

# Hands On – Python

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## Day 6 – 11/11/2024 (Monday)

### 1. appendcsv.py

→ import csv

new\_data = [

    ["Harinya", 32, "Andhra Pradesh"],

    ["Vikas", 21, "Kurnool"]

]

# File path to the CSV file

file\_path = "C:/Users/Sarthak Kulkarni/Desktop/Hexaware Python  
Training/Data\_engineering/Day6/example.csv"

# Open the file in append mode and write the new rows

with open(file\_path, mode="a", newline="") as file:

    writer = csv.writer(file)

    # Write each row in new\_data

    for row in new\_data:

        writer.writerow(row)

print("Data appended successfully.")

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH ERROR
● PS C:\Users\Sarthak Kulkarni\Desktop\Hexaware Python Training\Data_engineering\Python_codes> & C:/Python310/python.exe
:/Users/Sarthak Kulkarni/Desktop/Hexaware Python Training/Data_engineering/Python_codes/appendcsv.py
Data appended successfully.
○ PS C:\Users\Sarthak Kulkarni\Desktop\Hexaware Python Training\Data_engineering\Python_codes>
```

---

## 2. controlstr.py

→ # if statement

```
x = 10
```

```
if x > 5:
```

```
    print("x is greater than 5")
```

# If else statement

```
x = 3
```

```
if x > 5:
```

```
    print("x is greater than 5")
```

```
else:
```

```
    print("x is not greater than 5")
```

# IF-elif-else statement

```
x = 5
```

```
if x > 10:
```

```
    print("x is greater than 10")
```

```
elif x > 5:
```

```
    print("x is greater than 5")
```

else:

```
print("x is 5 or less than 5")
```

# For loop

```
for i in range(3):
```

```
    print("Loop iteration:", i)
```

# While loop

```
count = 0
```

```
while count < 3:
```

```
    print("Count is:", count)
```

```
    count += 1
```

# Nested Loop

```
for i in range(2):
```

```
    for j in range(3):
```

```
        print(f'i: {i}, j: {j}')
```

# Break, Continue and Pass

```
for i in range(5):
```

```
    if i == 4:
```

```
        break # exits loop if i is 4
```

```
    elif i == 1:
```

```
        continue # skips this iteration if i is 1

    print(i)
```

```
# Input & Output
```

```
name = input("Enter your name: ")

print("Hello,", name)
```

```
# Introduction to Lists
```

```
fruits = ["apple", "banana", "cherry"]

print(fruits[0]) # Output: apple
```

```
# List, Methods and slicing
```

```
fruit = ["apple", "banana", "cherry"]

fruit.append("orange") # Adds "orange"

print(fruit)
```

```
# Introduction to Dictionaries & Dictionary Methods
```

```
person = {"name": "Sarthak", "age": 22}

print(person["name"])
```

```
# Introduction to Set & Set Methods
```

```
fruits = {"apple", "banana", "cherry"}

fruits.add("orange")
```

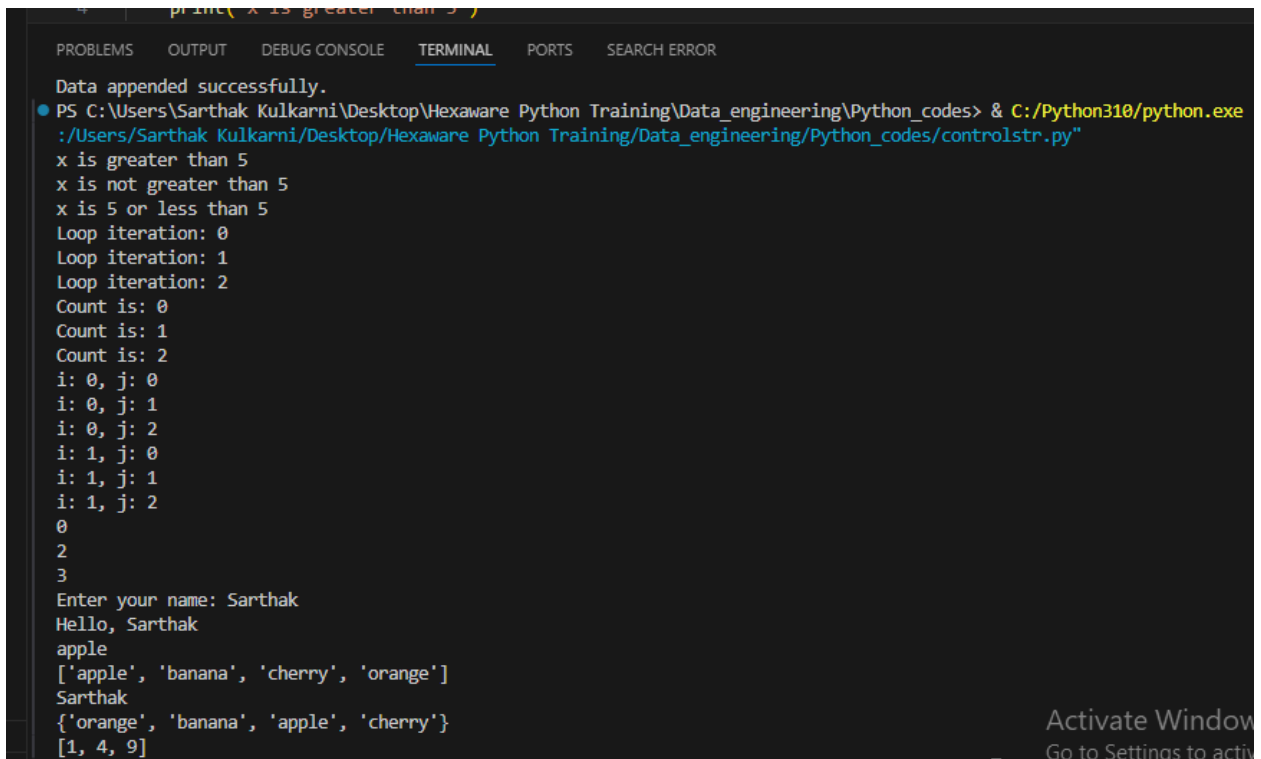
```
print(fruits)
```

