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Internship Domain : python

Week 6 task

Instructor Name : Hassan ALI

- **Task 1:**

Use math & statistics libraries to get square roots and average.

Description:

This Python script uses the built-in `math` and `statistics` libraries to:

- Calculate the square roots of a list of numbers
- Find the average (mean) of those numbers

It prints the original numbers, their square roots, and the average to the screen.

Output

task1.py > ...

```python
#Task 1:Use math & statistics libraries to get square roots and average.
import math        # for square root
import statistics  # for average

# List of numbers
numbers = [4, 9, 16, 25, 36]

# Get square roots
square_roots = [math.sqrt(num) for num in numbers]

# Calculate average
average = statistics.mean(numbers)

# Print results
print("Original numbers:", numbers)
print("Square roots:", square_roots)
print("Average:", average)
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

```
PS C:\Users\naazs\Documents\week6task internship2> & C:/Python/Python313/python.exe "c:/
Original numbers: [4, 9, 16, 25, 36]
Square roots: [2.0, 3.0, 4.0, 5.0, 6.0]
Average: 18
PS C:\Users\naazs\Documents\week6task internship2>
```

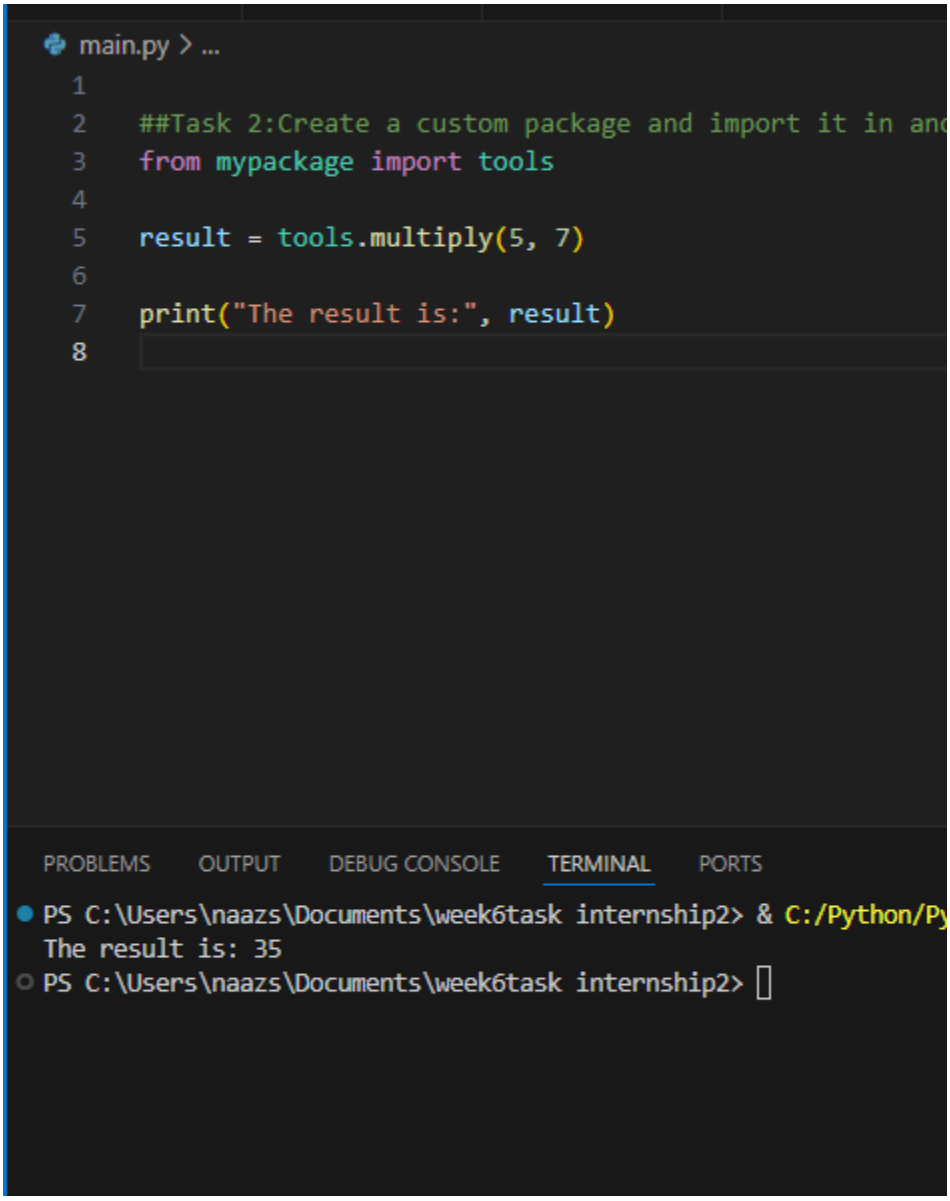
- **Task 2:**

Create a custom package and import it in another script.

Description:

This task shows how to create a custom Python package named `mypackage` with a module `tools.py` that contains a `multiply()` function.
We then import this package in another script (`main.py`, placed outside the package folder) and use the function to perform multiplication and print the result.

Output



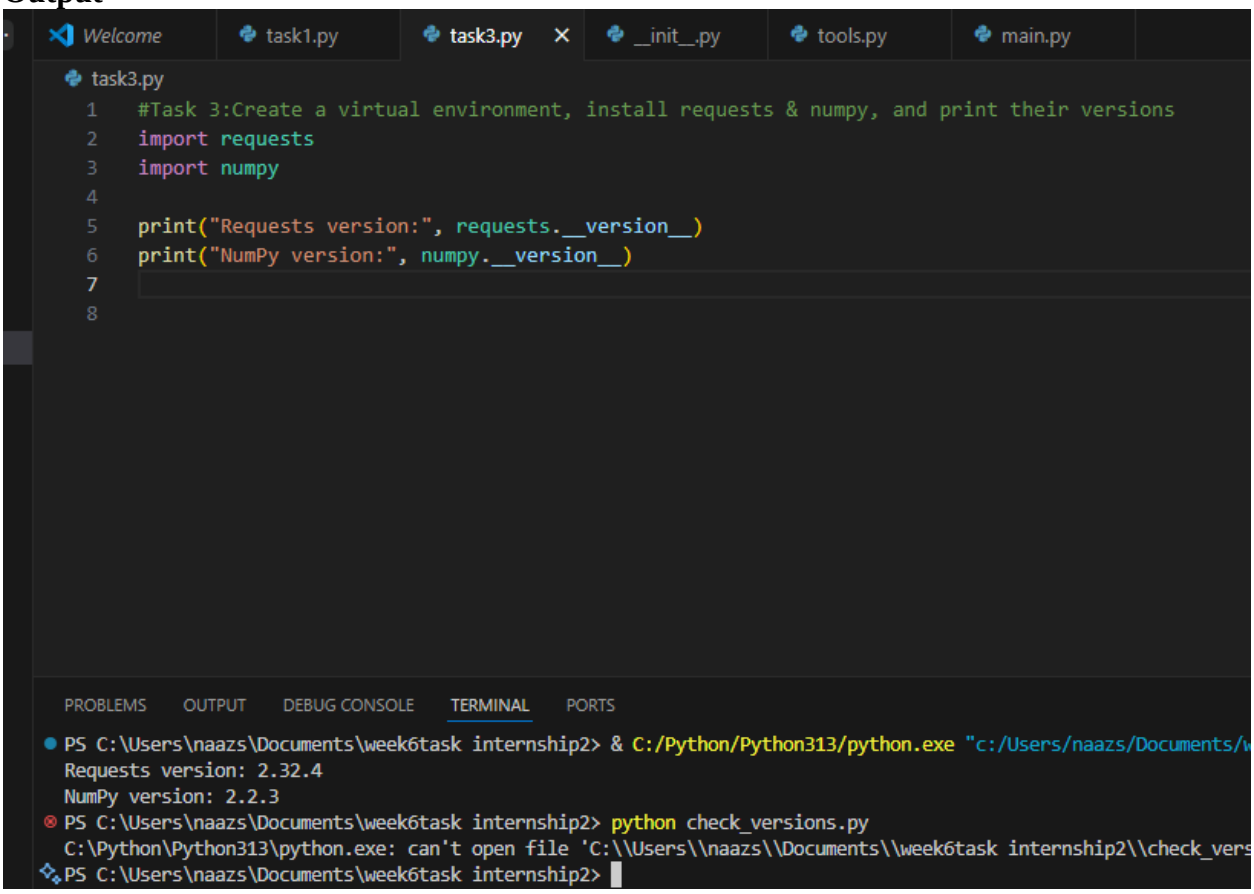
- **Task 3:**

