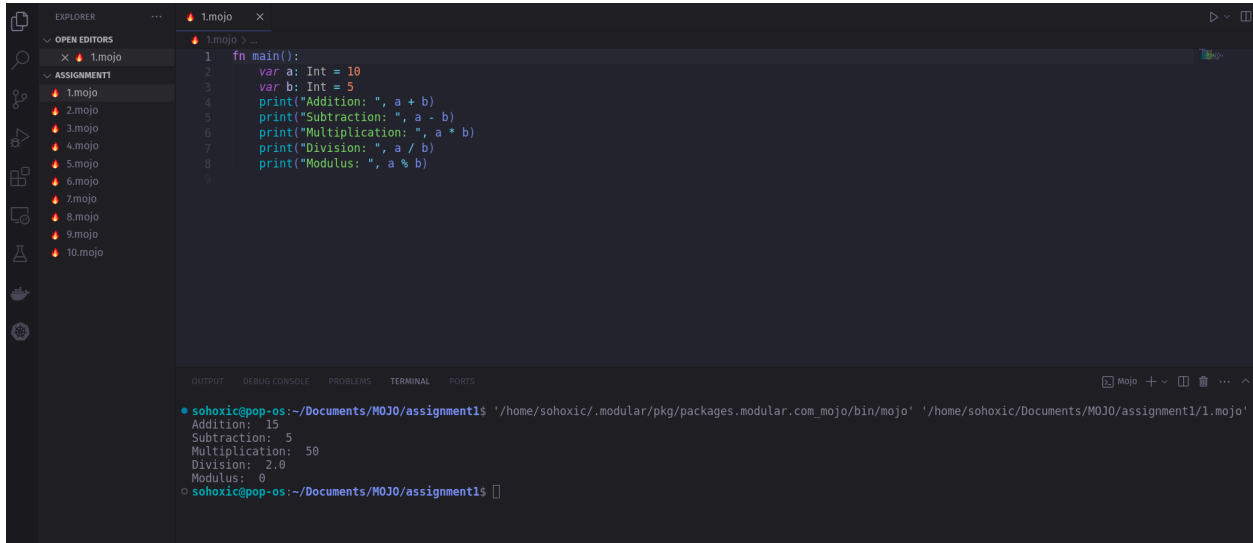


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SECTION I
DATE: 01.07.24

1.



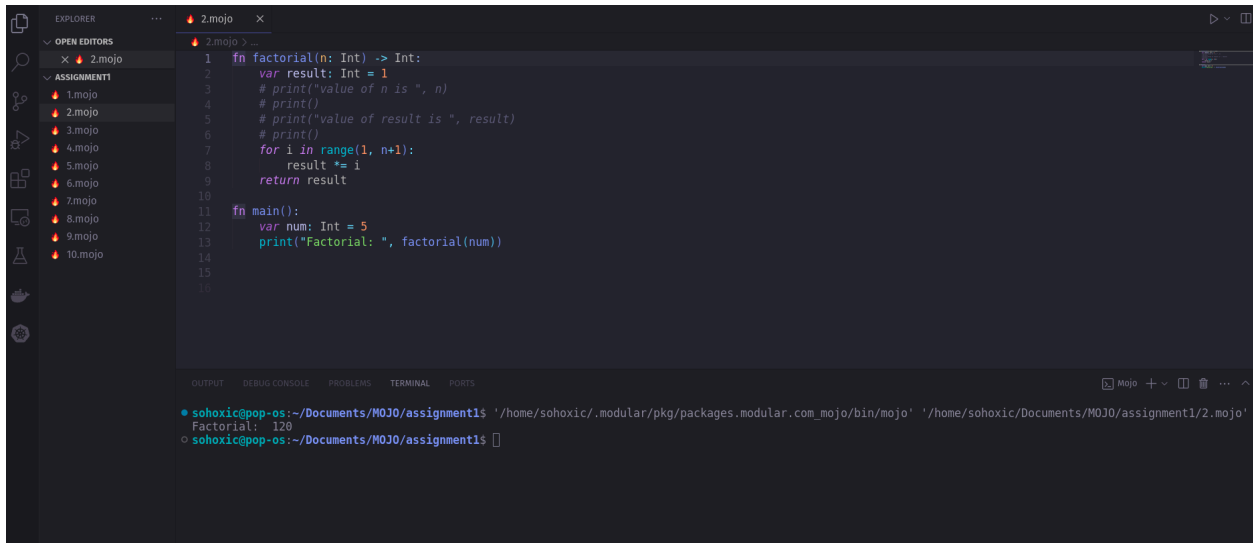
The screenshot shows the VS Code editor with a file named `1.mojo` open. The code defines a `main` function that performs arithmetic operations on variables `a` and `b`.

```
1 fn main():
2   var a: Int = 10
3   var b: Int = 5
4   print("Addition: ", a + b)
5   print("Subtraction: ", a - b)
6   print("Multiplication: ", a * b)
7   print("Division: ", a / b)
8   print("Modulus: ", a % b)
```

