

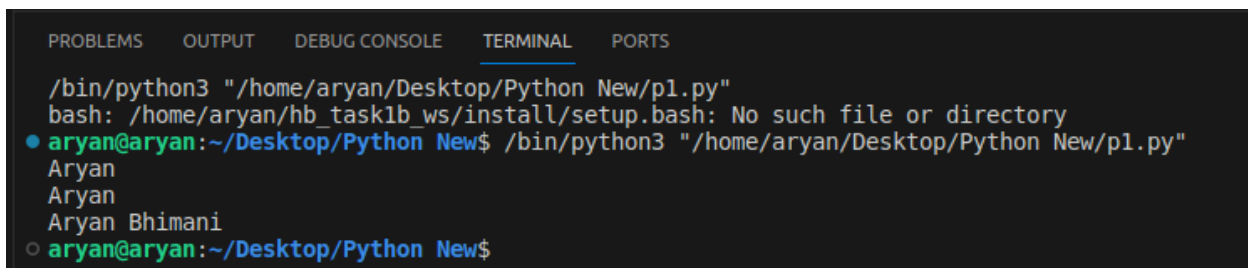
Practical 1

AIM:- (A) write a python program to print hello world.

Code :-

```
print ("Aryan")
x = "Aryan"
print(x)
Y = "Bhimani"
print (x,y)
```

Output :-



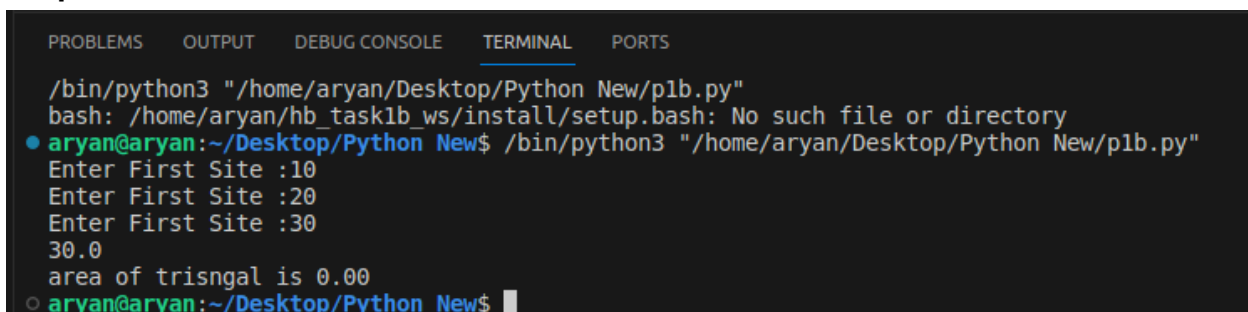
```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
/bin/python3 "/home/aryan/Desktop/Python New/p1.py"
bash: /home/aryan/hb_task1b_ws/install/setup.bash: No such file or directory
● aryan@aryan:~/Desktop/Python New$ /bin/python3 "/home/aryan/Desktop/Python New/p1.py"
Aryan
Aryan
Aryan Bhimani
○ aryan@aryan:~/Desktop/Python New$
```

AIM:- (B) write a python program to calculate area of triangle.

Code :-

```
X = int(input("Enter First Site :"))
Y = int(input("Enter First Site :"))
Z = int(input("Enter First Site :"))
s = (x+y+z)/2
print(s)
area = float (s*(s-x)*(s-y)*(s-z))**0.5
print ("area of triangle is %0.2f" %area)
```

Output :-



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
/bin/python3 "/home/aryan/Desktop/Python New/plb.py"
bash: /home/aryan/hb_task1b_ws/install/setup.bash: No such file or directory
● aryan@aryan:~/Desktop/Python New$ /bin/python3 "/home/aryan/Desktop/Python New/plb.py"
Enter First Site :10
Enter First Site :20
Enter First Site :30
30.0
area of trisngal is 0.00
○ aryan@aryan:~/Desktop/Python New$
```

Practical 2

AIM:- (A) Write a python program to find factorial of a number N taken from a user.

Code:-

