CHAPTER-4

DEVELOPMENT AND IMPLEMENTATION

4.1 Design and Implementation

The development phase of "ﷺ - An Online Discussion Forum" involves translating the design specifications into a functional application. This chapter details the architecture, database schema, and the integration of Django components. The implementation covers frontend and backend development, ensuring seamless user interaction and robust system performance.

4.2 Prototype Flowchart

A prototype flowchart illustrates the user journey within "&F," mapping out key interactions such as user registration, discussion creation, posting replies, and moderation tasks. This visual representation aids in refining user experience and ensuring intuitive navigation throughout the forum.

4.3 Components Description

Detailed descriptions of frontend interfaces, backend services, and database interactions highlight each component's role in "IJJF." This includes user authentication, real-time notifications, data storage, and administrative functionalities, ensuring comprehensive coverage of the forum's features and functionalities.

MODELS

Django models are Python classes that define the structure of data in a Django application. They represent database tables, encapsulate data attributes, and establish relationships between different types of data. Django's ORM facilitates seamless interaction with databases, enabling efficient data management and querying through Python code

VIEWS

In Django, views are Python functions or classes that handle HTTP requests and return responses. They encapsulate business logic, fetching data from models, processing requests, and rendering templates. Views bridge URLs to application logic, enabling dynamic content generation and interaction with users based on their actions.

TEMPLATES

In Django, templates are HTML files containing placeholders and template tags that Django's templating engine processes to generate dynamic web pages. Templates allow for the presentation layer of Django applications, rendering data from views and integrating with CSS and JavaScript to create interactive user interfaces.

4.4 Software Interface

The software interface integrates Django's ORM capabilities with frontend templates, enabling dynamic content generation and seamless data retrieval. This interface ensures efficient communication between users and the database, supporting real-time updates and personalized user experiences.

4.5 Coding with Django

Development involves coding backend logic using Python and Django's built-in libraries. This includes implementing models, views, forms, and templates to handle user interactions, manage data, and enforce business rules. Code snippets and examples illustrate the application's core functionalities and demonstrate Django's flexibility in customizing forum behaviours.

CODE SNIPPETS

FSD-PROJECT>Forum>profile_of_user>models.py

```
from django.db import models
from django.contrib.auth.models import User
from django.utils.timezone import now
# Create your models here.
class Profile(models.Model):
    user = models.OneToOneField(User, null=True, blank=True,
on_delete=models.CASCADE)
    image = models.ImageField(upload_to="images",default="default/user.png")
class Post(models.Model):
    user1 = models.ForeignKey(User, on_delete=models.CASCADE, default=1)
    post id = models.AutoField
    post_content = models.CharField(max_length=5000)
    timestamp= models.DateTimeField(default=now)
    image = models.ImageField(upload_to="images",default="")
class Replie(models.Model):
    user = models.ForeignKey(User, on_delete=models.CASCADE, default=1)
    reply_id = models.AutoField
```

```
reply_content = models.CharField(max_length=50000)
post = models.ForeignKey(Post, on_delete=models.CASCADE, default='')
timestamp= models.DateTimeField(default=now)
image = models.ImageField(upload_to="images",default="")
```

