

# Python Mega Projects

## Mega Project 1 - Finding Prime Number in Range

Python code:

```
num1=int(input("Enter first number: "))

num2=int(input("Enter second number: "))

for i in range(num1,num2+1):
    if i>1:
        is_prime=True
        for j in range (2,i):

            if i%j==0:
                is_prime=False
                break

        if is_prime:
            print(i,"is a prime number")
```

Output:

The screenshot shows the VS Code interface with the following details:

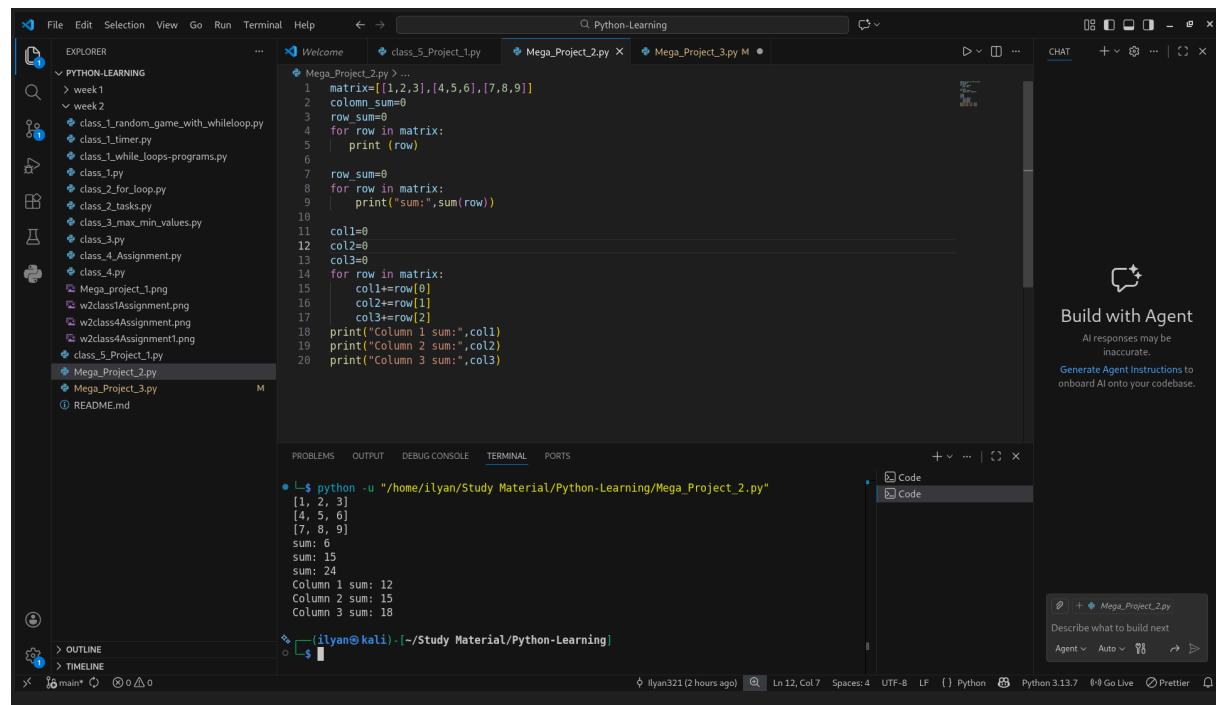
- Explorer View:** Shows a folder named "PYTHON-LEARNING" containing several Python files: week1, week2, class\_1\_random\_game\_with\_whileloop.py, class\_1\_timer.py, class\_1\_while\_loops-programs.py, class\_1\_ipy, class\_2\_for\_loop.py, class\_2\_tasks.py, class\_3\_max\_min\_values.py, class\_3\_ipy, class\_4\_assignment.py, class\_4\_ipy, and class\_5\_Project\_1.py.
- Code Editor:** The file "class\_5\_Project\_1.py" is open. It contains the provided Python code for finding prime numbers in a given range.
- Terminal:** At the bottom, the terminal window shows the output of running the script: "Enter first number: 2", "Enter second number: 16", and then a list of prime numbers from 2 to 13.
- Right Sidebar:** Features a "Build with Agent" section with a button to "Generate Agent Instructions to onboard AI onto your codebase".

## Mega Project 2 - Matrix Manipulation

Python code:

```
matrix=[[1,2,3],[4,5,6],[7,8,9]]  
column_sum=0  
row_sum=0  
for row in matrix:  
    print (row)  
  
row_sum=0  
for row in matrix:  
    print("sum:",sum(row))  
  
col1=0  
col2=0  
col3=0  
for row in matrix:  
    col1+=row[0]  
    col2+=row[1]  
    col3+=row[2]  
print("Column 1 sum:",col1)  
print("Column 2 sum:",col2)  
print("Column 3 sum:",col3)
```

Output:



The screenshot shows the VS Code interface with the following details:

- Explorer View:** Shows the project structure under "PYTHON-LEARNING".
- Terminal View:** Displays the execution of the script `Mega\_Project\_2.py` with its output:

```
[1, 2, 3]
[4, 5, 6]
[7, 8, 9]
sum: 6
sum: 15
sum: 24
Column 1 sum: 12
Column 2 sum: 15
Column 3 sum: 18
```
- Code Editor View:** Shows the source code for `Mega\_Project\_2.py`.
- Build with Agent:** A feature panel on the right side of the interface.

# Mega Project 3 - Number Guessing With Scores

Python code:

```
import random
i=1
print("-----Number Guessing Game-----")
while True:
    guess=random.randint(1,10)
    score=int(0)
    print("Round ",i)
    for i in range (3):
        print("The computer guessed:",guess)
        num=int(input("Enter a number between 1 and 10: "))
        if num==guess:
            print("You guessed correctly! 10 Score added.")
            score+=10
            print("Your total score is:",score)
            i+=1
            break
        else:
            print("You guessed incorrectly!")
    print()
    print("-----Your final score is:",score)
    print()
    i+=1
```

Output:

```
File Edit Selection View Go Run Terminal Help ← → ⌘ Python-Learning EXPLORER ... Welcome class_5_Project_1.py Mega_Project_2.py Mega_Project_3.py ...
Mega_Project_3.py ...
1 import random
2 i=1
3 print("-----Number Guessing Game-----")
4 while True:
5     guess=random.randint(1,10)
6     score=int(0)
7     print("Round ",i)

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
L $ python -u "/home/ilyan/Study Material/Python-Learning/Mega_Project_3.py"
-----
-----Number Guessing Game-----
Round 1
The computer guessed: 2
Enter a number between 1 and 10: 2
You guessed correctly! 10 Score added.
Your total score is: 10
-----
-----Your final score is: 10

Round 2
The computer guessed: 4
Enter a number between 1 and 10: 4
You guessed correctly! 10 Score added.
Your total score is: 10
-----
-----Your final score is: 10

Round 3
The computer guessed: 1
Enter a number between 1 and 10: 1
You guessed correctly! 10 Score added.
Your total score is: 10
-----
-----Your final score is: 10

Build with Agent
Al responses may be inaccurate.
Generate Agent Instructions to onboard AI onto your codebase.

Agent Auto ↗ ➔
Mega_Project_3.py
Describe what to build next
Agent Auto ↗ ➔
ilyan321 (2 hours ago) Ln 1, Col 14 Spaces: 4 UTF-8 LF {} Python Python 3.13.7 Go Live Prettier
```