```
import math
n = int(input('enter the number: '))
f = math.factorial(n)
print ("factorial is",f)
```

Output :-

[illegible]

AIM:- (B) Write a python program to find largest among 3 numbers taken from user.

Code:-

```
A = int(input("Enter First Site :"))
B = int(input("Enter First Site :"))
C = int(input("Enter First Site :"))
L = max(A,B,C)
print("largest number is :",L)
```

Output :-

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
```

```
/bin/python3 "/home/aryan/Desktop/Python New/p2b.py"  
bash: /home/aryan/hb_task1b_ws/install/setup.bash: No such file or directory  
● aryan@aryan:~/Desktop/Python New$ /bin/python3 "/home/aryan/Desktop/Python New/p2b.py"  
Enter First Site :50  
Enter First Site :60  
Enter First Site :91  
largest number is : 91  
○ aryan@aryan:~/Desktop/Python New$
```

Practical 3

AIM:- Write a python program to get the number of occurrences of a specified element in an array.

Code:-

```
from array import *
N = int(input("Enter the number :"))
A = array('I',[1,2,3,4,5,6,7,8,9,1])
print('original array',A)
print("number of occurrences of number "+str(A.count(N)))
```

Output :-



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
/bin/python3 "/home/aryan/Desktop/Python New/p3.py"
bash: /home/aryan/hb_task1b_ws/install/setup.bash: No such file or directory
● aryan@aryan:~/Desktop/Python New$ /bin/python3 "/home/aryan/Desktop/Python New/p3.py"
Enter the number :1
original array array('I', [1, 2, 3, 4, 5, 6, 7, 8, 9, 1])
number of occurrences of number 2
○ aryan@aryan:~/Desktop/Python New$
```

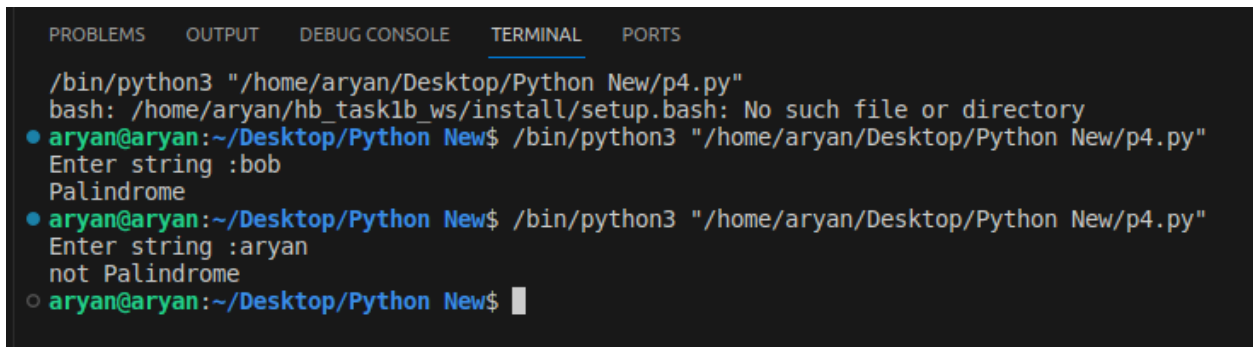
Practical 4

AIM:- Write a python program to check whether a string is palindrome or not.

Code:-

```
def f(s):  
    return s ==s[::-1]  
A = str(input("Enter string :"))  
ans = f(A)  
if ans:  
    print("Palindrome")  
else:  
    print("not Palindrome")
```

Output :-



The screenshot shows a terminal window with a dark background. At the top, there are tabs for 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', 'TERMINAL' (which is selected), and 'PORTS'. The terminal output shows the following sequence of commands and responses:

```
/bin/python3 "/home/aryan/Desktop/Python New/p4.py"  
bash: /home/aryan/hb_task1b_ws/install/setup.bash: No such file or directory  
● aryan@aryan:~/Desktop/Python New$ /bin/python3 "/home/aryan/Desktop/Python New/p4.py"  
Enter string :bob  
Palindrome  
● aryan@aryan:~/Desktop/Python New$ /bin/python3 "/home/aryan/Desktop/Python New/p4.py"  
Enter string :aryan  
not Palindrome  
○ aryan@aryan:~/Desktop/Python New$
```

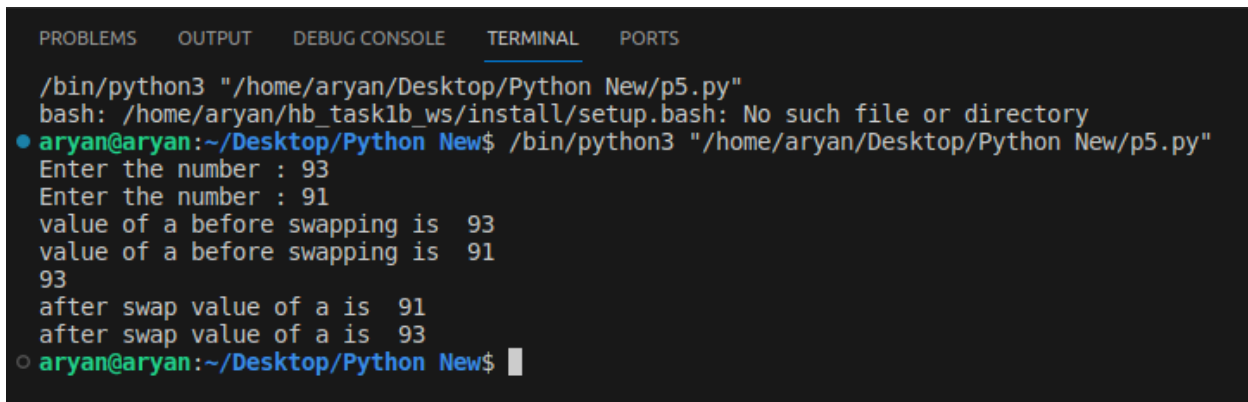
Practical 5

AIM:- Write a python program to Swap two numbers.

Code:-

```
A = int(input("Enter the number : "))
B = int(input("Enter the number : "))
print("value of a before swapping is ",A)
print("value of a before swapping is ",B)
def swap(A,B):
    temp = A;
    A = B;
    B = temp;
    print(temp)
    print("after swap value of a is ",A)
    print("after swap value of a is ",B)
swap(A,B)
```

Output :-

A screenshot of a terminal window with a dark background. At the top, there are tabs labeled 'PROBLEMS', 'OUTPUT', 'DEBUG CONSOLE', 'TERMINAL' (which is selected and underlined), and 'PORTS'. The terminal shows the following text: a command to run a Python script, a bash error message, a prompt where the user enters the file path, and the program's output. The output shows two input numbers (93 and 91), the values before swapping, and the values after swapping (91 and 93).

```
/bin/python3 "/home/aryan/Desktop/Python New/p5.py"
bash: /home/aryan/hb_task1b_ws/install/setup.bash: No such file or directory
● aryan@aryan:~/Desktop/Python New$ /bin/python3 "/home/aryan/Desktop/Python New/p5.py"
Enter the number : 93
Enter the number : 91
value of a before swapping is  93
value of a before swapping is  91
93
after swap value of a is  91
after swap value of a is  93
○ aryan@aryan:~/Desktop/Python New$
```

Practical 6

AIM:- (A) Write a python program to calculate average of numbers in given list.

Code:-

```
lst=[11,22,33,44,55]
def a(lst):
    return sum(lst)/len(lst)
average = a(lst)
print("average of list elemrnt is ",average)
```

Output :-

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
/bin/python3 "/home/aryan/Desktop/Python New/p6.py"
bash: /home/aryan/hb_task1b_ws/install/setup.bash: No such file or directory
● aryan@aryan:~/Desktop/Python New$ /bin/python3 "/home/aryan/Desktop/Python New/p6.py"
average of list elemrnt is  33.0
○ aryan@aryan:~/Desktop/Python New$
```

AIM:- (B) Write a python program to count occurrences and of item in the list.