FSD-PROJECT>Forum>profile_of_user>views.py

```
from django.shortcuts import render, redirect, HttpResponse, Http404
from django.contrib import messages
from django.contrib.auth.models import User
from django.contrib.auth import authenticate, login, logout
from .models import Post, Replie, Profile
from .forms import ProfileForm
from django.contrib.auth.decorators import login required
def forum(request):
    profile = Profile.objects.all()
    if request.method=="POST":
        user = request.user
        image = request.user.profile.image
        content = request.POST.get('content','')
        post = Post(user1=user, post_content=content, image=image)
        post.save()
        alert = True
        return render(request, "forum.html", {'alert':alert})
    posts = Post.objects.filter().order by('-timestamp')
    return render(request, "forum.html", {'posts':posts})
def discussion(request, myid):
    post = Post.objects.filter(id=myid).first()
    replies = Replie.objects.filter(post=post)
    if request.method=="POST":
        user = request.user
        image = request.user.profile.image
        desc = request.POST.get('desc','')
        post_id =request.POST.get('post_id','')
        reply = Replie(user = user, reply_content = desc, post=post, image=image)
        reply.save()
        alert = True
        return render(request, "discussion.html", {'alert':alert})
    return render(request, "discussion.html", {'post':post, 'replies':replies})
def UserRegister(request):
    if request.method=="POST":
        username = request.POST['username']
        email = request.POST['email']
        first_name=request.POST['first_name']
```

```
last_name=request.POST['last_name']
        password = request.POST['password']
        confirm_password = request.POST['confirm_password']
        if len(username) > 15:
            messages.error(request, "Username must be under 15 characters.")
            return redirect('/register')
        if not username.isalnum():
            messages.error(request, "Username must contain only letters and numbers.")
            return redirect('/register')
        if password != confirm_password:
            messages.error(request, "Passwords do not match.")
            return redirect('/register')
        user = User.objects.create_user(username, email, password)
        user.first_name = first_name
        user.last_name = last_name
        user.save()
        return render(request, 'login.html')
    return render(request, "register.html")
def UserLogin(request):
    if request.method=="POST":
        username = request.POST['username']
        password = request.POST['password']
        user = authenticate(username=username, password=password)
        if user is not None:
            login(request, user)
            messages.success(request, "Successfully Logged In")
            return redirect("/myprofile")
            messages.error(request, "Invalid Credentials")
        alert = True
        return render(request, 'login.html', {'alert':alert})
    return render(request, "login.html")
def UserLogout(request):
    logout(request)
    messages.success(request, "Successfully logged out")
    return redirect('/login')
@login_required(login_url = '/login')
def myprofile(request):
    if request.method=="POST":
        user = request.user
```

```
profile = Profile(user=user)
    profile.save()
    form = ProfileForm(data=request.POST, files=request.FILES)
    if form.is_valid():
        form.save()
        obj = form.instance
        return render(request, "profile.html",{'obj':obj})
else:
    form=ProfileForm()
return render(request, "profile.html", {'form':form})
```

FSD-PROJECT>Forum>profile_of_user>forms.py

```
from django import forms
from .models import Profile

class ProfileForm(forms.ModelForm):
    class Meta:
        model = Profile
        fields = ('image', )
```

FSD-PROJECT>Forum>profile_of_user>admin.py

```
from django.contrib import admin

# Register your models here.
from .models import Post, Replie, Profile

admin.site.register(Post)
admin.site.register(Replie)
admin.site.register(Profile)
```

FSD-PROJECT>Forum>profile_of_user>apps.py

```
from django.apps import AppConfig

class ProfileOfUserConfig(AppConfig):
    name = 'profile_of_user'
```

FSD-PROJECT>Forum>profile_of_user>urls.py

```
from django.urls import path
from . import views
urlpatterns = [
    path("", views.forum, name="Forum"),
```

```
path("discussion/<int:myid>/", views.discussion, name="Discussions"),
path("register/", views.UserRegister, name="Register"),
path("login/", views.UserLogin, name="Login"),
path("logout/", views.UserLogout, name="Logout"),
path("myprofile/", views.myprofile, name="Myprofile"),
]
```

FSD-PROJECT>Forum>Forum>urls.py

```
from django.contrib import admin
from django.urls import path, include
from django.conf import settings
from django.conf.urls.static import static

urlpatterns = [
    path('admin/', admin.site.urls),
    path('', include('profile_of_user.urls')),

] + static(settings.MEDIA_URL, document_root=settings.MEDIA_ROOT)
```

