Regex Matching Web App Development Project

Objective:

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.

Steps:

1. Create a new directory for your project and navigate into it.

2. Set up your virtual development environment:
  - Install Flask, a Python web framework, using pip if not already installed: `pip install Flask`.

3. Initialize a new Flask application:
  - Create a new Python file named `app.py`.
  - Import Flask and create a new Flask app instance.
  - Define a route for the home page ("/") where users can input the test string and regex.
  - Render an HTML template containing a form with fields for the test string and regex, and a submit button.

4. Create the HTML template:
  - Create a new directory named `templates` within your project directory.
  - Inside the `templates` directory, create a new HTML file named `index.html`.
  - Design the HTML form with input fields for the test string and regex, and a submit button.

5. Define a route to handle form submission:
  - Define a new route ("/results") in your `app.py` file to handle form submission.
  - Extract the test string and regex submitted by the user from the form data.
  - Use Python's `re` module to perform regex matching on the test string.
  - Store the matched strings in a list.

6. Render the results:
  - Pass the list of matched strings to the HTML template.
  - Modify the HTML template to display the matched strings below the input form.

7. Test your application:
  - Run your Flask application (`python app.py`).
  - Open a web browser and navigate to http://localhost:5000 to access your application.
  - Input various test strings and regex patterns to ensure the application displays the correct matches.

8. **(IMPORTANT)** Implement a new route where a user can validate if a given email id is valid or not.

9. **(BONUS)** Deploy the application on AWS Cloud.