The output window at the bottom shows the execution results:

```
sohoxic@pop-os:~/Documents/MOJO/assignment1$ '/home/sohoxic/.modular/pkg/packages.modular.com_mojo/bin/mojo' '/home/sohoxic/Documents/MOJO/assignment1/1.mojo'
Addition: 15
Subtraction: 5
Multiplication: 50
Division: 2.0
Modulus: 0
sohoxic@pop-os:~/Documents/MOJO/assignment1$
```

2.



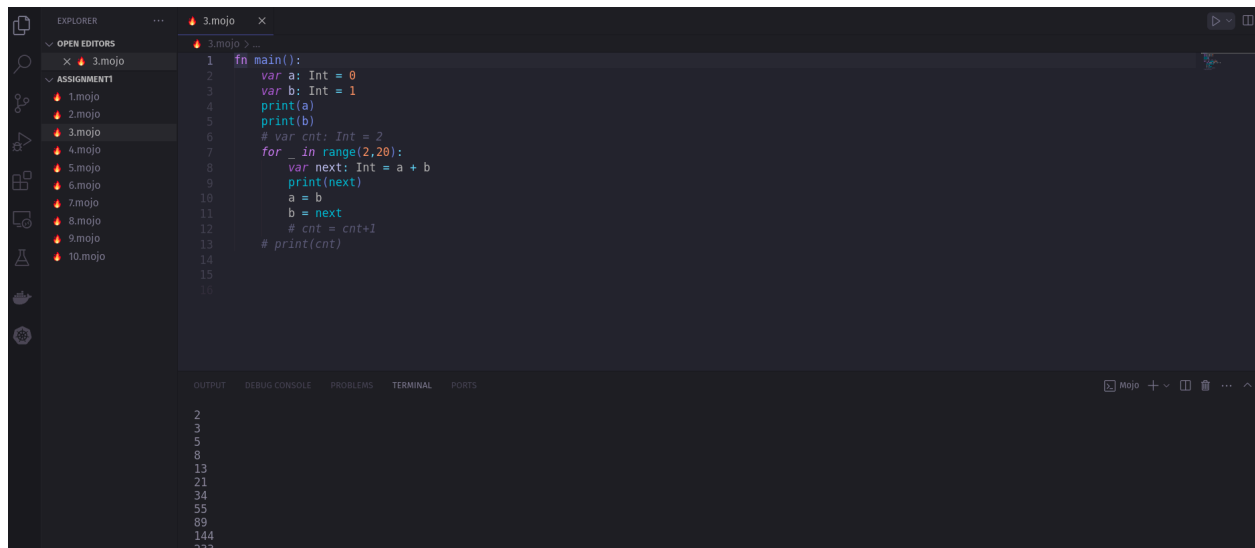
The screenshot shows the VS Code editor with a file named `2.mojo` open. The code defines a `factorial` function and a `main` function that calculates the factorial of a number.

```
1 fn factorial(n: Int) -> Int:
2   var result: Int = 1
3   # print("value of n is ", n)
4   # print()
5   # print("value of result is ", result)
6   # print()
7   for i in range(1, n+1):
8     result *= i
9   return result
10
11 fn main():
12   var num: Int = 5
13   print("Factorial: ", factorial(num))
14
15
16
```

The output window at the bottom shows the execution results:

```
sohoxic@pop-os:~/Documents/MOJO/assignment1$ '/home/sohoxic/.modular/pkg/packages.modular.com_mojo/bin/mojo' '/home/sohoxic/Documents/MOJO/assignment1/2.mojo'
Factorial: 120
sohoxic@pop-os:~/Documents/MOJO/assignment1$
```