FSD-PROJECT>Forum>profile_of_user>templates>basic.html

```
<!doctype html>
<html lang="en">
  <head>
    <meta charset="utf-8">
    <meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-</pre>
fit=no">
    <link rel="stylesheet"</pre>
href="https://stackpath.bootstrapcdn.com/bootstrap/4.2.1/css/bootstrap.min.css"
integrity="sha384-GJzZqFGwb1QTTN6wy59ffF1BuGJpLSa9DkKMp0DgiMDm4iYMj70gZWKYbI706tWS"
crossorigin="anonymous">
    <title>{% block title %} {% endblock %}</title>
      <style>
          {% block css %} {% endblock %}
    </style>
  </head>
  <body>
    <nav class="navbar navbar-expand-lg navbar-dark bg-dark fixed-top">
  <a class="navbar-brand" href="/">Discussion Forum</a>
  <button class="navbar-toggler" type="button" data-toggle="collapse" data-</pre>
target="#navbarSupportedContent" aria-controls="navbarSupportedContent" aria-
expanded="false" aria-label="Toggle navigation">
    <span class="navbar-toggler-icon"></span>
  </button>
```

```
<div class="collapse navbar-collapse" id="navbarSupportedContent">
   <a class="nav-link" href="/">Home <span class="sr-only"></span></a>
    {% if user.is_authenticated %}
<a class="nav-link dropdown-toggle" href='#' id="navbarDropdown" role="button" data-</pre>
toggle="dropdown"> Welcome {{request.user}}</a>
<div class="dropdown-menu" aria-labelledby="navbarDropdown">
       <a class="dropdown-item" href="/logout">Logout</a>
    <a class="nav-link" href="/myprofile">Profile</a>
    </div>
    {% else %}
    <a class="nav-link" href="/register">Register</a>
    <a class="nav-link" href="/login">Login</a>
    {% endif %}
   </div>
</nav>
<br>
</body>
{% block body %} {% endblock %}
<script src="https://code.jquery.com/jquery-3.6.0.js" integrity="sha256-</pre>
H+K7U5CnXl1h5ywQfKtSj8PCmoN9aaq30gDh27Xc0jk=" crossorigin="anonymous"></script>
 <script
src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.14.6/umd/popper.min.js"
integrity="sha384-wHAiFfRlMFy6i5SRaxvfOCifBUQy1xHdJ/yoi7FRNXMRBu5WHdZYu1hA6ZOblgut"
crossorigin="anonymous"></script>
 <script src="https://stackpath.bootstrapcdn.com/bootstrap/4.2.1/js/bootstrap.min.js"</pre>
integrity="sha384-B0UglyR+jN6CkvvICOB2joaf5I4l3gm9GU6Hc1og6Ls7i6U/mkkaduKaBhlAXv9k"
crossorigin="anonymous"></script>
 {% block js %} {% endblock %}
</html>
```

