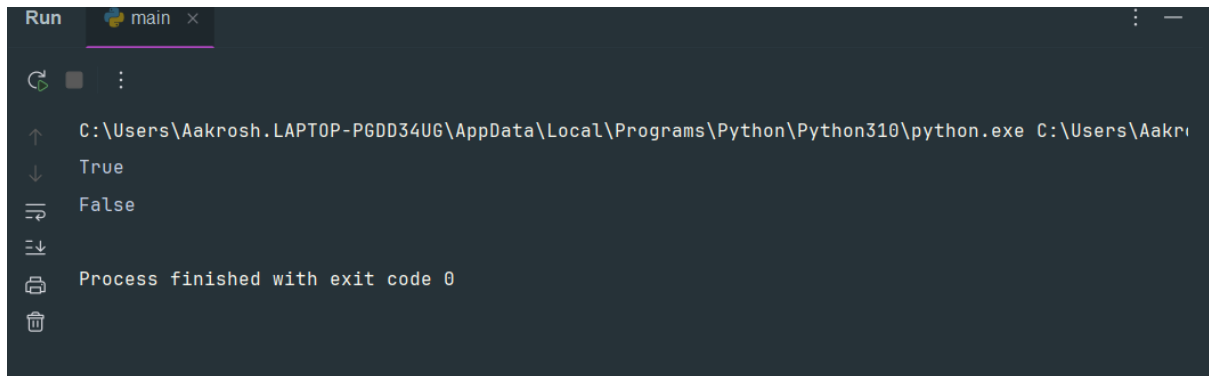


#Answer 1

```
import string
def pan(s):
    a = set(string.ascii_lowercase)
    return a <= set(s.lower())

print(pan("The quick brown fox jumps over the lazy dog"))
print(pan("Hello World"))
```

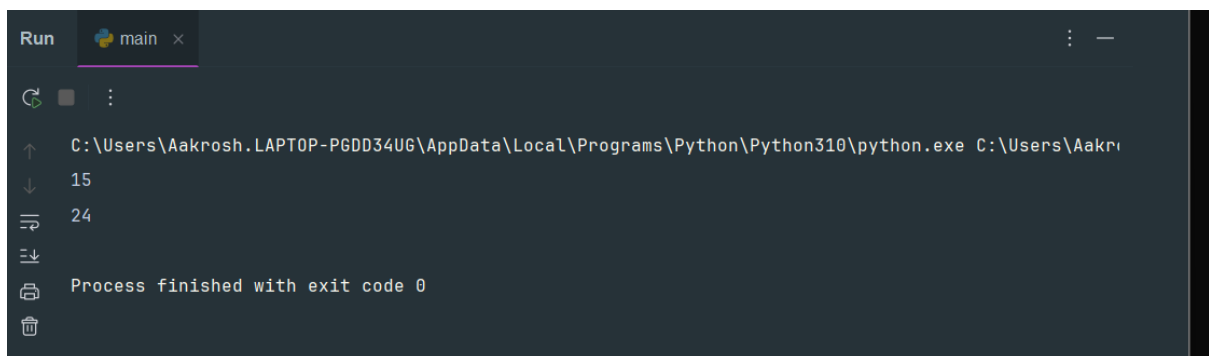


```
Run main x
C:\Users\Aakrosh.LAPTOP-P6DD34UG\AppData\Local\Programs\Python\Python310\python.exe C:\Users\Aakrosh.LAPTOP-P6DD34UG\AppData\Local\Programs\Python\Python310\python.exe C:\Users\Aakrosh.LAPTOP-P6DD34UG\AppData\Local\Programs\Python\Python310\python.exe C:\Users\Aakrosh.LAPTOP-P6DD34UG\AppData\Local\Programs\Python\Python310\python.exe
True
False
Process finished with exit code 0
```

#Answer 2

```
def sod(n):
    return sum(int(n) for n in str(abs(n)))

print(sod(12345))
print(sod(-987))
```



```
Run main x
C:\Users\Aakrosh.LAPTOP-P6DD34UG\AppData\Local\Programs\Python\Python310\python.exe C:\Users\Aakrosh.LAPTOP-P6DD34UG\AppData\Local\Programs\Python\Python310\python.exe C:\Users\Aakrosh.LAPTOP-P6DD34UG\AppData\Local\Programs\Python\Python310\python.exe C:\Users\Aakrosh.LAPTOP-P6DD34UG\AppData\Local\Programs\Python\Python310\python.exe
15
24
Process finished with exit code 0
```

#Answer 3

```
def sort(a, b, c):
    return sorted([a, b, c])
print(sort(10, 2, 5))
print(sort(7, 7, 3))
```




The screenshot shows a 'Run' window with a tab labeled 'main'. The command prompt displays the execution of the Python script. The first call to `sort(10, 2, 5)` returns `[2, 5, 10]`, and the second call to `sort(7, 7, 3)` returns `[3, 7, 7]`. The process finished with exit code 0.

```
Run main x
C:\Users\Aakrosh.LAPTOP-PGDD34UG\AppData\Local\Programs\Python\Python310\python.exe C:\Users\Aakrosh.LAPTOP-PGDD34UG\AppData\Local\Programs\Python\Python310\python.exe C:\Users\Aakrosh.LAPTOP-PGDD34UG\AppData\Local\Programs\Python\Python310\python.exe
[2, 5, 10]
[3, 7, 7]
Process finished with exit code 0
```

#Answer 4

```
def perfect(n):
    if n < 2:
        return False
    a = [i for i in range(1, n) if n % i == 0]
    return sum(a) == n

print(perfect(6))
print(perfect(12))
```



The screenshot shows a 'Run' window with a tab labeled 'main'. The command prompt displays the execution of the Python script. The first call to `perfect(6)` returns `True`, and the second call to `perfect(12)` returns `False`. The process finished with exit code 0.

```
Run main x
C:\Users\Aakrosh.LAPTOP-PGDD34UG\AppData\Local\Programs\Python\Python310\python.exe C:\Users\Aakrosh.LAPTOP-PGDD34UG\AppData\Local\Programs\Python\Python310\python.exe C:\Users\Aakrosh.LAPTOP-PGDD34UG\AppData\Local\Programs\Python\Python310\python.exe
True
False
Process finished with exit code 0
```

