```
x = 10
y = 5
```

[4]:

```
print("sanjitha")
x = 5
y = 10

# To take inputs from the user
#x = input('Enter value of x: ')
#y = input('Enter value of y: ')

# create a temporary variable and swap the values
temp = x
x = y
y = temp

print('The value of x after swapping: {}'.format(x))
print('The value of y after swapping: {}'.format(y))
```

```
sanjitha
The value of x after swapping: 10
The value of y after swapping: 5
```

reverse a number in string

guess number usimg random:

[3]:
```
import random

num = random.randint(1, 10)
guess = None

while guess != num:
    guess = input("guess a number between 1 and 10: ")
    guess = int(guess)

    if guess == num:
        print("congratulations! you won!")
        break
    else:
        print("nope, sorry. try again!")
```

```
guess a number between 1 and 10:  9
nope, sorry. try again!
guess a number between 1 and 10:  10
nope, sorry. try again!
guess a number between 1 and 10:  1
nope, sorry. try again!
guess a number between 1 and 10:  8
```

check if the number is prime or not:

[4]:
```
print("sanjitha")
b=int(input("enter a number:"))
if b>1:
    for i in range(2,b):
        if(b%i)==0:
            print("it is not a prime number")
    else:
        print("it is a prime number")
```

```
sanjitha
enter a number: 3
it is a prime number
```

check if the number is prime or not:

[4]:
```
print("sanjitha")
b=int(input("enter a number:"))
if b>1:
    for i in range(2,b):
        if(b%i)==0:
            print("it is not a prime number")
    else:
        print("it is a prime number")
```

program to calculate factorial of a number

[2]:
```
def fact(num):
    if num == 0:
        return 1
    else:
        return num * fact(num-1)


n = int(input("Enter the value of N : "))
r = int(input("Enter the value of R (R cannot be negative or greater than N): "))
print("Factorial of ",n ,"is : ",fact(n))
nCr = fact(n)/(fact(r)*fact(n-r))

print(n,'C',r," = ",nCr)
```

```
Enter the value of N :  5
Enter the value of R (R cannot be negative or greater than N):  2
Factorial of  5 is :  120
5 C 2  =  10.0
```

check if the string is palindrome or not:

[3]:
```
print("sanjitha")
d=input("enter your string:")
if("string==string[::-1]"):
    print("the string is a palindrome")
else:
    print("the string is not a palindrome")
```

```
sanjitha
enter your string: hannah
the string is a palindrome
```

swapping of 2 numbers:

[6]:
```
x = 5
y = 10

x, y = y, x
print("x =", x)
print("y =", y)
```

```
x = 10
y = 5
```

```
sum is: 9
```

sum of 2 numbers using functions:

[5]:
```
print("sanjitha")
def sum(x,y):
    return x+y
a=int(input("enter the first number:"))
b=int(input("enter the second number:"))
c=sum(a,b)
print("sum of",a,"and",b,"is",c)
```

```
sanjitha
enter the first number: 5
enter the second number: 5
sum of 5 and 5 is 10
```

GCD of 2 numbers:

[5]:
```
num1 = 36
num2 = 60
gcd = 1

for i in range(1, min(num1, num2)):
    if num1 % i == 0 and num2 % i == 0:
        gcd = i
print("GCD of", num1, "and", num2, "is", gcd)
```

```
GCD of 36 and 60 is 12
```

Markdown

JupyterLab

reverse a number in string:

[8]:
```
num = 1234
reversed_num = 0

while num != 0:
    digit = num % 10
    reversed_num = reversed_num * 10 + digit
    num //= 10

print("Reversed Number: " + str(reversed_num))
```

```
Reversed Number: 4321
```

guess number using random:

Markdown

[4]:
```
print("sanjitha")
x = 5
y = 10

# To take inputs from the user
#x = input('Enter value of x: ')
#y = input('Enter value of y: ')

# create a temporary variable and swap the values
temp = x
x = y
y = temp

print('The value of x after swapping: {}'.format(x))
print('The value of y after swapping: {}'.format(y))
```

```
sanjitha
The value of x after swapping: 10
The value of y after swapping: 5
```

check if the number is even or odd:

[1]:
```
print("sanjitha")
a=int(input("enter a number:"))
if(a%2==0):
   print("even")
else:
  print("odd")
```

```
sanjitha
enter a number: 4
even
```

check if number is positive or negative:

maximum of 2 numbers:

[6]:
```
print("sanjitha")
a=int(input("enter the first number:"))
b=int(input("enter the second number:"))
if (a>=b):
    print("a is maximum:")
else:
    print("b is maximum:")
```

```
sanjitha
enter the first number: 4
enter the second number: 5
b is maximum:
```

program to generate fibonacci sequence length:

[8]:
```
print("sanjitha")
n=int(input("enter the fibonacci sequence length:"))
a =  0
b = 1
if n<=0:
    print("not possible")
elif n==1:
    print("a")
elif n>=2:
    print("the fibonacci series with",n,"term is : ")
print(a,b,end="  ")
for i in range(2,n):
   curterm=a+b
   print(curterm,end="   ")
   a=b
   b=curterm
```

```
sanjitha
enter the fibonacci sequence length: 10
the fibonacci series with 10 term is :
0 1  1   2   3   5   8   13   21   34
```

check if number is positive or negative:

[2]:
```
print("sanjitha")
a=int(input("enter a number:"))
if a>0:
    print("it is positive\n")
elif a<0:
    print("it is negative\n")
else:
    print("it is zero\n")
```

```
sanjitha
enter a number: 5
it is positive
```

```
Reversed Number: 4321
```

guess number usimg random:

[3]:

```python
import random

num = random.randint(1, 10)
guess = None

while guess != num:
    guess = input("guess a number between 1 and 10: ")
    guess = int(guess)

    if guess == num:
        print("congratulations! you won!")
        break
    else:
        print("nope, sorry. try again!")
```

```
guess a number between 1 and 10:  9
nope, sorry. try again!
guess a number between 1 and 10:  10
nope, sorry. try again!
guess a number between 1 and 10:  1
nope, sorry. try again!
guess a number between 1 and 10:  8
```

sum of 2 numbers:

[9]:
```
 print("sanjitha")
a=int(input('enter the first number:'))
b=int(input('enter the second number:'))
sum=a+b
print('sum is:',sum)
```

```
sanjitha
enter the first number: 6
enter the second number: 3
sum is: 9
```