Code:-

```
lst=[11,22,33,44,55,11,22,33,44]
def count (lst,X):
    return lst.count(X)
X = int(input("enter the item you want to find out : "))
print("{} has occurred {} times". format(X,count(lst,X)))
```

Output :-

```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
/bin/python3 "/home/aryan/Desktop/Python New/p6b.py"
bash: /home/aryan/hb_task1b_ws/install/setup.bash: No such file or directory
● aryan@aryan:~/Desktop/Python New$ /bin/python3 "/home/aryan/Desktop/Python New/p6b.py"
enter the item you want to find out : 55
55 has occurred 1 times
● aryan@aryan:~/Desktop/Python New$ /bin/python3 "/home/aryan/Desktop/Python New/p6b.py"
enter the item you want to find out : 11
11 has occurred 2 times
○ aryan@aryan:~/Desktop/Python New$ █
```

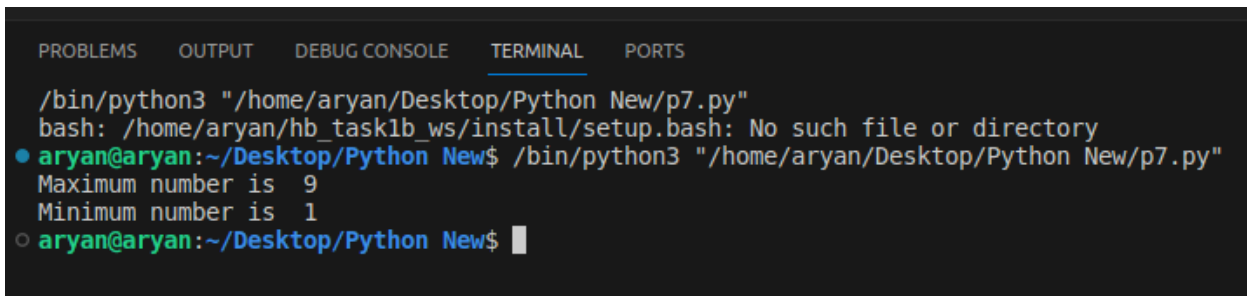
Practical 7

AIM:- Write a python program to find maximum and minimum out of tuple without using built in function.

Code:-

```
list = [1,2,3,4,5,6,7,8,9]
min = list[0]
max = list[0]
for l in list:
    if l>max:
        max = l
    elif l<min:
        min = l
print("Maximum number is ", max)
print("Minimum number is ", min)
```

Output:-



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

/bin/python3 "/home/aryan/Desktop/Python New/p7.py"
bash: /home/aryan/hb_task1b_ws/install/setup.bash: No such file or directory
● aryan@aryan:~/Desktop/Python New$ /bin/python3 "/home/aryan/Desktop/Python New/p7.py"
Maximum number is 9
Minimum number is 1
○ aryan@aryan:~/Desktop/Python New$
```

Practical 8

AIM:- Write a python program to add, search value, delete entries of a phone with it's model no in a dictionary.

Code:-

```
from ast import Dict
dic = {}
def add (phonename,model_no):
    dic [model_no] = phonename
    print (f' added {model_no} and {phonename}')
add ('mi','6pro')
add ('apple','15pro')

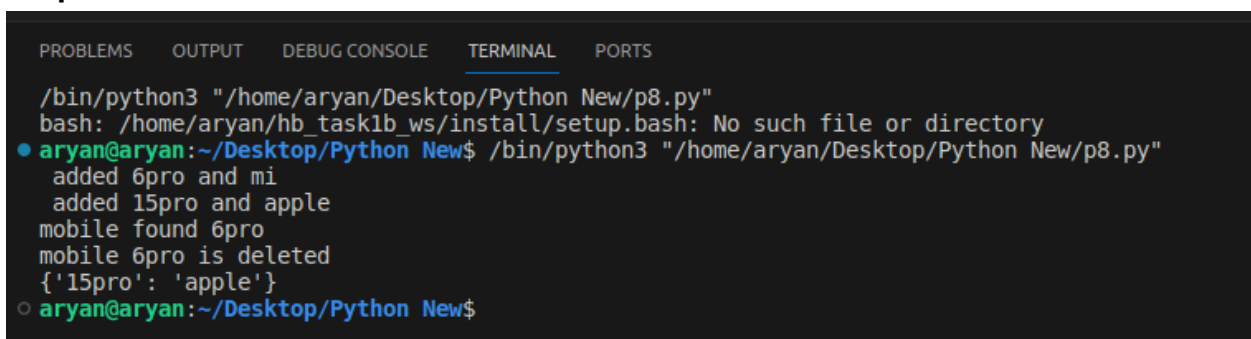
def search(model_no):
    if model_no in dic:
        print(f'mobile found {model_no}')
    else:
        print('mobile not found')