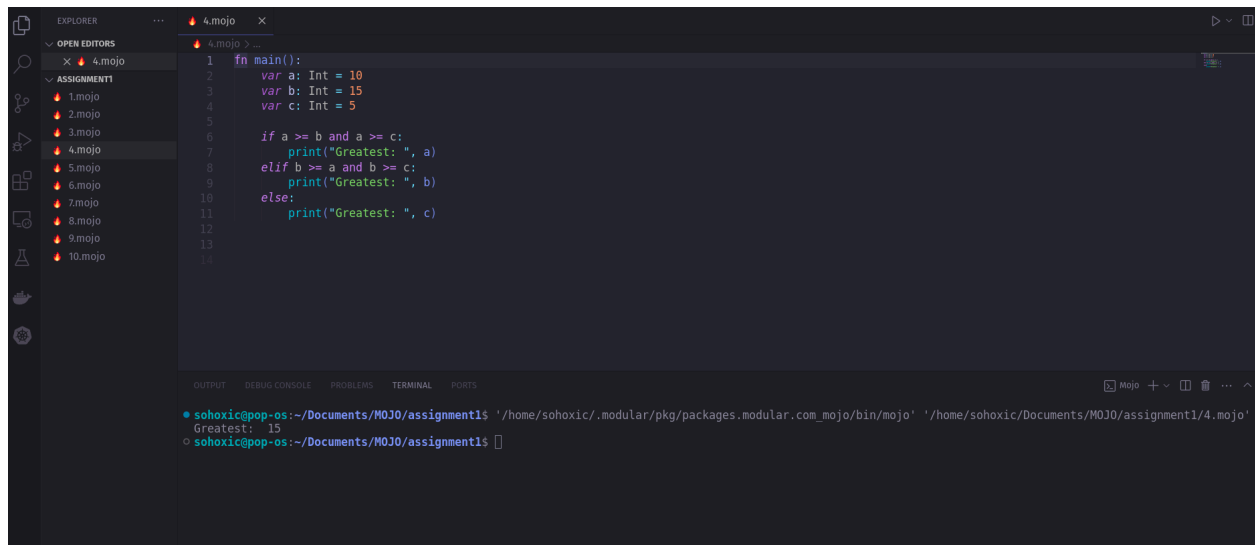
3.



```
1 fn main():
2   var a: Int = 0
3   var b: Int = 1
4   print(a)
5   print(b)
6   # var cnt: Int = 2
7   for _ in range(2,20):
8     var next: Int = a + b
9     print(next)
10    a = b
11    b = next
12    # cnt = cnt+1
13    # print(cnt)
14
15
16
```

2
3
5
8
13
21
34
55
89
144
233

4.



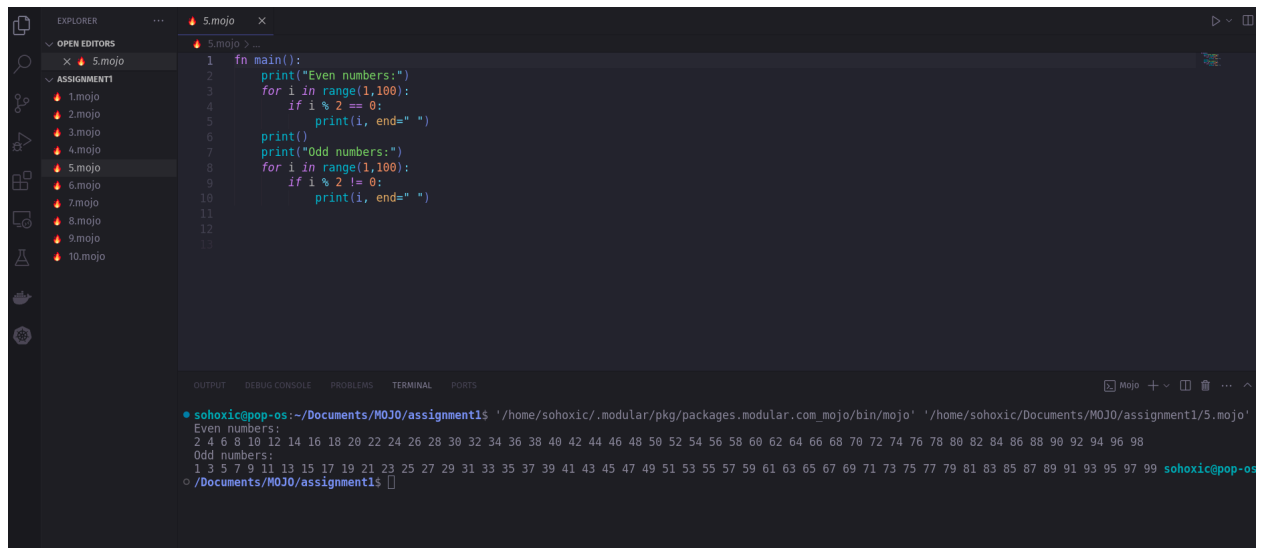
```
1 fn main():
2   var a: Int = 10
3   var b: Int = 15
4   var c: Int = 5
5
6   if a >= b and a >= c:
7     print("Greatest: ", a)
8   elif b >= a and b >= c:
9     print("Greatest: ", b)
10  else:
11    print("Greatest: ", c)
12
13
14
```

