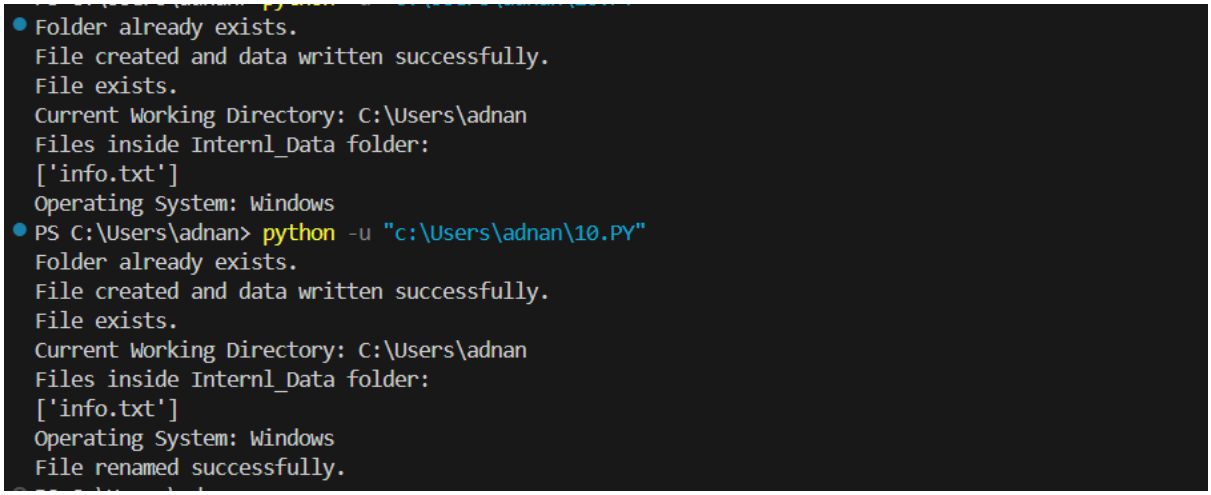
Task: File Management System

1.

```
import os
import platform

folder_name = "Internl_Data"

if not os.path.exists(folder_name):
    os.mkdir(folder_name)
    print("Folder created successfully.")
else:
    print("Folder already exists.")

file_path = os.path.join(folder_name, "info.txt")

with open(file_path, "w") as file:

    file.write("Name: Adnan\n")
    file.write("Course: AI&DS Internship\n")

print("File created and data written successfully.")

if os.path.exists(file_path):
    print("File exists.")
```

```
else:
    print("File does not exist.")

print("Current Working Directory:", os.getcwd())

print("Files inside Internl_Data folder:")
print(os.listdir(folder_name))

print("Operating System:", platform.system())

new_file_path = os.path.join(folder_name, "student_info.txt")
os.rename(file_path, new_file_path)

print("File renamed successfully.")
```



TASK 2:-

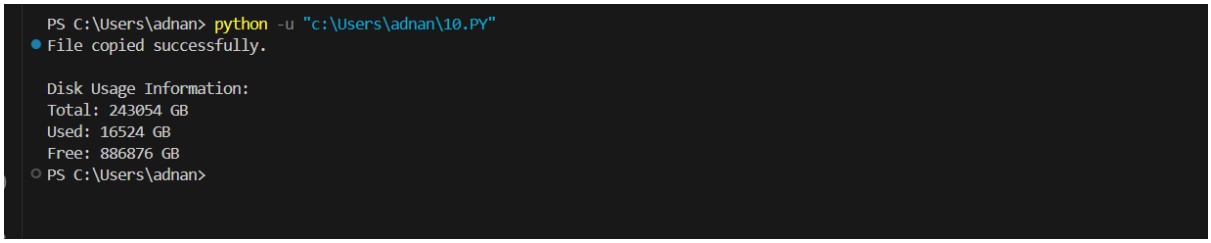
```
import sys
```

```
print("Script Name:", sys.argv[0])


if len(sys.argv) > 1:
    print("Command-line arguments are:")
    for arg in sys.argv[1:]:
        print(arg)
else:
    print("No command-line arguments were entered.")


print("Python Version:", sys.version)


name = input("Enter your name: ")


print("Welcome,", name + "!")


sys.stdout.write("This message is displayed using standard output.\n")
```

```
PS C:\Users\adnan> python -u "c:\Users\adnan\10.PY"
Script Name: c:\Users\adnan\10.PY
No command-line arguments were entered.
Python Version: 3.10.11 (tags/v3.10.11:7d4cc5a, Apr  5 2023, 00:38:17) [MSC v.1929 64 bit (AMD64)]
Enter your name: ADNAN
Welcome, ADNAN!
This message is displayed using standard output.
PS C:\Users\adnan>
```

TASK 3:-

```
import shutil
import os

source_file = "sample.txt"
destination_file = "copy_sample.txt"

if os.path.exists(source_file):

    shutil.copy(source_file, destination_file)
    print("File copied successfully.")

else:
    print("Source file does not exist.")

# 3. Print disk usage
total, used, free = shutil.disk_usage("/")

print("\nDisk Usage Information:")
print("Total:", total // (128**3), "GB")
print("Used:", used // (256**3), "GB")
print("Free:", free // (64**3), "GB")
```



TASK 4:-

```
import math

num = float(input("Enter a number: "))


if num >= 0:
    print("Square Root:", math.sqrt(num))
else:
    print("Square Root: Not possible for negative number")

if num >= 0 and num.is_integer():
    print("Factorial:", math.factorial(int(num)))
else:
    print("Factorial: Only possible for non-negative integers")

print("Floor Value:", math.floor(num))

print("Ceiling Value:", math.ceil(num))
```

```
PS C:\Users\adnan> python -u "c:\Users\adnan\10.PY"
Enter a number: 54
Square Root: 7.3484692283495345
Factorial: 23084369733924138047209274268302758108327856457180794113228800000000000000
Floor Value: 54
Ceiling Value: 54
PS C:\Users\adnan>
```

TASK 5:-

```
import random

dice = random.randint(1, 6)

print("Dice Result:", dice)

cards = ["Ace", "King", "Queen", "Jack"]

random.shuffle(cards)
print("Shuffled Cards:", cards)

random_card = random.choice(cards)
print("Random Card:", random_card)
```

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS
PS C:\Users\adnan> python -u "c:\Users\adnan\10.PY"
Dice Result: 3
Shuffled Cards: ['Ace', 'King', 'Jack', 'Queen']
Random Card: Ace
PS C:\Users\adnan>
```

Task 6:-

```
import statistics

marks = [78, 85, 92, 88, 76]

average = statistics.mean(marks)

median = statistics.median(marks)

std_deviation = statistics.stdev(marks)

print("Student Marks:", marks)

print("Average Marks:", average)

print("Median Marks:", median)

print("Standard Deviation:", std_deviation)
```

```
PS C:\Users\adnan> python -u "c:\Users\adnan\10.PY"
Student Marks: [78, 85, 92, 88, 76]
Average Marks: 83.8
Median Marks: 85
Standard Deviation: 6.723094525588644
PS C:\Users\adnan>
```

Task 7:-

```
import json
```

```
location = input("Enter location: ")
college_name = input("Enter college name: ")

data = {
   "location": location,
   "college_name": college_name
}

with open("data.json", "w") as file:
   json.dump(data, file, indent=4)

print("\nData has been written to data.json")

with open("data.json", "r") as file:
   stored_data = json.load(file)

print("\nStored Data:")
print("Location:", stored_data["location"])
print("College Name:", stored_data["college_name"])
```