Q.1 Write a program that ask user for his name and then welcome him. The output should look like this:
 Enter your name: Saksham
 Hello Saksham

```
N = str(input("Enter your name:"))
print("Hello ",N)
```

Q.2 Write a program that prompts the user to enter two integers and display the total on the screen.

```
A = int(input("Enter the first number:"))
B = int(input("Enter the second number:"))
sum = A+B
print("Sum of that two number is:",sum)
```

Q.3 Write a program that prompts the user to input a Celsius temperature and outputs the equivalent temperature in Fahrenheit.

```
T = float(input("Enter temperature in celsius:"))
F = T*1.8+32
print("Temperature in Fahrenheit is:",F)
```

Q.4 Write a program which accept principle,rate and time from user and print the simple interest.

```
P = int(input("Enter the Principal:"))
R = int(input("Enter the Rate:"))
T = int(input("Enter the Time:"))
SI = (P*T*R)/100
print("Simple interest is",SI)
```

Q.5 Write a program that accept seconds from keyboard as integer. Your program should convert seconds in hours,minutes and seconds. Your output should like this:
 Enter seconds: 13400
 Hours: 3
 Minues: 43
 Seconds: 20

```
S = int(input("Enter time in seconds:"))
h = S/3600
```

```
m = S%3600/60
se = S%60

print("Hours:",int(h))
print("Minutes:",int(m))
print("Seconds:",int(se))
```

Q.6 Write a program that prompts the user to enter number in two variables and swap the contents of the variables.

```
A = int(input("Enter value of A:"))
B = int(input("Enter value of B:"))
swap=A
A=B
B=swap
print("Value of A is",A)
print("Value of B is",B)
```

Q.7 Write program that prompts user to enter number in two variables and swap the contents of the two variables(Do not declare extra variable).

```
A = int(input("Enter value of A:"))
B = int(input("Enter value of B:"))
A=A+B
B=A-B
A=A-B
print(A)
print(B)
```

Q.8 Write a program that prompts the user to input the radius of the circle and output the area and circumference of the circle.

```
R = float(input("Enter radius of circle:"))
PI= 3.14
A = PI*(R*R)
C = 2*PI*R
print("Area of circle is:",float(A))
print("Circumference of circle is:",float(C))
```

Q.9 Write a program that prompts the user to input the length and Width of the rectangle and outputs the area and circumference of the rectangle.

```
L = int(input("Enter the length:"))
W = int(input("Enter the width:"))
A = L*W
P = 2*(L+W)
print("Area of rectangle is:",A)
print("Perimeter of rectangle is:",P)
```

 Circumference if a unit of circle so that's why it is not
applicable in the case of rectangle.So we use perimeter in
rectangle..

Q.10 Write a program that prompts the user to input a number and
display if the number is odd or even.

```
N = int(input("Enter a number:"))
if(N%2==0):
 print("Number is Even!")
else:
 print("Number is Odd!")
```

Q.11 Write a program that prompts the user to input two integer
and output the largest.

```
A = int(input("Enter value of A:"))
B = int(input("Enter value of B:"))
if(A>B):
 print("A is Largest!")
else:
 print("B is Largest!")
```

Q.12 Write a program that prompts the user to input three integers
and output the largest.

```
A = int(input("Enter value of A:"))
B = int(input("Enter value of B:"))
C = int(input("Enter value of C:"))
if(A>B>C):
    print("A is the largest!")
elif(B>C>A):
    print("B is the largest!")
else:
    print("C is the largest!")
```

Q.13 Write a program that prompts the user to input a year and

determine whether the year is leap year or not.

```
Y = int(input("Enter your year:"))
if(Y%4==0):
 print("Year is leap year!")
else:
 print("Year is not a leap year!")
```

Q.14 Write a program that prompts the user to input numbers of calls and calculate the monthly telephone bills as per the following rule:
 Minimum Rs. 200 for up to 100 calls.
 Plus Rs. 0.60 per call for next 50 calls.
 Plus Rs. 0.50 per call for next 50 calls.
 Plus Rs. 0.40 per call for any call beyond 200 calls.

```
calls = int(input("Enter number of calls in this month:"))
if(calls <= 100):
    print("Your total telephone bill of this month is Rs. 200")
elif(calls <=150):
    print("Your total telephone bill of this month is Rs.",calls*0.60)
elif(calls <= 200):
    print("Your totla telephone bill of this month is Rs.",calls*0.50)
else:
    print("Your total telephone bill of this month is Rs.",calls*0.40)
```

Q.15 The marks obtained by a student in 3 diffrent subjects are input by the user. Your program should calculte the average of subjects and display the grade. The student gets a grade as per the following rules.

