Exercise - Write code to implement a web application

5 minutes

This module requires a sandbox to complete. A **sandbox** gives you access to free resources. Your personal subscription will not be charged. The sandbox may only be used to complete training on Microsoft Learn. Use for any other reason is prohibited, and may result in permanent loss of access to the sandbox.

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Sign in to activate sandbox

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In this unit, you'll use developer tools to create the code for a starter web application.

Create a new web project

To create a starter web application, we'll use the web application framework Flask.

1. Run the following commands to set up a virtual environment and install Flask in your profile:

   Bash

   ```
   python3 -m venv venv
   source venv/bin/activate
   pip install flask
   ```

2. Run these commands in Azure Cloud Shell to create the directory for your new web app:

```bash
Bash
```

```bash
mkdir ~/BestBikeApp
cd ~/BestBikeApp
```

3. Create a new file for your web app by opening *application.py* in the python interactive editor:

```bash
Bash
```

```bash
code application.py
```

4. Copy and paste the following Python code to create the main web app functionality:

```python
Python
```

```python
from flask import Flask
app = Flask(__name__)

@app.route("/")
def hello():
    return "<html><body><h1>Hello Best Bike App!</h1></body></html>\n"
```

5. Save your file and exit the editor by selecting the **…** menu on the top right, and then selecting **Save** > **Close Editor**, or by pressing `Ctrl+S` and `Ctrl+Q` on Windows and Linux or `Command+S` and `Command+Q` on macOS.

6. To deploy your application to Azure, you'll need to save the list of application requirements you made for it in a *requirements.txt* file. To do so, run the following command:

```bash
Bash
```

```bash
pip freeze > requirements.txt
```

Optionally test your web app

You can test your application locally in Azure while it's running.

1. Open a second command shell session in a new browser tab .

2. From your primary command shell session (to the right), run the following commands to activate the virtual environment:

   Bash

   ```bash
   cd ..
   source venv/bin/activate
   ```

3. From your primary command shell session (to the right), run the following commands to start your web application:

   Bash

   ```bash
   cd ~/BestBikeApp
   export FLASK_APP=application.py
   flask run
   ```

4. From your second command shell session, run the following command to browse to your web application:

   Bash

   ```bash
   curl http://127.0.0.1:5000/
   ```

   You should get the following HTML output:

   HTML

   ```html
   <html><body><h1>Hello Best Bike App!</h1></body></html>
   ```

5. From your primary command shell session, press [Ctrl+C] to quit your web app, then close the secondary Azure Cloud Shell.

Next unit: Deploy code to App Service

Continue >

Azure Cloud Shell

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