FSD-PROJECT>Forum>profile_of_user>templates>discussion.html

```
{% extends 'basic.html' %}
{% block title %} Solutions {% endblock %}
{% block css %}
{% endblock %}
{% block body %}
<br>
<div class="container-fluid mt-5">
    <div class="row">
        <div class="col-md-12">
            <div class="card mb-4">
                <div class="card-header">
                     <div class="media flex-wrap w-100 align-items-center"> <img</pre>
src="/media/{{post.image}}"
                             class="d-block ui-w-40 rounded-circle" alt="" width="40px"
height="40px">
                         <div class="media-body ml-3" style="text-transform:</pre>
uppercase;"> <a data-abc="true">{{post.user1}}</a>
                         </div>
                         <div class="text-muted small ml-3">
                             <div>Date and Time Of Post :</div>
                             <div><strong>{{post.timestamp}}</strong></div>
                         </div>
                     </div>
                </div>
                <div class="card-body">
                     {{post.post_content}}
                </div>
                <div class="card-footer d-flex flex-wrap justify-content-between"</pre>
align-items-center px-0 pt-0 pb-3">
                     <div class="px-4 pt-3"> <button type="button" class="btn btn-</pre>
primary" data-target="#reply" data-toggle="modal"><i</pre>
                                 class="ion ion-md-create"></i>&nbsp; Reply</button>
</div>
                </div>
            </div>
        </div>
    </div>
</div>
{% for reply in replies %}
<br>
<div class="container">
<div class="media">
```

```
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    <img class="mr-3 rounded-circle" src="/media/{{reply.image}}" alt="." width="30px"</pre>
height="30px">
    <div class="media-body">
      <h4 class="mt-0">{{reply.user}}
          <span><small style="font-size:</pre>
13px;">({{reply.timestamp}})</small></span></h4>
     <h5>{{reply.reply_content}}</h5>
    </div>
  </div>
</div>
{% endfor %}
<!-- Modal -->
<div class="modal fade" id="reply" tabindex="-1" role="dialog" aria-</pre>
labelledby="exampleModalLabel" aria-hidden="true">
    <div class="modal-dialog" role="document">
      <div class="modal-content">
        <div class="modal-header">
          <h5 class="modal-title" id="exampleModalLabel">Modal title</h5>
          <button type="button" class="close" data-dismiss="modal" aria-label="Close">
            <span aria-hidden="true">&times;</span>
          </button>
        </div>
        {% if user.is_authenticated %}
        <div class="modal-body">
          <form action="/discussion/{{post.id}}/" method="POST"> {% csrf_token %}
            <div class="form-group">
              <label for="exampleFormControlTextarea1">Post Your Solution Here</label>
              <input type="hidden" name="post_id" value="{{post.id}}">
              <textarea class="form-control" id="desc" name="desc"</pre>
rows="3"></textarea>
            </div>
          </div>
          {% else %}
          <h3>Please Login first to post a reply</h3>
          {% endif %}
        <div class="modal-footer">
          <button type="button" class="btn btn-secondary" data-</pre>
dismiss="modal">Close</button>
          <button type="submit" class="btn btn-primary">Post Solution
        </div>
      </div>
    </div>
  </div>
{% endblock %}
{% block js %}
<script>
 {% if alert %}
alert('Your Reply has been posted successfully!!');
```

```
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document.location = "/"
{% endif %}
</script>
{% endblock %}
```

