```python
#declare different varieables with meaning ful name following naming conventions (camlsace,snake-case)
# camelcase
studentname="anclin stephy"
studentage=21
studententrolledcourse="Data Analytics"
print("Student Name:",studentname)
print("Student Age:",studentage)
print("Entrolled Course:",studententrolledcourse)

#snake_case
student_name="anclin stephy"
student_age=21
student_entrolled_course="Data Analytics"
print("Student Name:",student_name)
print("Student Age:",student_age)
print("Entrolled Course:",student_entrolled_course)
```

```
Student Name: anclin stephy
Student Age: 21
Entrolled Course: Data Analytics
Student Name: anclin stephy
Student Age: 21
Entrolled Course: Data Analytics
```

```python
#define consonant PI
PI=3.14159
print("value of the PI:",PI)
#circumference of a circle
PI=3.14159
radius=5
circumference=(2*PI*radius)
print("The circumference of a circle is:",circumference)
```

```
value of the PI: 3.14159
The circumference of a circle is: 31.4159
```

```python
#declare a list ,acces elements,and perform basic list operations
differentitems=["Stephy","Python",38.9,"Apple","Computer"]
print(" Different Items :", differentitems)
print("Name:",differentitems[0])
print("Language:",differentitems[1])
print("Width:",differentitems[2])
print("fruits:",differentitems[3])
print("Field:",differentitems[4])
differentitems.append("Orenge")
print("After adding orange:", differentitems)
```

```
 Different Items : ['Stephy', 'Python', 38.9, 'Apple', 'Computer']
Name: Stephy
Language: Python
Width: 38.9
fruits: Apple
Field: Computer
After adding orange: ['Stephy', 'Python', 38.9, 'Apple', 'Computer',
'Orenge']
```

```
#sum of Two  numbers
Num1=45
Num2=90
result=Num1+Num2
print("Sum of Two Numbers:",result)
```

```
Sum of Two Numbers: 135
```

```
#program to find the area of a circle
import math
radius=7
area = math.pi*(radius ** 2)
print("The area of the circle is:", area)
```

```
The area of the circle is: 153.93804002589985
```

```
#Area of the rectangle
length=30
width=8
area=length*width
print("Area of the rectangle is:",area)
```

```
Area of the rectangle is: 240
```

```
#find the area of triangle
base=30
height=8
area=(base*height)/2
print("Area of the triangle is:",area)
```

```
Area of the triangle is: 120.0
```

```
#simple calculater
print("Select an operation to perform:")
print("1. Addition")
print("2. Subtraction")
print("3. Multiplication")
print("4. Division")
choice = input("Enter choice (1/2/3/4): ")
num1 = float(input("Enter first number: "))
num2 = float(input("Enter second number: "))
if choice == '1':
```

```
    result = num1 + num2
    print(f"The result of addition is: {result}")
elif choice == '2':
    result = num1 - num2
    print(f"The result of subtraction is: {result}")
elif choice == '3':
    result = num1 * num2
    print(f"The result of multiplication is: {result}")
elif choice == '4':
    if num2 != 0:
        result = num1 / num2
        print(f"The result of division is: {result}")
    else:
        print("Error! Division by zero is not allowed.")
else:
    print("Invalid choice. Please select a valid option.")
```

```
Select an operation to perform:
1. Addition
2. Subtraction
3. Multiplication
4. Division

Enter choice (1/2/3/4):  1
Enter first number:  34
Enter second number:  35

The result of addition is: 69.0
```

```
# Using assignment operators
x = 10
print("Initial value of x:", x)
x += 5
print("After x += 5:", x)
x -= 3
print("After x -= 3:", x)
x *= 2
print("After x *= 2:", x)
x /= 4
print("After x /= 4:", x)
```

```
Initial value of x: 10
After x += 5: 15
After x -= 3: 12
After x *= 2: 24
After x /= 4: 6.0
```

```
#use increment decrement operator
x=10
print("initial value of x:",x)
x+=5
```

```
print("after x+=5:",x)
x-=3
print("after x-=3:",x)
```

```
initial value of x: 10
after x+=5: 15
after x-=3: 12
```

```
#use comaprission operator
num1=100
num2=200
result=(num1==num2)
print("Double equal:",result)
result=(num1!=num2)
print("Not equal:",result)
result=(num1>num2)
print("Greater than:",result)
result=(num1<num2)
print("Less than:",result)
result=(num1>=num2)
print("Greater than or equal:",result)
result=(num1<=num2)
print("Less than or equal:",result)
```

```
Double equal: False
Not equal: True
Greater than: False
Less than: True
Greater than or equal: False
Less than or equal: True
```

```
#use logical operator
a=True
b=False
print("a and b:",a and b)
print("a or b:",a or b)
print(" a not:",not a)
print("b not:",not b)
```

```
a and b: False
a or b: True
 a not: False
b not: True
```

```
#swap two variable
a=100
b=200
print("Before swapping: a =", a, ", b =", b)
temp=a
a=b
```

```
b=temp
print("after swapping swapping: a =", a, ", b =", b)
```

```
Before swapping: a = 100 , b = 200
after swapping swapping: a = 200 , b = 100
```

```
#find average of given numbers
int=[120,130,140]
a=sum(int)
b=sum(int)
avg=a/b
print("Average of Given numbers:",avg)
```

```
Average of Given numbers: 1.0
```

```
# perform a compound arithimetic operation on four variable
a=10
b=30
c=12
d=3
int=(a+b)*c/d
print("perform a compound arithmetic operation:",int)
```

```
perform a compound arithmetic operation: 160.0
```

```
#program to store 10th grade marks calculate total and average
Subject=[100,98,99,97,89]
print("Tamil:",Subject[0])
print("English:",Subject[1])
print("Maths:",Subject[2])
print("Science:",Subject[3])
print("Social:",Subject[4])
Total= 100+98+99+97+89
Avg=Total/5
print("Total Marks:",Total)
print("Average:",Avg)
```

```
Tamil: 100
English: 98
Maths: 99
Science: 97
Social: 89
Total Marks: 483
Average: 96.6
```