Average	Grade
90-100	A
80-89	B
70-79	C
60-69	D
0-59	F

```
M = int(input("Enter marks obtained in Mathamatics:"))
S = int(input("Enter marks obtained in Science:"))
E = int(input("Enter marks obtained in English:"))
Avg = M+S+E/3
if(Avg <= 59):
    print("Sorry bro your grade is: F")
elif(Avg <= 69):
    print("Your grade is 'D'")
elif(Avg <= 79):
```

```python
        print("Your grade is 'C'")
elif(Avg <= 89):
        print("Your grade is 'B'")
else:
        print("Congratulations! Your grade is 'A'")
```

Q.16 Write a program that prompts the user to input a number.
Program should display the corresponding days to the number.

```python
days = {}
days[1]="Monday"
days[2]="Tuesday"
days[3]="Wednesday"
days[4]="Thursday"
days[5]="Friday"
days[6]="Saturday"
days[7]="Sunday"
D = int(input("Enter a number(between 1-7):"))
if D in days:
    print(days[D])
    # print("The day is:",days)
else:
    print("Please give a number between 1-7")
```

Q.17 Write a program that prompts the user to input a character
and determines the character is vowel or consonant.

```python
vowels = ["a","e","i","o","u"]
c = str(input("Enter a character(character must be in small):"))
if c in vowels:
    print(c,"is a vowel")
else:
    print(c,"is consonant")
```

Q.18 Write a program to print number from 1 to 10.

```python
i=0
for i in range(1,11):
    print(i)
```

Q.19 Write a program that asks the user for a positive integer
value. The program should calculate the sum of all the integers
from 1 up to the number entered.For example, if the user enters
20, the loop will find the sum of 1,2,3,4....20.

```python
n = int(input("Enter a positive integer:"))
i=0
```

```
sum=0
for i in range(1,n+1):
    sum+=i
    print(sum)
```

Q.20 Write a program that prompts the user to input a number and prints its multiplication table.

```
n = int(input("Enter a number:"))
i=0
sum=0
for i in range(1,11):
    sum=n*i
    print("2 x",i,"=",sum)
```

Q.21 Write a program that prompts the user to input a number and print its factorial.

```
n = int(input("Enter a number:"))
i = 1
fact = 1
for i in range(1,n+1):
    fact*=i
print(fact)
```

Q.22 Two numbers are entered through the keyboard. Write a program to find the value of one number raised to the power of another.

```
a = int(input("Enter first number:"))
b = int(input("Enter its power"))
power = a**b
print(a,"is raised to power",b,"=",power)
```

Q.23 Write a program that prompts the user to input a number and reverese its digits.

```
num = input("Enter a number:")
r = num[::-1]
print("Reversed numbers is:",r)
```

Q.24 Write a program that ask the user to input a positive integer. Your program should find and display the sum of digits of number.

```
n = int(input("Enter a positive number:"))
sum=0
while n>0:
    sum+=n%10
    n/=10
print("The sum of its digits is:",int(sum))
```

Q.25 Write a program that prompts the user to input a decimal integer and display its binary equivalent.

```
d = int(input("Enter your decimal numbers:"))
b = bin(d)
print("The binary of",d,"is",b)
```

Q.26 Write a program that prompts the user to input two numbers and display its H.C.F.

```
n1 = int(input("Enter first number:"))
n2 = int(input("Enter second number:"))
if(n1 < n2):
    smaller = n1
else:
    smaller = n2
hcf = 1

for i in range(1, smaller+1):
    if(n1 % i == 0) and (n2%i == 0):
        hcf = i
print("The hcf of",n1,"and",n2,"is",hcf)
```

Q.27 Write a program to find all armstrong number in the range of 0 and 999.

```
for num in range(10,1000):
    numstr = str(num)
    numdigits = len(numstr)
    sumdigits = 0
    for digit in numstr:
        sumdigits += int(digit)** numdigits
    if(sumdigits == num):
        print(num)
```

Q.28 Write a program to print the following:
 1.

```
* * * * *
* * * * *
* * * * *
* * * * *
* * * * *
```
2.
```
*
* *
* * *
* * * *
* * * * *
```
3.
```
        *
      * *
    * * *
  * * * *
* * * * *
```
4.
```
    *
  * *
  * * *
 * * * *
* * * * *
```
5.
```
      1
    2 2 2
   3 3 3 3
  4 4 4 4 4
 5 5 5 5 5 5
```

1.
```python
n = 5
for row in range(1,n+1):
    for col in range(1,n+1):
        print("*",end=" ")
    print()
```

2.
```python
for row1 in range(1,n+1):
    for col1 in range(1,row1+1):
        print("*",end=" ")
    print()
```

3.
```python
for row2 in range(1,n+1):
    for sp in range(0,n-row2):
        print(" ",end=" ")
    for col2 in range(1,row2+1):
        print("*",end=" ")
    print()
```
4.
```python
for row3 in range(1,n+1):
    for sp1 in range(0,n-row3):
```

```
        print(" ",end=" ")
    for col3 in range(1,row3+1):
        print(" * ",end=" ")
    print()
```

5.
```
for row4 in range(1,n+1):
    for sp2 in range(0,n-row4):
        print(" ",end=" ")
    for col4 in range(1,2*row4):
        print(row4,end=" ")
    print()
```

Q.29 Write a program that accept a list from user and print the alternate element of list.

```
lst = input("Enter a list of elements saparated by space:").split()
for i in range(0,len(lst),2):
    print(lst[i])
```

Q.30 Write a program that accept a list from user. Your program should reverse the content of list and display it. Do not use reverse()

```
lst = input("Enter a list of elements saparated by space:").split()
rev =[]
for i in range(len(lst)-1,-1,-1):
    rev.append(lst[i])
print("Reversed list looks like:",rev)
```