sohoxic@pop-os:~/Documents/MOJO/assignment1\$ '/home/sohoxic/.modular/pkg/packages.modular.com_mojo/bin/mojo' '/home/sohoxic/Documents/MOJO/assignment1/4.mojo'

Greatest: 15

sohoxic@pop-os:~/Documents/MOJO/assignment1\$

5.

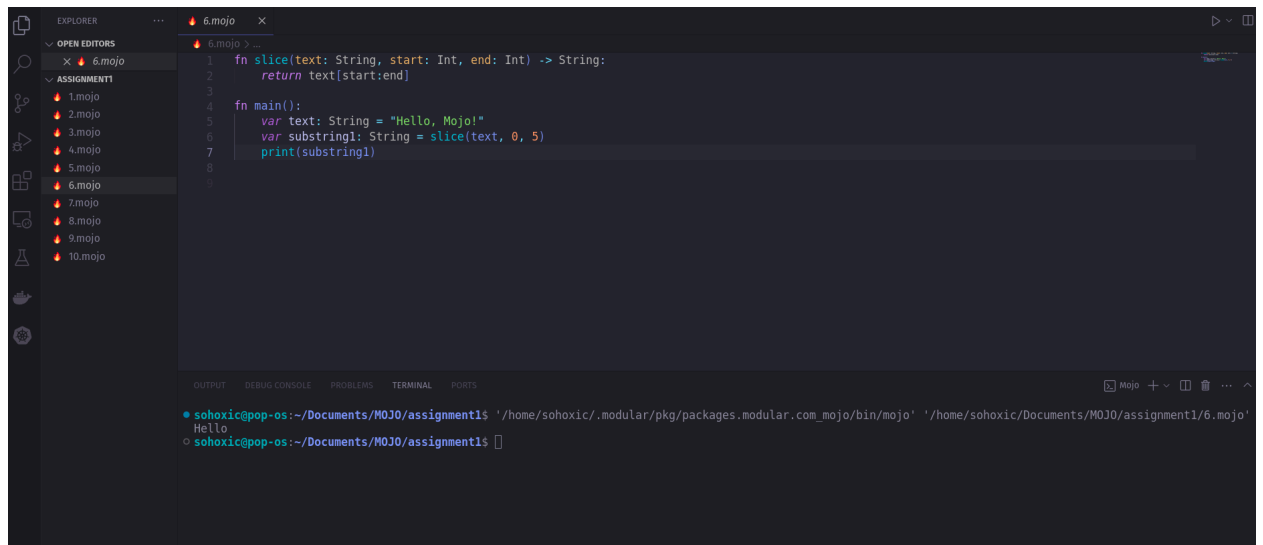


```
1 fn main():
2   print("Even numbers:")
3   for i in range(1,100):
4     if i % 2 == 0:
5       print(i, end=" ")
6
7   print()
8   print("Odd numbers:")
9   for i in range(1,100):
10    if i % 2 != 0:
11      print(i, end=" ")
12
13
```

sohoxic@pop-os:~/Documents/MOJO/assignment1\$ '/home/sohoxic/.modular/pkg/packages.modular.com_mojo/bin/mojo' '/home/sohoxic/Documents/MOJO/assignment1/5.mojo'

Even numbers:
2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 62 64 66 68 70 72 74 76 78 80 82 84 86 88 90 92 94 96 98
Odd numbers:
1 3 5 7 9 11 13 15 17 19 21 23 25 27 29 31 33 35 37 39 41 43 45 47 49 51 53 55 57 59 61 63 65 67 69 71 73 75 77 79 81 83 85 87 89 91 93 95 97 99
sohoxic@pop-os
~/Documents/MOJO/assignment1\$

6.