FSD-PROJECT>Forum>profile of user>templates>forum.html

```
{% extends 'basic.html' %}
{% block title %} Forum {% endblock %}
{% block homeactive %} active {% endblock homeactive %}
{% block css %}
body {
margin: 0;
font-family: -apple-system, BlinkMacSystemFont, "Segoe UI", Roboto, "Helvetica Neue",
Arial, "Noto Sans", sans-serif,
"Apple Color Emoji", "Segoe UI Emoji", "Segoe UI Symbol", "Noto Color Emoji";
font-size: .88rem;
font-weight: 400;
line-height: 1.5;
color: #495057;
text-align: left;
background-color: #eef1f3
}
.mt-100 {
margin-top: 100px
.card {
box-shadow: 0 0.46875rem 2.1875rem rgba(4, 9, 20, 0.03), 0 0.9375rem 1.40625rem
rgba(4, 9, 20, 0.03), 0 0.25rem
0.53125rem rgba(4, 9, 20, 0.05), 0 0.125rem 0.1875rem rgba(4, 9, 20, 0.03);
border-width: 0;
transition: all .2s
}
.card-header:first-child {
border-radius: calc(.25rem - 1px) calc(.25rem - 1px) 0 0
.card-header {
display: flex;
align-items: center;
border-bottom-width: 1px;
padding-top: 0;
```

```
padding-bottom: 0;
padding-right: .625rem;
height: 3.5rem;
text-transform: uppercase;
background-color: #fff;
border-bottom: 1px solid rgba(26, 54, 126, 0.125)
}
.btn-primary {
color: #fff;
background-color: #3f6ad8;
border-color: #3f6ad8
}
.btn {
font-size: 0.8rem;
font-weight: 500;
outline: none !important;
position: relative;
transition: color 0.15s, background-color 0.15s, border-color 0.15s, box-shadow 0.15s
}
.card-body {
flex: 1 1 auto;
padding: 1.25rem
}
.card-body p {
font-size: 13px
}
a {
color: #E91E63;
text-decoration: none !important;
background-color: transparent
}
.media img {
width: 40px;
height: auto
}
{% endblock %}
{% block body %}
{% load static %}
<div class="container my-4">
<div class="jumbotron">
```

```
<h1 class="display-4" style="font-family: Arial, sans-serif; color: #1E90FF; text-</pre>
align: center; margin-top: 20px; font-size: 4em; font-weight: bold; letter-spacing:
1px; text-shadow: 2px 2px 4px #000000; border-bottom: 2px solid #1E90FF; padding-
bottom: 10px; padding-left: 10px; padding-right: 10px; background-color: #f0f8ff;">
   ಚರ್ಚೆ
</h1>
1.5em; line-height: 1.8; margin-bottom: 25px; text-align: justify; background-color:
#f8f9fa; padding: 15px; border-radius: 5px; box-shadow: 0 4px 8px rgba(0, 0, 0,
0.1);">
 Welcome to our discussion forum. You can post your question or any related queries
by simply clicking on the add post button. <br >> Thank you and have a nice day!!
<hr class="my-4" style="border: 2px solid #3498db; margin-bottom: 30px;">
margin-top: 25px; text-align: justify; background-color: #e8f6f3; padding: 15px;
border-radius: 5px; box-shadow: 0 4px 8px rgba(0, 0, 0, 0.1);">
 You can also reply to others' posts by clicking on their post and replying to them.
<button class="btn btn-primary btn-lg" data-target="#questions" data-</pre>
toggle="modal" role="button">Add Post</button>
   </div>
   {% for post in posts %}
   <div class="container-fluid mt-10">
     <div class="row">
         <div class="col-md-12">
             <div class="card mb-4">
                <div class="card-header">
                    <div class="media flex-wrap w-100 align-items-center"> <img</pre>
src="/media/{{post.image}}"
                            class="d-block ui-w-40 rounded-circle" alt="">
                        <div class="media-body ml-3"> <a</pre>
href="/discussion/{{post.id}}" data-abc="true">{{post.user1}}</a>
                        </div>
                        <div class="text-muted small ml-3">
                          <div class="px-4 pt-3">{{post.timestamp}} </div>
                        </div>
                    </div>
                </div>
                <div class="card-body">
                    {{post.post_content}}
                </div>
                <div class="card-footer d-flex flex-wrap justify-content-between"</pre>
align-items-center px-0 pt-0 pb-3">
```

```
</div>
              </div>
          </div>
      </div>
  </div>
  {% endfor %}
</div>
<!-- Modal -->
<div class="modal fade" id="questions" tabindex="-1" role="dialog" aria-</pre>
labelledby="exampleModalLabel" aria-hidden="true">
    <div class="modal-dialog" role="document">
      <div class="modal-content">
        <div class="modal-header">
          <h5 class="modal-title" id="exampleModalLabel">Modal title</h5>
          <button type="button" class="close" data-dismiss="modal" aria-label="Close">
            <span aria-hidden="true">&times;</span>
          </button>
        </div>
        {% if user.is_authenticated %}
        <div class="modal-body">
          <form action="/" method="POST"> {% csrf_token %}
          <div class="form-group">
            <label for="exampleFormControlTextarea1">Post Your Question Here</label>
            <textarea class="form-control" id="content" name="content"</pre>
rows="3"></textarea>
          </div>
        </div>
        {% else %}
        <h3>Please Login to post</h3>
        {% endif %}
        <div class="modal-footer">
          <button type="button" class="btn btn-secondary" data-</pre>
dismiss="modal">Close</button>
          <button type="submit" class="btn btn-primary">Post</button>
        </div>
      </div>
    </div>
  </div>
    {% endblock %}
    {% block js %}
    <script>
     {% if alert %}
    alert('Your Question has been posted successfully!!');
    document.location = '/';
    {% endif %}
```

```
</script>
{% endblock %}
```