```
# Introduction to Map & Map Methods
```

```
numbers = [1, 2, 3]
```

```
squared_numbers = list(map(lambda x: x**2, numbers))
```

```
print(squared_numbers)
```



```
4 | print( x is greater than 5 )
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH ERROR
Data appended successfully.
PS C:\Users\Sarthak Kulkarni\Desktop\Hexaware Python Training\Data_engineering\Python_codes> & C:/Python310/python.exe
:/Users/Sarthak Kulkarni/Desktop/Hexaware Python Training/Data_engineering/Python_codes/controlstr.py"
x is greater than 5
x is not greater than 5
x is 5 or less than 5
Loop iteration: 0
Loop iteration: 1
Loop iteration: 2
Count is: 0
Count is: 1
Count is: 2
i: 0, j: 0
i: 0, j: 1
i: 0, j: 2
i: 1, j: 0
i: 1, j: 1
i: 1, j: 2
0
2
3
Enter your name: Sarthak
Hello, Sarthak
apple
['apple', 'banana', 'cherry', 'orange']
Sarthak
{'orange', 'banana', 'apple', 'cherry'}
[1, 4, 9]
```

---

### 3. csvopen.py

```
→ import csv
```

```
import os
```

```
# Define the path to the CSV file
```

```
file_path = "C:/Users/Sarthak Kulkarni/Desktop/Hexaware Python  
Training/Data_engineering/Python_codes/example2.csv"
```

```
# Check if the file exists before opening it
```

```
if os.path.exists(file_path):
```

```
    # Open the file in read mode
```

```
    with open(file_path, mode="r") as file:
```

```
        # Create a CSV reader object
```

```
        csv_reader = csv.reader(file)
```

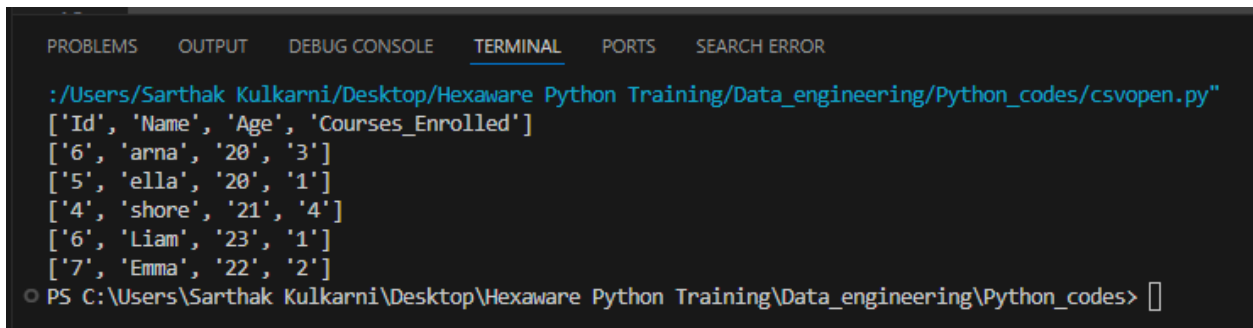
```
        # Iterate over each row in the CSV file
```