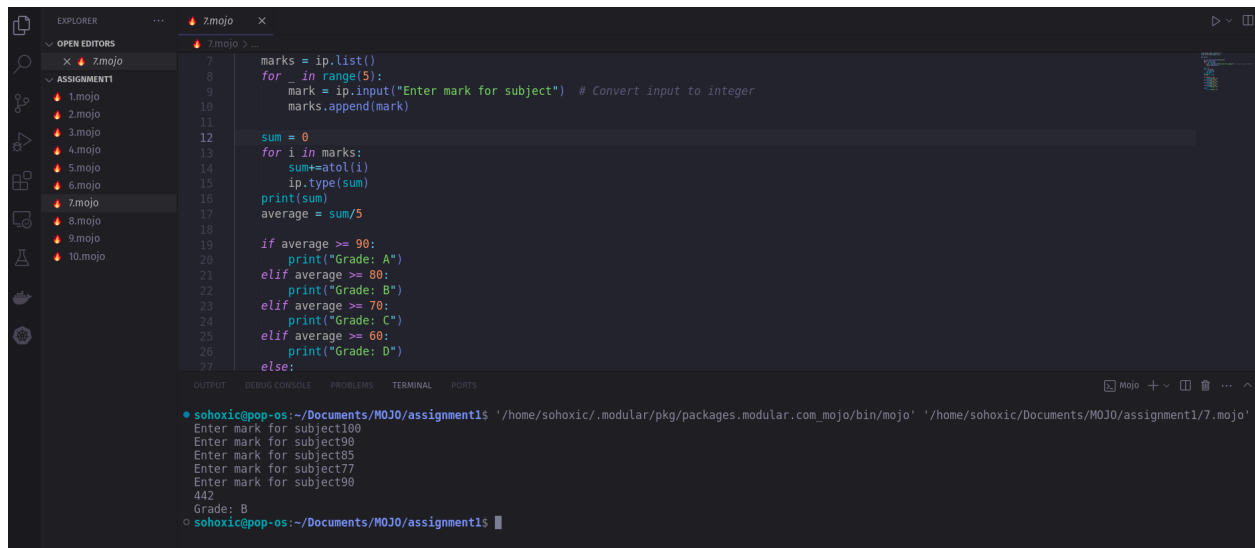


```
1 fn slice(text: String, start: Int, end: Int) -> String:
2   return text[start:end]
3
4 fn main():
5   var text: String = "Hello, Mojo!"
6   var substring!: String = slice(text, 0, 5)
7   print(substring!)
8
```

sohoxic@pop-os:~/Documents/MOJO/assignment1\$ '/home/sohoxic/.modular/pkg/packages.modular.com_mojo/bin/mojo' '/home/sohoxic/Documents/MOJO/assignment1/6.mojo'