search('6pro')

def delete(model_no):
    if model_no in dic:
        del dic[model_no]
        print(f'mobile {model_no} is deleted')
    else:
        print('mobile not found')

delete('6pro')
print(dic)
```

Output:-



```
PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
/bin/python3 "/home/aryan/Desktop/Python New/p8.py"
bash: /home/aryan/hb_task1b_ws/install/setup.bash: No such file or directory
● aryan@aryan:~/Desktop/Python New$ /bin/python3 "/home/aryan/Desktop/Python New/p8.py"
added 6pro and mi
added 15pro and apple
mobile found 6pro
mobile 6pro is deleted
{'15pro': 'apple'}
○ aryan@aryan:~/Desktop/Python New$
```

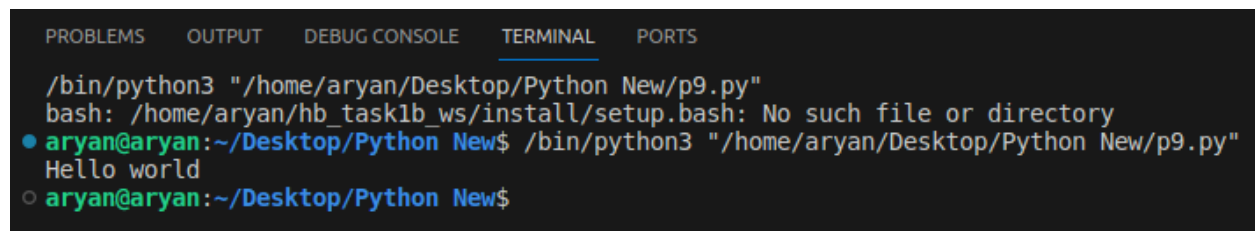

Practical 9

AIM:- Write a python program to write into a file and read from file and display on terminal.

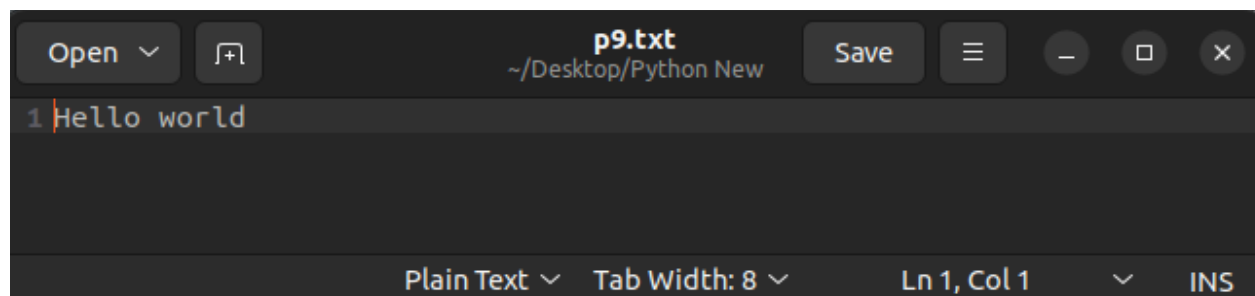
Code:-

```
with open ('p9.txt','w') as file:  
    file.write('Hello world')  
with open ('p9.txt','r') as file:  
    content = file.read()  
    print(content)
```

Output:-



```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS  
  
/bin/python3 "/home/aryan/Desktop/Python New/p9.py"  
bash: /home/aryan/hb_task1b_ws/install/setup.bash: No such file or directory  
● aryan@aryan:~/Desktop/Python New$ /bin/python3 "/home/aryan/Desktop/Python New/p9.py"  
Hello world  
○ aryan@aryan:~/Desktop/Python New$
```



