

CYCLE - 1

Expt. No. 1 (a)

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Expt. Name. Handling Input and Output

Date : 07-01-2022

Aim:

To write a python program Handling Input and Output.

Algorithm:

step 1: start

step 2: Get the input from the user

step 3: print the output by multiplying the input value and 5

step 4: stop

Program:

```
print("Handling Input and Output")
```

```
n = int(input("Enter a number to be multiplied by 5:"))
```

```
print("Your answer for 5 x {} is {}".format(n, n*5))
```

Result:

The above program is executed successfully and the output is attached.

Aim:

To write a python program using looping constructs.

Algorithm:

step 1: start

step 2: Get the input from the user

step 3: Using for loop given range between 1 and 11

step 3.1: print the multiplication of input value and number

step 4: stop

Program:

```
print("Looping Constructs")
```

```
n = int(input("Enter a number to get their Multiplication tables:"))
```

```
for i in range(1, 11):
```

```
    print("{} x {} = {}".format(n, i, n*i))
```

Result:

The above program is executed successfully and the output is attached.

Aim:

To write a python program using Arrays, Lists, set and dictionaries

Algorithm:

- step 1: start
- step 2: import array library
- step 3: print the array given in the code
- step 4: initialize 2 lists and append
- step 5: append the two lists and print it
- step 6: initialize 2 sets
- step 7: append the two sets and print it.
- step 8: initialize a dictionary
- step 9: update the dictionary and print it
- step 10: stop

Program:

```
import array as ar
print("Arrays, Lists, set and Dictionaries\n")
print("Arrays")
a = ar.array('i', [1, 2, 3])
for i in range(0, 3):
    print(a[i], end=" ")

print()
print("Appending Lists\n")
l1 = ["a", "b", "c"]
l2 = [1, 2, 3]
```



```
for x in l2:
```

```
    l1.append(x)
```

```
print("append list : ", end=" ")
```

```
print(l1)
```

```
print("\n Appending Sets\n")
```

```
s1 = {"a", "b", "c"}
```

```
s2 = {1, 2, 3}
```

```
set3 = s1.union(s2)
```

```
print("append set: ", end=" ")
```

```
print(set3)
```

```
car = {'brand': 'Ford', 'model': 'Mustang', 'year': 1964}
```

```
print("\n Details of car before updating: \n {}".format(car))
```

```
car["Color"] = "white"
```

```
print("\n Details of a car after updating: \n {}".format(car))
```

Result:

The above program is executed successfully and the output is attached.

Aim:

To write a ^{python} program using Modules and Function

Algorithm:

Step 1: Start

Step 2: Create a function for sum, difference, multiplication and Division

Step 3: Perform the respective operations in their function

Step 4: Call the function with the parameters

Step 5: stop

Program:

```
def add(x,y):  
    print("Sum of {0} + {1} = {2}".format(x,y,x+y))  
def sub(x,y):  
    print("Difference of {0} - {1} = {2}".format(x,y,x-y))  
def mul(x,y):  
    print("Product of {0} * {1} = {2}".format(x,y,x*y))  
def div(x,y):  
    print("Quotient of {0} / {1} = {2}".format(x,y,x/y))  
add(2,3)  
sub(5,3)  
mul(10,5)  
div(10,2)
```

Result:

The above program is executed successfully and the output is attached.

Aim:

To write a python program using File Handling

Algorithm:

Step 1: start

step 2: take the file as input

step 3: print the file name, mode of opening,

step 4: stop

Program:

```
fo = open("data.txt", "wb")
```

```
print("Mode of opening:", fo.name)
```

```
print("File name:", fo.name)
```

```
print("Is closed?", fo.closed)
```

Result:

The above program is executed successfully and the output is attached.

Aim:

To write a python program using Exception Handling

Algorithm:

- Step 1: Start
- Step 2: initialize a list
- Step 3: Using try print the elements
- Step 4: Using except print the error occurred
- Step 5: Stop

Program:

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

```
try:
```

```
    print("Second element = %d" % (a[1]))
```

```
    print("Fourth element = %d" % (a[3]))
```

```
except:
```

```
    print("An error occurred")
```

Result:

The above code is executed successfully and the output is attached.

Expt. No. 3

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Expt. Name. Given list, find second highest value

Date: 07-01-2022

Aim:

To write a Python program to find the second highest value in a given list.

Algorithm:

Step 1: start

Step 2: initialize the array

Step 3: sort array using sort method

Step 4: print the second last element in the list

Step 5: stop

Program:

```
arr = [6, 5, 2, 1, 6, 4]
```

```
arr.sort()
```

```
print('second highest element in list is:', arr[-2])
```

Result:

The above code is executed successfully.