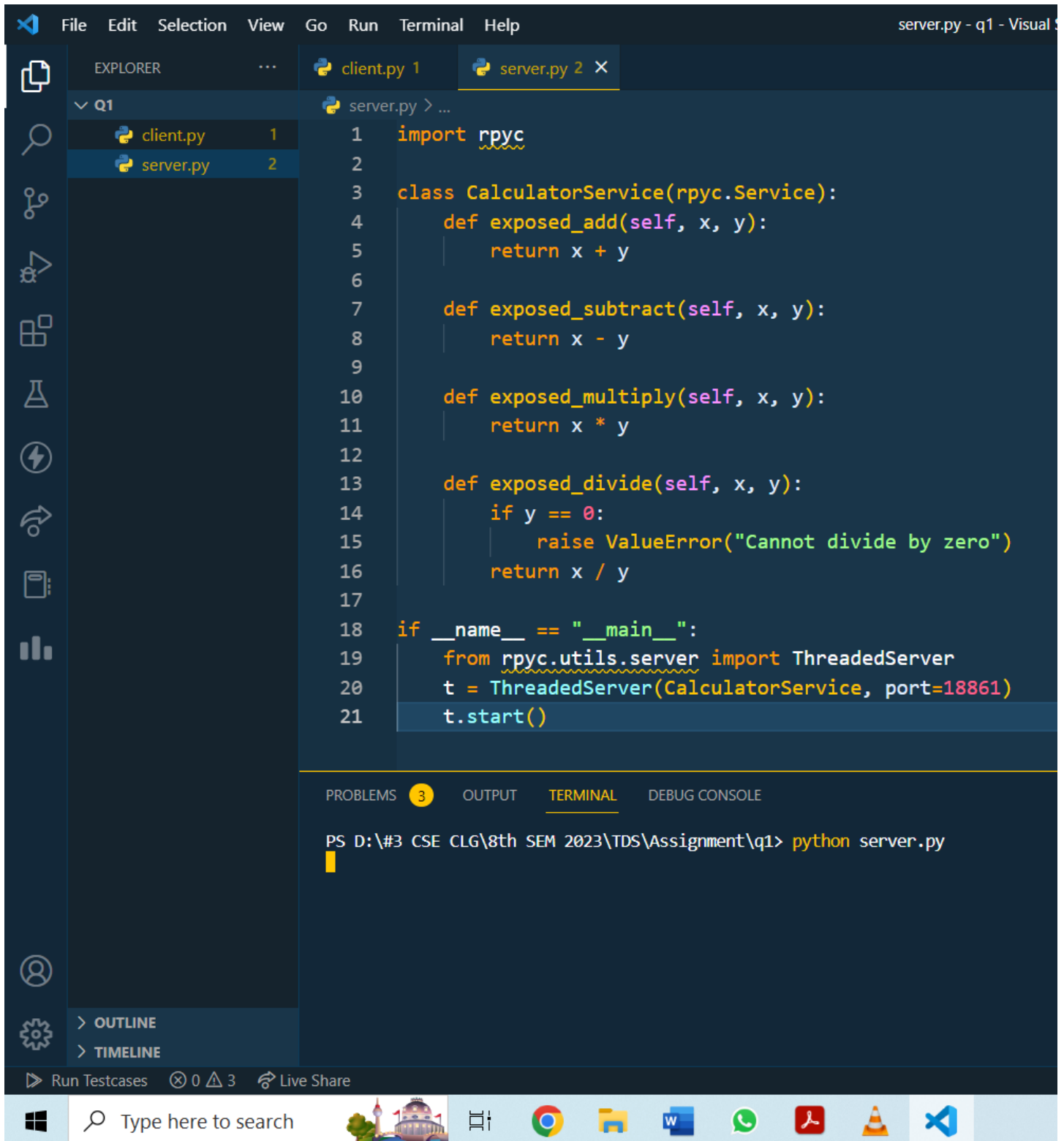


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Question-1

Initially we will start the server which will look like this



The screenshot displays the Visual Studio Code interface. The Explorer sidebar on the left shows a project named 'Q1' containing two files: 'client.py' and 'server.py'. The 'server.py' file is open in the editor, showing the following Python code:

