# Experiment 0: Installation of Python Flask for developing web analytics applications and running a basic micro-website to verify the setup.

## ⚠️ Important Disclaimer

*This document provides foundational guidance, but technology evolves rapidly. Students/developers are encouraged to:*

- Explore alternative tools (e.g., PyCharm instead of VS Code)
- Adapt steps for newer Python/Flask versions
- Research error solutions using official documentation (Flask, Python)
- Innovate with modern approaches (Docker, cloud IDEs like GitPod)
- Report any roadblocks to instructors for collaborative problem-solving.*

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**Objective**:
Install Flask and necessary tools to create a basic web application with SQLite database support.

## System Requirements

- **Operating System**: Windows 10/11, macOS (10.14+), or Linux (Ubuntu 20.04+)
- **RAM**: Minimum 4GB (8GB recommended)
- **Disk Space**: 500MB free space
- **Python Version**: 3.7 or higher

## Step-by-Step Setup

### 1. Install Python

- **Windows/macOS**:
  Download from python.org
- **Linux**:

```
sudo apt update && sudo apt install python3 python3-pip
```

### 2. Install VS Code (Recommended IDE)

1. Download from code.visualstudio.com
2. Install Python extension:
   `Extensions → Search "Python" → Install`

### 3. Install Flask

```
pip install flask
```

### 4. SQLite Setup

```
python3 -c "import sqlite3; print(sqlite3.sqlite_version)"
```

*(Already included with Python)*

### 5. Create Test Application

Save as `app.py`:

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

@app.route('/')
def home():
    return "Hello, Flask!"

if __name__ == '__main__':
    app.run(debug=True)
```

### 6. Run the Application

**Method 1**: Terminal

```
py app.py or python app.py  # or python3 app.py
```

**Method 2**: VS Code

1. Open `app.py`
2. Click the ▶️ Run button or press `F5`

**Expected Output**:

- Terminal: `Running on http://127.0.0.1:5000/`
- Browser: Displays "Hello, Flask!"

## Alternative Methods

### Virtual Environment

```
python -m venv myenv
source myenv/bin/activate  # Linux/macOS
.\myenv\Scripts\activate  # Windows
pip install flask
```