```
        for row in csv_reader:
```

```
            print(row) # Print each row
```

```
else:
```

```
    print("The file does not exist.")
```



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS SEARCH ERROR  
:/Users/Sarthak Kulkarni/Desktop/Hexaware Python Training/Data_engineering/Python_codes/csvopen.py"  
['Id', 'Name', 'Age', 'Courses_Enrolled']  
['6', 'arna', '20', '3']  
['5', 'ella', '20', '1']  
['4', 'shore', '21', '4']  
['6', 'Liam', '23', '1']  
['7', 'Emma', '22', '2']  
PS C:\Users\Sarthak Kulkarni\Desktop\Hexaware Python Training\Data_engineering\Python_codes> []
```

---

#### 4. introduction.py

→ # Writing the first program

```
print("Hello Sarthak!")
```

```
# Key words and Identifier
```

```
x = 5
```

```
if x > 0:
```

```
    print("x is positive")
```

```
# Variables and Operators
```

```
a = 10 # Variable assignment
```

```
b = 20
```

```
sum_result = a + b # Using the '+' operator
```

```
print("Sum:", sum_result)
```

```
# Data Types
```

```
x = 5      # int
```

```
y = 3.14   # float
```

```
name = "Python" # str
```

```
is_active = True # bool
```

```
# Sequence
```

```
my_list = [1, 2, 3, 4] # list
```

```
print("List: ",my_list)
```

```
my_tuple = (5, 6, 7) # tuple
```

```
print("Tuple: ",my_tuple)
```

```
for i in range(3):    # range
```

```
print(i)

# Boolean

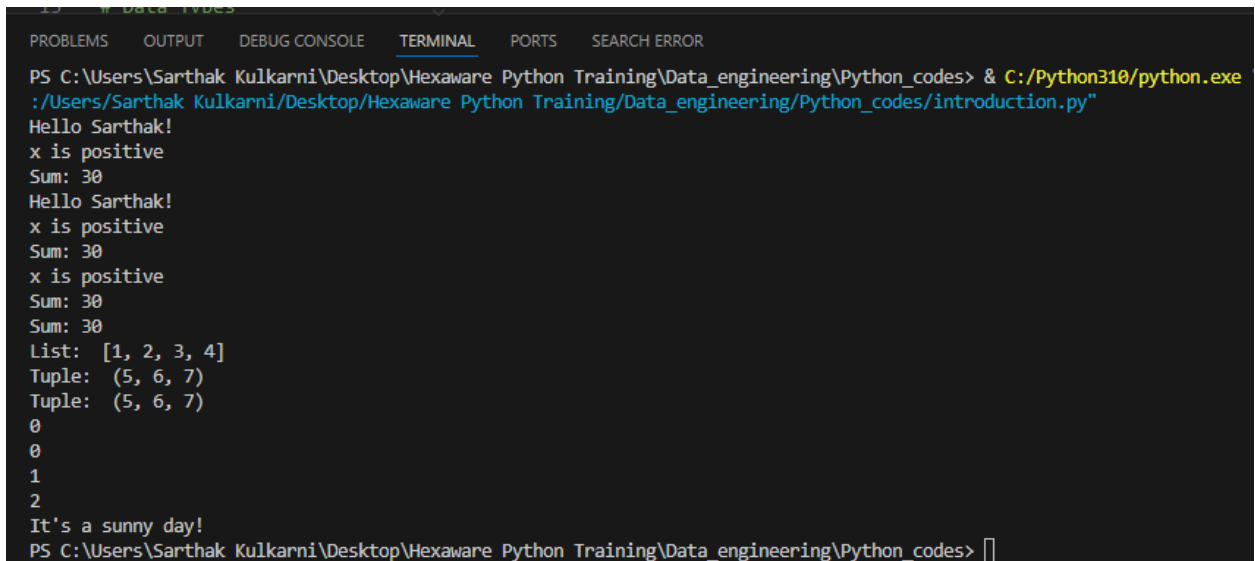
is_sunny = True

if is_sunny:

    print("It's a sunny day!")

else:

    print("It's not sunny.")
```

A screenshot of a Python terminal window. The window has a dark background with a light-colored border. At the top, there are tabs for 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', 'TERMINAL' (which is active), 'PORTS', and 'SEARCH ERROR'. The terminal shows the command prompt 'PS C:\Users\Sarthak Kulkarni\Desktop\Hexaware Python Training\Data\_engineering\Python\_codes>' followed by the command '& C:/Python310/python.exe :/Users/Sarthak Kulkarni/Desktop/Hexaware Python Training/Data\_engineering/Python\_codes/introduction.py'. The output of the script is displayed below the command: 'Hello Sarthak!', 'x is positive', 'Sum: 30', 'Hello Sarthak!', 'x is positive', 'Sum: 30', 'x is positive', 'Sum: 30', 'Sum: 30', 'List: [1, 2, 3, 4]', 'Tuple: (5, 6, 7)', 'Tuple: (5, 6, 7)', '0', '0', '1', '2', 'It's a sunny day!'. The prompt 'PS C:\Users\Sarthak Kulkarni\Desktop\Hexaware Python Training\Data\_engineering\Python\_codes>' is shown at the bottom of the terminal.

```
PS C:\Users\Sarthak Kulkarni\Desktop\Hexaware Python Training\Data_engineering\Python_codes> & C:/Python310/python.exe
:/Users/Sarthak Kulkarni/Desktop/Hexaware Python Training/Data_engineering/Python_codes/introduction.py
Hello Sarthak!
x is positive
Sum: 30
Hello Sarthak!
x is positive
Sum: 30
x is positive
Sum: 30
Sum: 30
List: [1, 2, 3, 4]
Tuple: (5, 6, 7)
Tuple: (5, 6, 7)
0
0
1
2
It's a sunny day!
PS C:\Users\Sarthak Kulkarni\Desktop\Hexaware Python Training\Data_engineering\Python_codes>
```