Hello
sohoxic@pop-os:~/Documents/MOJO/assignment1\$

7.



```

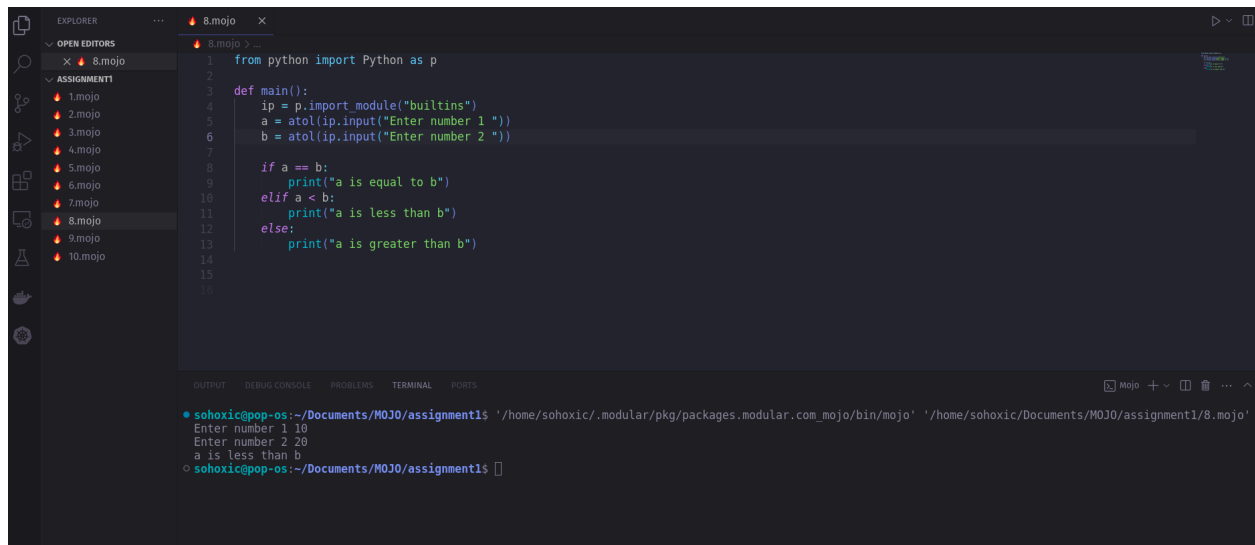
7
8 marks = ip.list()
9 for i in range(5):
10     mark = ip.input("Enter mark for subject") # Convert input to integer
11     marks.append(mark)
12
13 sum = 0
14 for i in marks:
15     sum+=atol(i)
16     ip.type(sum)
17 print(sum)
18 average = sum/5
19
20 if average >= 90:
21     print("Grade: A")
22 elif average >= 80:
23     print("Grade: B")
24 elif average >= 70:
25     print("Grade: C")
26 elif average >= 60:
27     print("Grade: D")
28 else:
29     print("Grade: E")
30

```

sohoxic@pop-os:~/Documents/MOJO/assignment1\$./home/sohoxic/.modular/pkg/packages.modular.com_mojo/bin/mojo ' /home/sohoxic/Documents/MOJO/assignment1/7.mojo '

Enter mark for subject100
Enter mark for subject90
Enter mark for subject85
Enter mark for subject77
Enter mark for subject90
44.2
Grade: B
sohoxic@pop-os:~/Documents/MOJO/assignment1\$

8.



```

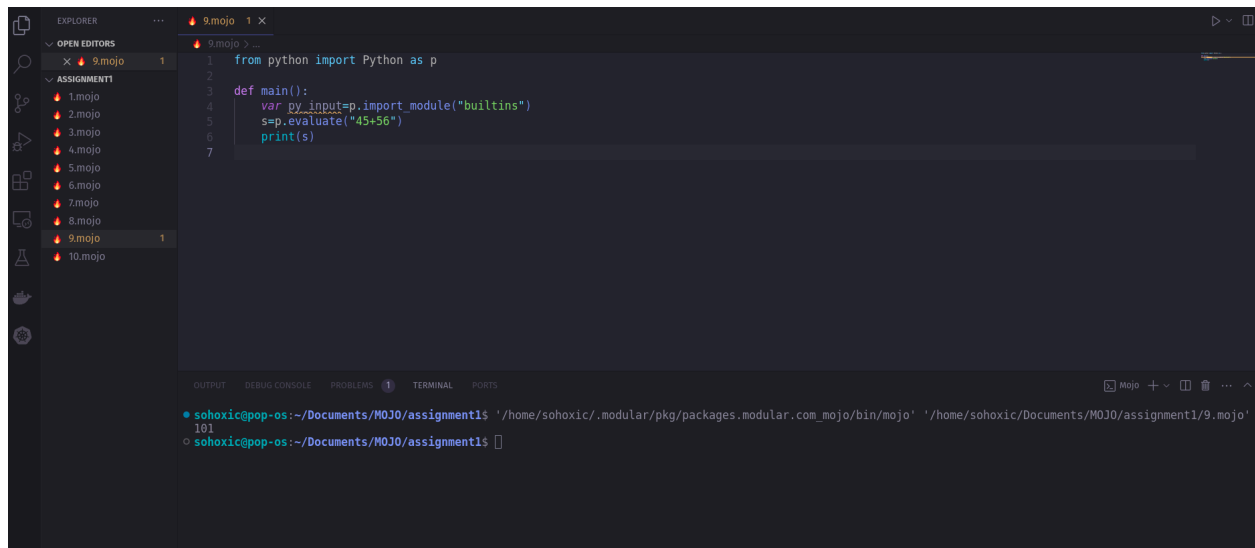
1 from python import Python as p
2
3 def main():
4     ip = p.import_module("builtins")
5     a = atol(ip.input("Enter number 1 "))
6     b = atol(ip.input("Enter number 2 "))
7
8     if a == b:
9         print("a is equal to b")
10    elif a < b:
11        print("a is less than b")
12    else:
13        print("a is greater than b")
14
15
16

```

sohoxic@pop-os:~/Documents/MOJO/assignment1\$./home/sohoxic/.modular/pkg/packages.modular.com_mojo/bin/mojo ' /home/sohoxic/Documents/MOJO/assignment1/8.mojo '

Enter number 1 10
Enter number 2 20
a is less than b
sohoxic@pop-os:~/Documents/MOJO/assignment1\$

9.



