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PROJECT ON

Regex Matching Web App Development Project

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About me

I hold a Bachelor of Science (BSc) degree in Chemistry. Despite my non-technical background, my passion for understanding patterns and uncovering insights led me to explore data-driven fields. I embarked on a journey into the fascinating world of data analysis and data science and realized that it offer a unique blend of scientific inquiry and practical problem-solving.

I believe that data-driven decisions can transform businesses, research, and society. By mastering data analysis techniques, I aim to contribute to informed decision-making and drive positive change.

I have a hands on project experience in using MySQL, Excel in different projects across different domains like banking, social media, automobile, human resources and Entertainment industry.

LinkedIn profile : LinkedIn Profile

AWS Deployment ip address:
http://16.171.12.187:5000/

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Objective / About the Project

Your task is to replicate the core functionality of the website **regex101.com**. This entails creating a web application that allows users to input a test string and a regular expression (regex) and displays all the matches found.

```python
from flask import Flask, render_template, request
import re


app = Flask(__name__)



def regex_matcher(test_string, regex_pattern):
    matches = re.findall(regex_pattern, test_string)
    return matches

def is_valid_email(email):
    email_pattern = r'^[\w\.-]+@[a-zA-Z\d\.-]+\.[a-zA-Z]{2,}$'
    return re.match(email_pattern, email)

@app.route('/')
def home():
    return render_template('index.html')

@app.route('/regex_results', methods=['POST'])
def regex_results():
    test_string = request.form.get('test_string')
    regex_pattern = request.form.get('regex_pattern')

    regex_matches = regex_matcher(test_string, regex_pattern)

    return render_template('index.html', test_string=test_string, regex_pattern=regex_pattern,
                           regex_matches=regex_matches)



@app.route('/email_validation', methods=['POST'])
def email_validation():
    email_to_validate = request.form.get('email')

    is_valid_email_result = is_valid_email(email_to_validate)

    return render_template('index.html', email=email_to_validate,
                           is_valid_email=is_valid_email_result)

if __name__ == "__main__":
    app.run(debug=True, host='0.0.0.0', port=5000)
```

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```html
<> index.html > ...
1    <!DOCTYPE html>
2    <html lang="en">
3    <head>
4        <meta charset="UTF-8">
5        <meta name="viewport" content="width=device-width, initial-scale=1.0">
6        <title>Home</title>
7    </head>
8    <body>
9        <h1>Regex Matching and Email Validation</h1>
10
11
12       <form action="/regex_results" method="post">
13           Test String:    <label for="test_string">
14                           <input type="text" id="test_string" name="test_string" required>
15                           <br>
16           Regex Pattern:  <label for="regex_pattern"></label>
17                           <input type="text" id="regex_pattern" name="regex_pattern" required>
18                           <br>
19                           <button type="submit">Match Regex</button>
20       </form>
21
22
23       <form action="/email_validation" method="post" >
24           Email:  <label for="email">
25                   <input type="text" id="email" name="email" required>
26                   <br>
27                   <button type="submit">Validate Email</button>
28       </form>
29
```

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```
29
30    {% if test_string and regex_pattern %}
31        <h2>Regex Matcher</h2>
32        {% if regex_matches %}
33            <h4>Regex Matches</h4>
34            <ul>
35                {% for match in regex_matches %}
36                    <li>{{ match }}</li>
37                {% endfor %}
38            </ul>
39        {% else %}
40            <p>No regex matches found.</p>
41        {% endif %}
42    {% endif %}
43
44    {% if email %}
45        <h2>Email Validation</h2>
46        <p>Email: {{ email }}</p>
47        {% if is_valid_email %}
48            <p style="color: ▮rgb(14, 231, 115);">Valid Email Address</p>
49        {% else %}
50            <p style="color: ▮rgb(237, 16, 38);">Invalid Email Address</p>
51        {% endif %}
52    {% endif %}
53
54
55 </body>
56 </html>
```

THANK YOU