

DAY-1 PROGRAMS

DATE: 06/06/2024

1) Fibonacci Series

```
def fibonacci(n):
    if n==0:
        return 0
    elif n==1:
        return 1
    else:
        return (fibonacci(n-1)+fibonacci(n-2))
n=9
for i in range(1,n+1):
    print(fibonacci(i))
```

2) Armstrong number or not

```
def amstrong(n):
    temp=n
    sum=0
    while temp>0:
        d=temp%10
        sum+=d**3
        temp=temp//10
    return sum==n
n=153
if sum==n:
    print("armstrong")
else:
    print("Not a armstrong number")
```

3) GCD of two numbers

```
def gcd(a,b):
    if b==0:
        return a
    else:
        return gcd(b,a%b)
a=48
b=18
print(gcd(a,b))
```

4) Largest element of an array.

```
a=[1,2,3,4,5]
print(max(a))
```

5) Factorial of a number using recursion.

```
def fact(n):
    if n==0:
        return 1
    else:
        return n*fact(n-1)
n=4
print(fact(n))
```

6) Copy one string to another using recursion.

```
def copy_string(src, dest=""):
    if src=="":
        return dest
    else:
        return copy_string(src[1:], dest + src[0])
source="Hello,World!"
destination=copy_string(source)
print("Source string:", source)
print("Destination string:",destination)
```

7) Reverse of a string using recursion.

```
def string(str):
    k=str[::-1]
    return k
str='deepthi'
print(string(str))
```

8) Prime numbers

```
def CheckPrime(i,num):
    if num==i:
        return 0
    else:
        if(num%i==0):
            return 1
        else:
            return CheckPrime(i+1,num)
n=10
```

```
for i in range(2,n+1):
    if(CheckPrime(2,i)==0):
        print(i)
```

9) Check prime or not.

```
def prime(n,i=2):
    if n==2:
        return True
    elif n%i==0:
        return False
    return prime(n,i+1)
n=10
if prime(n):
    print(n,"is prime number")
else:
    print(n,"is not prime number")
```

10) Check palindrome or not.

```
def pal(n):
    return str(n)==str(n)[::-1]
n='121'
if pal(n):
    print(n,"palindrome")
else:
    print(n,"notpalindrome")
```