Lab 5 - Developing Web App using Django – Part 1

A1.

Code:

urls.py:

```python
from django.contrib import admin
from django.urls import path
from q1.views import home
from q2.views import home2
from a1.views import home3

urlpatterns = [
    path('admin/', admin.site.urls),
    path('q1/',home),
    path('q2/',home2),
    path('a1/',home3),
]
```

captcha_page.html:

```html
<!DOCTYPE html>
<html>
<head>
    <title>Captcha Verify</title>
    <style>
        body { font-family: sans-serif; display: flex; justify-content: center;
padding-top: 50px; background: #f0f2f5; }
        .box { background: white; padding: 30px; border-radius: 8px; box-shadow:
0 4px 10px rgba(0,0,0,0.1); text-align: center; }

        .captcha-display {
            background: #333; color: #fff; font-size: 24px; font-weight: bold;
            letter-spacing: 5px; padding: 10px; margin-bottom: 20px;
            display: inline-block; user-select: none; font-family: 'Courier New',
monospace;
        }

        input { padding: 10px; width: 80%; border: 1px solid #ccc; border-radius:
4px; margin-bottom: 10px; }
        button { padding: 10px 20px; background: #007bff; color: white; border:
none; border-radius: 4px; cursor: pointer; }
        button:disabled { background: #ccc; cursor: not-allowed; }
```

```html
        .msg { margin-top: 15px; font-weight: bold; color: #d93025; }
    </style>
</head>
<body>

<div class="box">
    <h2>Security Check</h2>
    <div class="captcha-display">{{ captcha }}</div>

    <form method="POST">
        {% csrf_token %}
        <input type="text" name="captcha_input" placeholder="Enter code above"
            {% if is_disabled %} disabled {% endif %} required>
        <br>
        <button type="submit" {% if is_disabled %} disabled {%
endif %}>Verify</button>
    </form>

    {% if message %}
        <div class="msg">{{ message }}</div>
    {% endif %}

    {% if is_disabled %}
        <p><small>Please refresh or contact admin to reset.</small></p>
    {% endif %}
</div>
</body>
</html>
```

views.py:

```python
# Create your views here.
import random
import string
from django.shortcuts import render


def home3(request):
    if request.method == "GET":
        request.session['captcha_text'] =
''.join(random.choices(string.ascii_uppercase + string.digits, k=6))
        request.session['fail_count'] = 0

    if 'fail_count' not in request.session:
```

```python
            request.session['fail_count'] = 0

    message = ""
    is_disabled = request.session['fail_count'] >= 3

    if request.method == "POST" and not is_disabled:
        user_input = request.POST.get('captcha_input')
        actual_captcha = request.session.get('captcha_text')

        if user_input == actual_captcha:
            message = "✓Success! Captcha Matched."
            request.session['fail_count'] = 0

            request.session['captcha_text'] =
''.join(random.choices(string.ascii_uppercase + string.digits, k=6))
        else:
            request.session['fail_count'] += 1
            message = f"✗Mismatch! Attempt {request.session['fail_count']} of
3."

            if request.session['fail_count'] >= 3:
                is_disabled = True
                message = "▨ Account Locked: Too many failed attempts."

    return render(request, 'captcha_page.html', {
        'captcha': request.session['captcha_text'],
        'message': message,
        'is_disabled': is_disabled
    })
```

settings.py:

```python
INSTALLED_APPS = [
    'django.contrib.admin',
    'django.contrib.auth',
    'django.contrib.contenttypes',
    'django.contrib.sessions',
    'django.contrib.messages',
    'django.contrib.staticfiles',
    'q1',
    'q2',
    'a1',
]
```