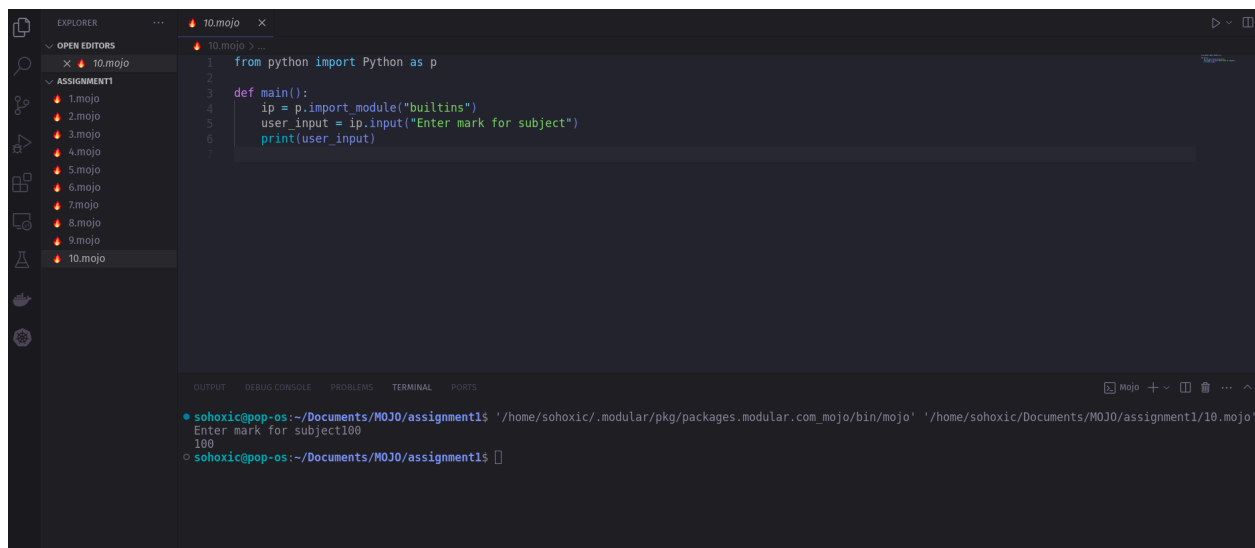
The screenshot shows the VS Code interface with a file explorer on the left containing a folder named 'ASSIGNMENT1' with files 1.mojo through 10.mojo. The main editor window displays the content of 9.mojo, which is a Python script. The terminal at the bottom shows the command to run the script and its output.

```
1 from python import Python as p
2
3 def main():
4     var py_input=p.import_module("builtins")
5     s=p.evaluate("45+56")
6     print(s)
7
```

Terminal output:

```
sohoxic@pop-os:~/Documents/MOJO/assignment1$ '/home/sohoxic/.modular/pkg/packages.modular.com_mojo/bin/mojo' '/home/sohoxic/Documents/MOJO/assignment1/9.mojo'
101
sohoxic@pop-os:~/Documents/MOJO/assignment1$
```

10.



The screenshot shows the VS Code interface with a file explorer on the left containing a folder named 'ASSIGNMENT1' with files 1.mojo through 10.mojo. The main editor window displays the content of 10.mojo, which is a Python script. The terminal at the bottom shows the command to run the script and its output.

```
1 from python import Python as p
2
3 def main():
4     ip = p.import_module("builtins")
5     user_input = ip.input("Enter mark for subject")
6     print(user_input)
7
```

Terminal output:

```
sohoxic@pop-os:~/Documents/MOJO/assignment1$ '/home/sohoxic/.modular/pkg/packages.modular.com_mojo/bin/mojo' '/home/sohoxic/Documents/MOJO/assignment1/10.mojo'
Enter mark for subject100
100
sohoxic@pop-os:~/Documents/MOJO/assignment1$
```