FSD-PROJECT>Forum>profile_of_user>templates>login.html

```
{% extends 'basic.html' %}
{% block title %} Log In {% endblock %}
{% block loginactive %} active {% endblock loginactive %}
{% block css %}
@import url(https://fonts.googleapis.com/css?family=Roboto:400,300,500);
*:focus {
 outline: none;
}
body {
  margin: 0;
  padding: 0;
  background: #DDD;
  font-size: 16px;
  color: #222;
  font-family: 'Roboto', sans-serif;
  font-weight: 300;
}
#login-box {
  position: relative;
  margin: 5% auto;
  width: 700px;
  height: 500px;
  background: #FFF;
  border-radius: 2px;
  box-shadow: 0 2px 4px rgba(0, 0, 0, 0.4);
}
.items {
  position: absolute;
  top: 0;
  left: 0;
  box-sizing: border-box;
  padding: 40px;
  width: 700px;
  height: 500px;
}
h1 {
  margin: 0 0 20px 0;
```

```
font-weight: bold;
  font-size: 28px;
  text-align: center;
}
input[type="text"],
input[type="password"] {
  display: block;
  box-sizing: border-box;
  margin-bottom: 20px;
  padding: 4px;
  width: 600px;
  height: 32px;
  border: none;
  border-bottom: 1px solid #AAA;
  font-family: 'Roboto', sans-serif;
  font-weight: 400;
  font-size: 15px;
  transition: 0.2s ease;
}
input[type="text"]:focus,
input[type="password"]:focus {
  border-bottom: 2px solid #16a085;
  color: #16a085;
  transition: 0.2s ease;
}
input[type="submit"] {
  margin-top: 28px;
  width: 120px;
  height: 32px;
  background: #16a085;
  border: none;
  border-radius: 2px;
  color: #FFF;
  font-family: 'Roboto', sans-serif;
  font-weight: 500;
  text-transform: uppercase;
  transition: 0.1s ease;
  cursor: pointer;
  position: relative;
  left: 250px;
}
input[type="submit"]:hover,
input[type="submit"]:focus {
```

```
opacity: 0.8;
  box-shadow: 0 2px 4px rgba(0, 0, 0, 0.4);
 transition: 0.1s ease;
}
input[type="submit"]:active {
 opacity: 1;
 box-shadow: 0 1px 2px rgba(0, 0, 0, 0.4);
  transition: 0.1s ease;
}
{% endblock %}
{% block body %}
<br>
{% for message in messages %}
<div class="alert alert-{{ message.tags }} alert-dismissible fade show" role="alert">
      <strong>Message : </strong> {{ message }}
      <button type="button" class="close" data-dismiss="alert" aria-label="Close">
        <span aria-hidden="true">&times;</span>
      </button>
    </div>
{% endfor %}
<div id="login-box">
    <div class="items">
      h1>Log In</h1>
              <form action="/login/" method="post"> {% csrf_token %}
      <input type="text" name="username" placeholder="Username" />
      <input type="password" name="password" placeholder="Password" />
      <input type="submit" name="signup_submit" value="Log In" />
    </div>
  </div>
  {% endblock %}
```

FSD-PROJECT>Forum>profile_of_user>templates>profile.html

```
<span aria-hidden="true">&times;</span>
   </button>
</div>
{% endfor %}
<div class="container">
   <div class="row">
       <div class="col-lg-12 col-lg-offset-0">
          <div class="row pad">
             <div class="col-lg-12">
                 <div class="panel panel-primary">
                    <div class="card-body">
                        Username: <strong class="float-
right">{{request.user}}</strong>
                           Full Name: <strong class="float-
right">{{request.user.get_full_name}}</strong>
                           Email: <strong class="float-
right">{{request.user.email}}</strong>
                           <form action="/myprofile/"</pre>
enctype="multipart/form-data" method="POST">{% csrf_token %}
                                  {{ form.as_p }}
                                  <button type="submit">Submit</button>
                                  Profile Photo: <strong class="float-right">
<img
                                         src="{{request.user.profile.image.url}
}" class="rounded-circle" alt=""
                                         width="150px" height="150px"></strong>
                           </div>
                 </div>
             </div>
          </div>
      </div>
   </div>
</div>
</div>
{% endblock %}
```