Create a virtual environment, install requests & numpy, and print their versions.

description:

This task demonstrates how to set up a Python virtual environment, install external libraries (`requests` and `numpy`), and check their installed versions using a simple Python script.

Output



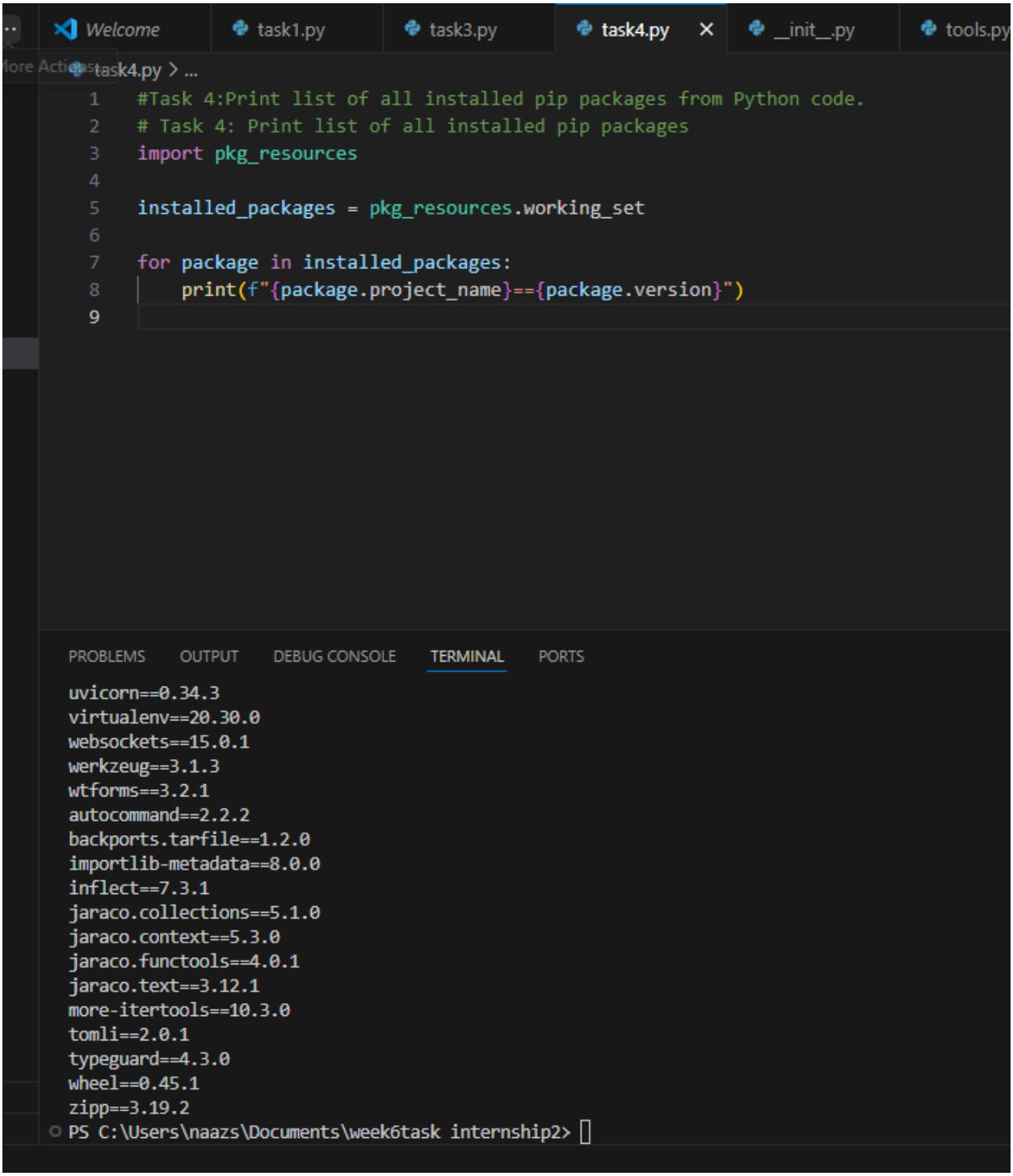
- **Task 4:**

Print list of all installed pip packages from Python code.

description:

This script uses the `pkg_resources` module from `setuptools` to list all installed pip packages and their versions in the current Python environment.

Output



- **Task 5:**

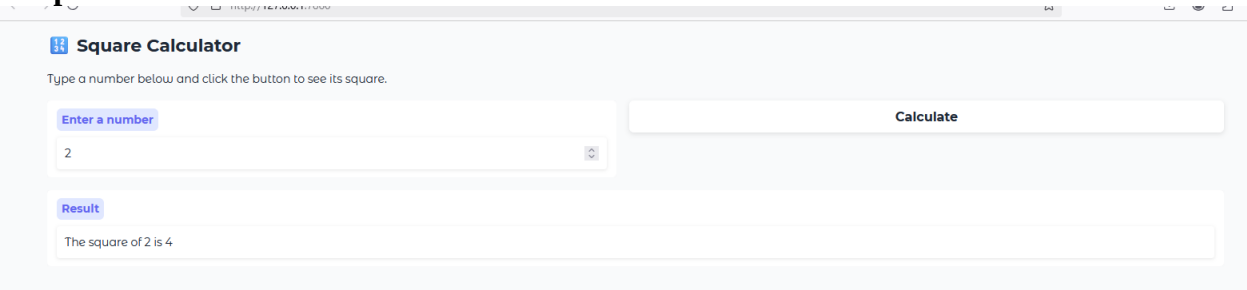
Create Gradio app that takes a number and returns its square.

description:

This is a simple Gradio web app that asks the user to enter a number, then calculates and displays its square when the **"Calculate"** button is clicked.

✓ Built with Gradio's `Blocks` layout for a clean and modern interface.