---

## 5. practice1.py

→ import csv

```
filepath = "example2.csv"
```

# Open the file in write mode ('w') which overwrites any existing data

with open(filepath, 'w', newline="") as file:



```

csvwriter = csv.writer(file)

# Write header row

csvwriter.writerow(["Id", "Name", "Age", "Courses_Enrolled"])


# Data to write

data = [

    [1, "Aparna", 20, 3],

    [2, "Stella", 20, 1],

    [3, "Kishore", 21, 4]

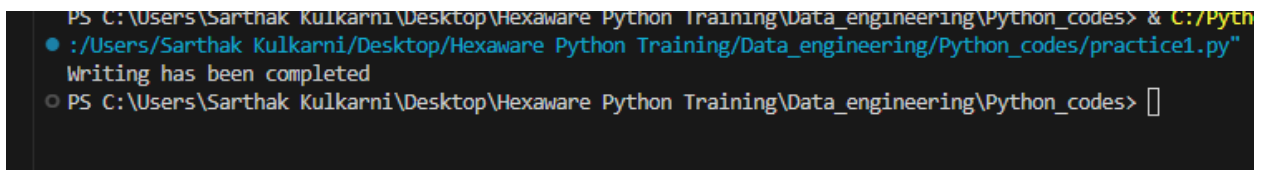
]


# Write the data rows

csvwriter.writerows(data)


print("Writing has been completed")

```



```

PS C:\Users\Sarthak Kulkarni\Desktop\Hexaware Python Training\Data_engineering\Python_codes> C:/Python/Python38-64/python.exe ./Users/Sarthak Kulkarni/Desktop/Hexaware Python Training/Data_engineering/Python_codes/practice1.py
Writing has been completed
PS C:\Users\Sarthak Kulkarni\Desktop\Hexaware Python Training\Data_engineering\Python_codes>

```

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## 6. practice2.py

→ import csv

filepath = 'example2.csv'

# Open the file in write mode ('w'), which overwrites any existing data

with open(filepath, 'w', newline='') as file:

```
    csvwriter = csv.writer(file) # Create a writer object
```

```
    # Write header row
```

```
    csvwriter.writerow(["Id", "Name", "Age", "Courses_Enrolled"])
```

```
    # Data to write
```

```
    data = [
```

```
        [6, "arna", 20, 3],
```

```
        [5, "ella", 20, 1],
```

```
        [4, "shore", 21, 4]
```

```
    ]
```

```
    # Write the data rows
```

```
    csvwriter.writerows(data)
```

```
print("Writing has been completed")
```

```
● PS C:\Users\Sarthak Kulkarni\Desktop\Hexaware Python Training\Data_engineering\Python_codes> & C:/Python310/python.exe  
  :/Users/Sarthak Kulkarni/Desktop/Hexaware Python Training/Data_engineering/Python_codes/practice2.py  
  Writing has been completed  
○ PS C:\Users\Sarthak Kulkarni\Desktop\Hexaware Python Training\Data_engineering\Python_codes> [
```

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## 7. practice3.py

→ import csv

filepath = "example2.csv"

# Open the file in read-and-write mode ('r+')

with open(filepath, 'r+', newline="") as file:

    csvwriter = csv.writer(file)

    # Move the file pointer to the end of the file to append data

    file.seek(0, 2) # Seek to end of file

    # Data to append

    additional\_data = [

        [6, "Liam", 23, 1],

        [7, "Emma", 22, 2]

    ]

    # Append the new data rows

    csvwriter.writerows(additional\_data)

print("Data has been appended successfully.")

```
● PS C:\Users\Sarthak Kulkarni\Desktop\Hexaware Python Training\Data_engineering\Python_codes> & C:/Python310/python.exe  
  :/Users/Sarthak Kulkarni/Desktop/Hexaware Python Training/Data_engineering/Python_codes/Practice3.py"  
  Data has been appended successfully.  
○ PS C:\Users\Sarthak Kulkarni\Desktop\Hexaware Python Training\Data_engineering\Python_codes> []
```

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