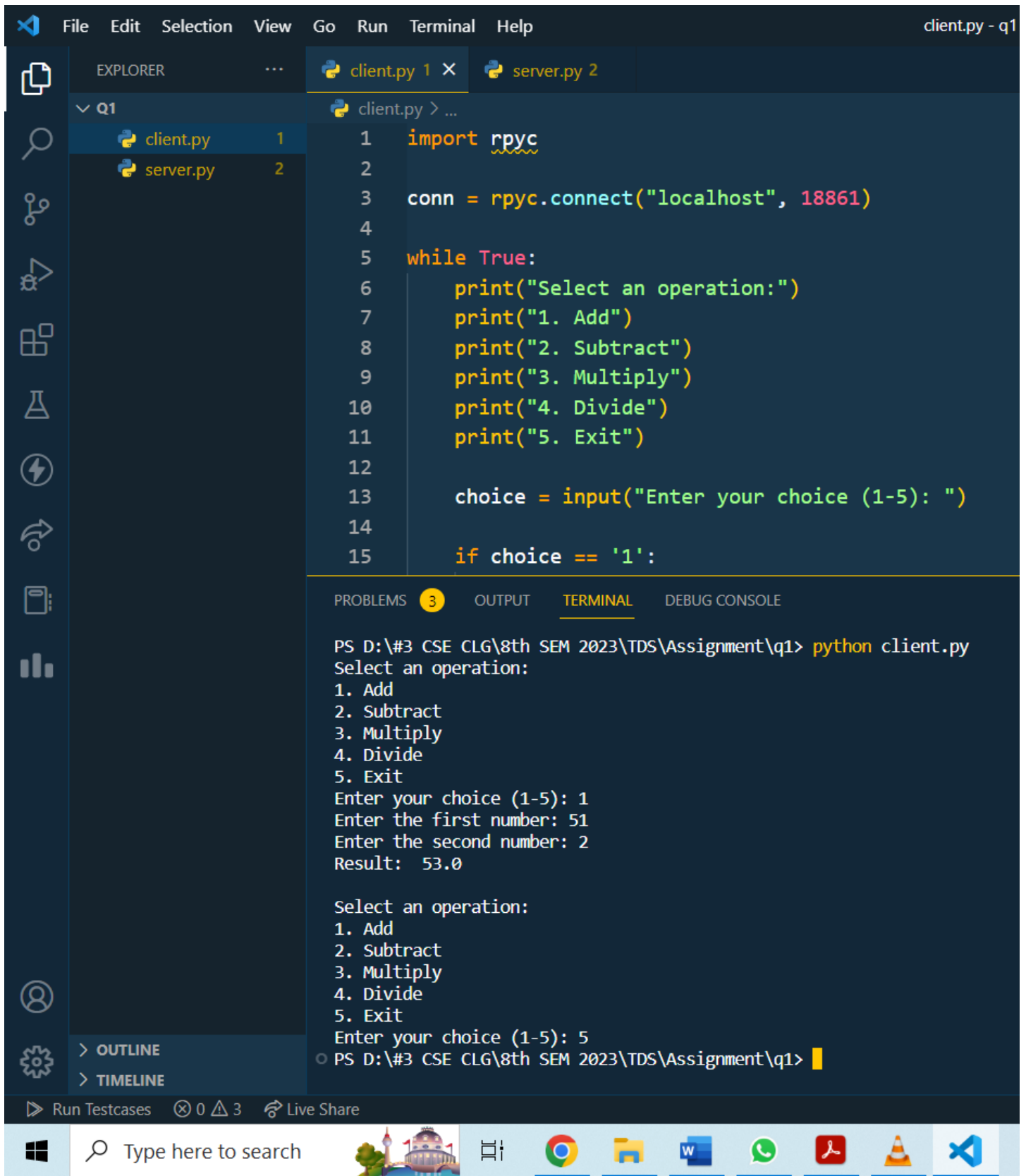
```
1 import rpyc
2
3 class CalculatorService(rpyc.Service):
4     def exposed_add(self, x, y):
5         return x + y
6
7     def exposed_subtract(self, x, y):
8         return x - y
9
10    def exposed_multiply(self, x, y):
11        return x * y
12
13    def exposed_divide(self, x, y):
14        if y == 0:
15            raise ValueError("Cannot divide by zero")
16        return x / y
17
18 if __name__ == "__main__":
19     from rpyc.utils.server import ThreadedServer
20     t = ThreadedServer(CalculatorService, port=18861)
21     t.start()
```

The bottom panel of the editor shows the 'TERMINAL' tab. It contains the command prompt output for running the server:

```
PS D:\#3 CSE CLG\8th SEM 2023\TDS\Assignment\q1> python server.py
```

The Windows taskbar at the bottom of the screen shows the Start button, a search bar, and several pinned application icons including Google Chrome, File Explorer, Microsoft Word, WhatsApp, Adobe Reader, VLC media player, and Visual Studio Code.

Then we will start client to do arithmetic addition and then exit.



The screenshot displays the Visual Studio Code interface. The Explorer panel on the left shows a project named 'Q1' containing two files: 'client.py' and 'server.py'. The main editor window is open to 'client.py', which contains the following Python code:

```
1 import rpyc
2
3 conn = rpyc.connect("localhost", 18861)
4
5 while True:
6     print("Select an operation:")
7     print("1. Add")
8     print("2. Subtract")
9     print("3. Multiply")
10    print("4. Divide")
11    print("5. Exit")
12
13    choice = input("Enter your choice (1-5): ")
14
15    if choice == '1':
```

The TERMINAL panel at the bottom shows the execution of the client program. It starts with the command `python client.py` in a PowerShell prompt. The program prompts the user to "Select an operation:" and lists the options: 1. Add, 2. Subtract, 3. Multiply, 4. Divide, 5. Exit. The user enters '1' for Add, then '51' for the first number and '2' for the second number. The program outputs "Result: 53.0". The terminal then prompts the user to "Select an operation:" again, and the user enters '5' to exit. The terminal prompt is now `PS D:\#3 CSE CLG\8th SEM 2023\TDS\Assignment\q1>`.