FSD-PROJECT>Forum>profile_of_user>templates>register.html

```
{% extends 'basic.html' %}
{% block title %} Register {% endblock %}
{% block registeractive %} active {% endblock registeractive %}
{% block css %}
@import url(https://fonts.googleapis.com/css?family=Roboto:400,300,500);
*:focus {
 outline: none;
}
body {
  margin: 0;
  padding: 0;
  background: #DDD;
  font-size: 16px;
  color: #222;
  font-family: 'Roboto', sans-serif;
  font-weight: 300;
}
#login-box {
  position: relative;
  margin: 5% auto;
  width: 700px;
  height: 500px;
  background: #FFF;
  border-radius: 2px;
  box-shadow: 0 2px 4px rgba(0, 0, 0, 0.4);
}
.items {
  position: absolute;
  top: 0;
  left: 0;
  box-sizing: border-box;
  padding: 40px;
 width: 700px;
  height: 500px;
}
h1 {
  margin: 0 0 20px 0;
  font-weight: bold;
  font-size: 28px;
  text-align: center;
```

```
}
input[type="text"],
input[type="email"],
input[type="password"] {
  display: block;
  box-sizing: border-box;
  margin-bottom: 20px;
  padding: 4px;
  width: 600px;
  height: 32px;
  border: none;
  border-bottom: 1px solid #AAA;
  font-family: 'Roboto', sans-serif;
  font-weight: 400;
  font-size: 15px;
  transition: 0.2s ease;
}
input[type="text"]:focus,
input[type="email"]:focus,
input[type="password"]:focus {
  border-bottom: 2px solid #16a085;
  color: #16a085;
  transition: 0.2s ease;
}
input[type="submit"] {
  margin-top: 28px;
  width: 120px;
  height: 32px;
  background: #16a085;
  border: none;
  border-radius: 2px;
  color: #FFF;
  font-family: 'Roboto', sans-serif;
  font-weight: 500;
  text-transform: uppercase;
  transition: 0.1s ease;
  cursor: pointer;
  position: relative;
  left: 250px;
}
input[type="submit"]:hover,
input[type="submit"]:focus {
  opacity: 0.8;
  box-shadow: 0 2px 4px rgba(0, 0, 0, 0.4);
```

```
transition: 0.1s ease;
}
input[type="submit"]:active {
 opacity: 1;
 box-shadow: 0 1px 2px rgba(0, 0, 0, 0.4);
 transition: 0.1s ease;
{% endblock %}
{% block body %}
<br>
{% for message in messages %}
<div class="alert alert-{{ message.tags }} alert-dismissible fade show" role="alert">
      <strong>Message : </strong> {{ message }}
      <button type="button" class="close" data-dismiss="alert" aria-label="Close">
        <span aria-hidden="true">&times;</span>
      </button>
    </div>
{% endfor %}
<div id="login-box">
    <div class="items">
      <h1>Register</h1>
        <form action="/register/" method="post"> {% csrf_token %}
      <input type="text" name="username" placeholder="Username" />
      <input type="email" name="email" placeholder="E-mail" />
      <input type="text" name="first_name" placeholder="First Name" />
      <input type="text" name="last_name" placeholder="Last Name" />
      <input type="password" name="password" placeholder="Password" />
      <input type="password" name="confirm password" placeholder="Confirm your</pre>
password" />
      <input type="submit" name="signup_submit" value="Register" />
    </div>
  </div>
  {% endblock %}
```