```
Open  [icon]  p9.txt  
~/Desktop/Python New  Save  [icon]  [icon]  [icon]  
1 Hello world  
  
Plain Text  Tab Width: 8  Ln 1, Col 1  INS
```

Practical 10

AIM:- implement a management system using python.

Code:-

```
class Patient:
```

```
    def __init__(self, patient_id, name, age, gender, contact_number):
        self.patient_id = patient_id
        self.name = name
        self.age = age
        self.gender = gender
        self.contact_number = contact_number
        self.appointments = []
```

```
    def schedule_appointment(self, doctor, date_time):
        appointment = {'doctor': doctor, 'date_time': date_time}
        self.appointments.append(appointment)
        print(f"Appointment scheduled with Dr. {doctor} on {date_time}")
```

```
    def display_info(self):
        print(f"Patient ID: {self.patient_id}")
        print(f"Name: {self.name}")
        print(f"Age: {self.age}")
        print(f"Gender: {self.gender}")
        print(f"Contact Number: {self.contact_number}")
        print("Appointments:")
        for appointment in self.appointments:
            print(f"    - Dr. {appointment['doctor']} on {appointment['date_time']}")
        print("\n")
```

```
class Doctor:
```

```
    def __init__(self, doctor_id, name, specialty):
        self.doctor_id = doctor_id
        self.name = name
        self.specialty = specialty
```

```
    def display_info(self):
        print(f"Doctor ID: {self.doctor_id}")
        print(f"Name: {self.name}")
        print(f"Specialty: {self.specialty}")
        print("\n")
```

```
class Hospital:
    def __init__(self, name):
        self.name = name
        self.patients = []
        self.doctors = []

    def add_patient(self, patient):
        self.patients.append(patient)

    def add_doctor(self, doctor):
        self.doctors.append(doctor)

    def display_patients(self):
        print("Patients in the hospital:")
        for patient in self.patients:
            patient.display_info()

    def display_doctors(self):
        print("Doctors in the hospital:")
        for doctor in self.doctors:
            doctor.display_info()

# Example usage:
if __name__ == "__main__":
    hospital = Hospital("Sample Hospital")

    doctor1 = Doctor(1, "Dr. Smith", "Cardiologist")
    doctor2 = Doctor(2, "Dr. Johnson", "Pediatrician")

    hospital.add_doctor(doctor1)
    hospital.add_doctor(doctor2)

    patient1 = Patient(101, "John Doe", 30, "Male", "123-456-7890")
    patient2 = Patient(102, "Jane Doe", 25, "Female", "987-654-3210")

    patient1.schedule_appointment("Smith", "2024-03-10 10:00 AM")
    patient2.schedule_appointment("Johnson", "2024-03-15 02:30 PM")

    hospital.add_patient(patient1)
    hospital.add_patient(patient2)
```

```
hospital.display_doctors()
hospital.display_patients()
```

Output:-

```
PROBLEMS  OUTPUT  DEBUG CONSOLE  TERMINAL  PORTS

/bin/python3 "/home/aryan/Desktop/Python New/p100.py"
bash: /home/aryan/hb_task1b_ws/install/setup.bash: No such file or directory
● aryan@aryan:~/Desktop/Python New$ /bin/python3 "/home/aryan/Desktop/Python New/p100.py"
Appointment scheduled with Dr. Smith on 2024-03-10 10:00 AM
Appointment scheduled with Dr. Johnson on 2024-03-15 02:30 PM
Doctors in the hospital:
Doctor ID: 1
Name: Dr. Smith
Specialty: Cardiologist

Doctor ID: 2
Name: Dr. Johnson
Specialty: Pediatrician

Patients in the hospital:
Patient ID: 101
Name: John Doe
Age: 30
Gender: Male
Contact Number: 123-456-7890
Appointments:
  - Dr. Smith on 2024-03-10 10:00 AM

Patient ID: 102
Name: Jane Doe
Age: 25
Gender: Female
Contact Number: 987-654-3210
Appointments:
  - Dr. Johnson on 2024-03-15 02:30 PM

○ aryan@aryan:~/Desktop/Python New$
```