✓ Includes a title and instructions to guide the user.
✓ Shows the result neatly in a textbox below.
✓ Uses a soft theme to make the interface look smooth and user-friendly.

Output



- **Task 6:**

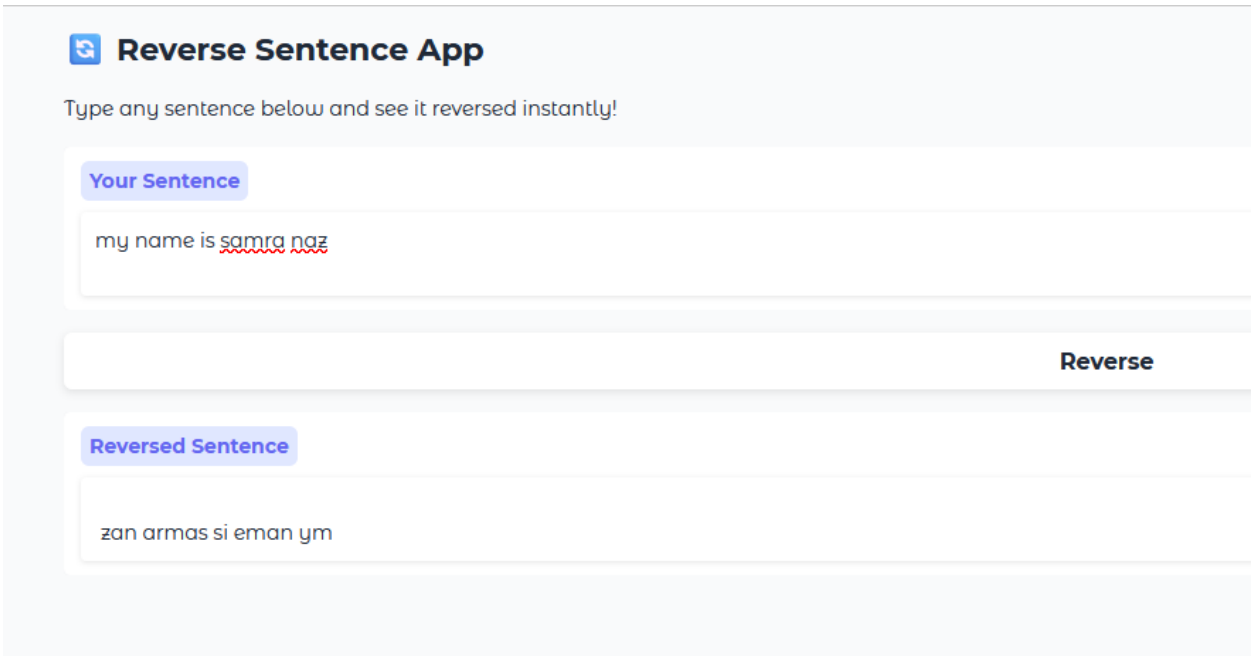
Create Gradio interface that takes a sentence and returns it reversed.

description:

This Gradio app takes a sentence typed by the user and returns it reversed when the **"Reverse"** button is clicked.

✓ Built using Gradio's `Blocks` layout for a clean and modern look.
✓ Includes a textbox for input, a button to trigger the action, and an output box to display the reversed sentence.
✓ Uses a soft theme to keep the interface simple and user-friendly.

output


Reverse Sentence App
Type any sentence below and see it reversed instantly!
Your Sentence
my name is samra naz
Reverse
Reversed Sentence
zan armas si eman ym