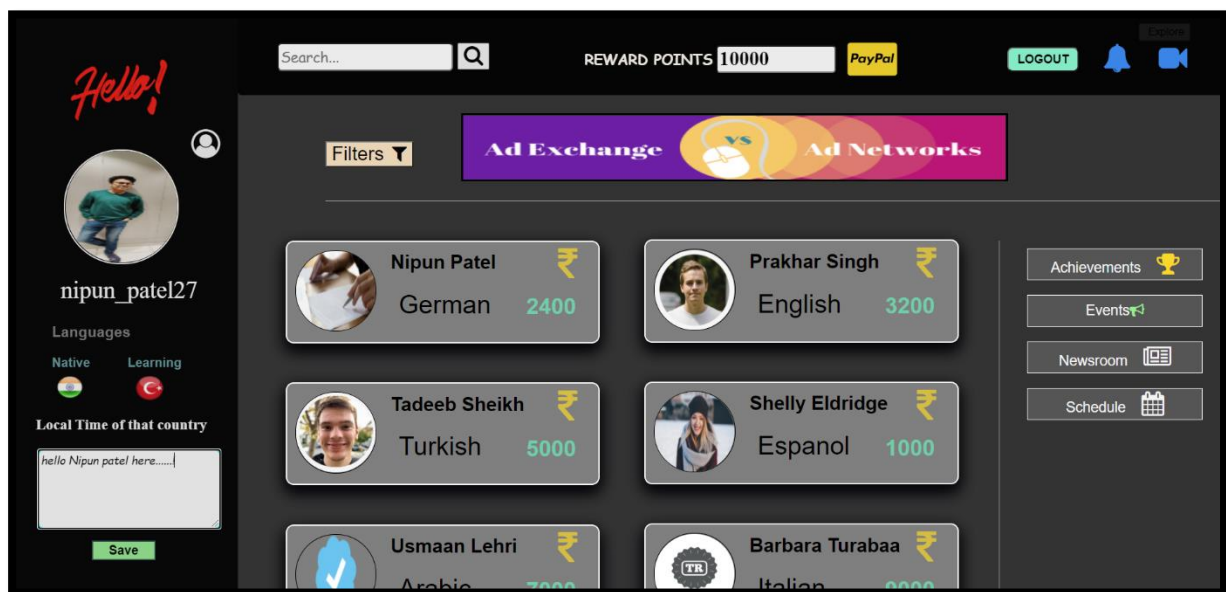
```

## Results

### 9.1 Constraints and Challenges

- 1) Conducting the classes for especially abled classes is a unique idea but as well as the challenging too as it can become impossible to teach the deaf and blind students in a remote mode.
- 2) Time scheduling is a bit challenging for the availability of end to end users for their convenience.
- 3) Identification of the skilled linguists is the hectic time consumption process.
- 4) Request of incoming and outgoing request acceptance delays can cause loose of interest.

### 9.2 Final design



### Conclusion

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Initial Plans: - Well, we decide to build a secured and user friendly website which could connect two different linguistic people where they can exchange their language. We wanted to give initial points to the user and based on their performance their request amount will get increased. The two other concepts which we thought to implement were chat bot and saving video recording of that person.

Plans Achieved: - We were able to implement 85% of our initial plans and made a transitionally working website. We were successful in implementing the OTP sending and receiving part along with adding of API's and profile uploading part. Although we were unable to implement the request sharing part and due to time constraint we didn't made the newsroom page and the achievements page.

Future Plans: - Firstly we will be focusing on the parts we were unable to implement and later we will be adding the filters and end-to-end chat system with the users. Implementation of chat-bot and end-user reviews.

### References

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- 4) <https://console.developers.google.com/apis/library?project=quiet-sum-297708&supportedpurview=project>
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