

REPORT WRITING!

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GITHUB LINK: <https://github.com/keerthi19hub/PYTHON-ASSIGNMENT>

PROGRAM-01

#program 1-arithmetic operators

```
a=int(input("enter a number:"))
b=int(input("enter a number:"))
print("addition:",a+b)#addition
print("subtraction:",a-b)#subtraction
print("multiplication:",a*b)#multiplication
print("division:",a/b)#division
print("modulus:",a%b)#remainder
print("exponential:",a**b)#quotient
print("floor division:",a//b)#without decimal point only
integers
```

#OUTPUT:

```
enter a number: 10
enter a number: 3
addition: 13
subtraction: 7
multiplication: 30
division: 3.3333333333333335
```

modulus: 1

exponential: 1000

floor division: 3

EXPLANATION:This program is done by using arithmetic operators like addition(+),subtraction(-),multiplication(*),division(/),modulus for finding remainder(%),exponential(**) for finding quotient and floor division (/ /).

PROGRAM-02

#program 2-comparism operators

```
a=int(input("enter first number"))
```

```
b=int(input("enter second number"))
```

```
if a>b:
```

```
    print("a is greater than b")#if first one is greater than the second
```

```
elif a==b:
```

```
    print("a and b are equal")#if both first and second are equal
```

```
elif a<=b:
```

```
    print("a is lesser than b")#if first one is lesser than the second
```

```
else:
```

```
    print("do nothing")#if not greater,smaller and equal print nothing
```

#OUTPUT: enter first number 15

enter second number 100

a is lesser than b

EXPLANATION:This program is done using comparison symbols like (< for less than) ,(> for more than) ,(==equal to),and conditional statements like if ,elif, else(if-else).

PROGRAM-3

#program 3-logical operators

```
a=True
b=False
c=True
print(a and b)
print(b and a)
print(a and c)
print(a or b)
print(b or a)
print(a or c)
print(not a)
print(not b)
print(not c)
```

#OUTPUT:

```
False
False
True
True
True
True
False
True
False
```

EXPLANATION: In this program we used logical operators like true or false to find whether the given statement is true or false.

PROGRAM-4

#program 4-string manipulation

```
a=input("enter the string ")
print(len(a))#to find length of string
print(a[0],a[-1])#find first and second word
print(a[::-1])#reverse the string
print(a.upper())#capital words,uppercase
print(a.lower())#lower case
```

OUTPUT:

```
enter the string  keerthi
7
k i
ihtreeK
KEERTHI
Keerthi
```

EXPLANATION: In this program we use string operations like (len) to find the length of the string, and use numbers to find the numbering of the letters of the string ,and to reverse the string we use (-1),and upper to capitalise the letters and lower to lower the string.

PROGRAM-5

#program 5-string formating

```
name=input("enter your name=")#enter name
age=int(input("enter your age="))#enter age
print("Hello",name,"you are",age,"years old")#print
hello,you are,years old in double quotes as they need to
be printed in the output.
```

OUTPUT:

```
enter your name= keerthi
enter your age= 18
Hello keerthi you are 18 years old
```

EXPLANATION:In this program the integer value is stored in the age variable and the name in string format.

PROGRAM-6

#program 6-substring search

```
x=str(input("sentence:"))
y=str(input("enter a word:"))
print(x.index(y))#to include both sentence and word we
use x.index(y)
```

OUTPUT:

```
sentence: twinkle twinkle little star
enter a word: little
```

16

EXPLANATION:In this program we use string operations to combine a sentence and a word ,so to combine the two we use string operation that is index.

PROGRAM-7

#program 7-list operations

```
a=int(input("enter the number 1:"))
b=int(input("enter the number 2:"))
c=int(input("enter the number 3:"))
d=int(input("enter the number 4:"))
e=int(input("enter the number 5:"))
f=(a,b,c,d)
print([f])
print(sum(f))
print(max(f))#Largest number
print(min(f))#smallest number
```

OUTPUT:

```
enter the number 1: 10
enter the number 2: 30
enter the number 3: 50
enter the number 4: 70
enter the number 5: 90
[(10, 30, 50, 70)]
```

160

70

10

EXPLANATION:In this program int is used to convert the input which is initially a string,sum is used to add all the values given in the list and max is used to find the largest number and min is used to find the smallest number given in the list.

PROGRAM-8

#program 8-list manipulation

```
fruits=["mango","orange","apple","kiwi","banana"]
print(fruits)
fruits.append("pineapple")#to add a fruit
print(fruits)
fruits.remove("orange")#to remove a fruit
print(fruits)
```

OUTPUT:

```
['mango', 'orange', 'apple', 'kiwi', 'banana']
['mango', 'orange', 'apple', 'kiwi', 'banana', 'pineapple']
['mango', 'apple', 'kiwi', 'banana', 'pineapple']
```

EXPLANATION:In this program we use string operations that is append to add a fruit and remove to remove a fruit

PROGRAM-9

#Program 9-sorting a list

```
A = int(input("Enter the number 1:"))
B = int(input("Enter the number 2:"))
C = int(input("Enter the number 3:"))
D = int(input("Enter the number 4:"))
E = int(input("Enter the number 5:"))
f = [A, B, C, D, E]
f.sort()#sort the list in ascending order
print("Ascending Order of the list:",f)
f.sort(reverse=True)#sort the list in descending order
print("Descending Order of the list:",f)
```

OUTPUT:

```
Enter the number 1: 2
Enter the number 2: 4
Enter the number 3: 6
Enter the number 4: 8
Enter the number 5: 10
Ascending Order of the list: [2, 4, 6, 8, 10]
Descending Order of the list: [10, 8, 6, 4, 2]
```

EXPLANATION:In this program we do sorting of elements in a list ,here we sort elements according to ascending and descending order,(f.sort()) sorts lists in ascending order and f.sort(reverse=true)sorts lists in descending order.

PROGRAM-10

#program 10-list slicing

```
numbers=[1,2,3,4,5,6,7,8,9,10]
print(numbers[:5])#to print starting 5 numbers
print(numbers[-5:])#to print the numbers after 5
print(numbers[1:7])#to print the numbers from 1 to 7
leaving 1
```

OUTPUT:

```
[1, 2, 3, 4, 5]
[6, 7, 8, 9, 10]
[2, 3, 4, 5, 6, 7]
```

EXPLANATION:In this program we used slicing of elements ,we used (:5)to print the starting 5 number and (-5:)to print the numbers after 5 and(1:7)to print the numbers from 1 to 7.

THANK YOU

BONUS QUESTION

#BONUS QUESTION

```
students = []

for _ in range(3):
    name = input("Enter student name:")
    scores=[float(input(f"Enter score {i+1}: ")) for i in range(3)]
    students.append([name,scores])

for student in students:
    avg = sum(student[1])/3
    print(student[0], "'s average score:",avg)
```

OUTPUT:

Enter student name: Keerthi

Enter score 1: 95

Enter score 2: 92

Enter score 3: 89

Enter student name: Srujana

Enter score 1: 87

Enter score 2: 93

Enter score 3: 85

Enter student name: Riya

Enter score 1: 92

Enter score 2: 85

Enter score 3: 99

Keerthi 's average score:' 92.0

Srujana 's average score:' 88.33333333333333

Riya 's average score:' 92.0

EXPLANATION:in this program I used loop.we have to get the names and scores from the user(i+1).to find the average of their scores we need to add the three and divide by 3,for the function I in range we need to append the function.