DAY 1 PROGRAMS

DATE: 06-06-2024

1.Fibonacci series

```
def fib(n):
    if n==0:
        return 0
    elif n==1:
        return 1
    else:
        return fib(n-1)+fib(n-2)
n=8
for i in range(0,n+1):
    print(fib(i))
```

2.Armstrong number

```
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("is not")
```

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.Maximum number

```
array=[23,45,23,23,56]
print(max(array))
```

5. Factorial

Factorial of a number

```
def fact(n):
    if n==0:
        return 1
    else:
        return n*fact(n-1)
n=5
print(fact(n))
```

6.Reverse of a number

```
def rev(s):
    s1=s[::-1]
    return s1
s='vasavi'
print(rev(s))
```

7.Print 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)
```

8. 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")
```

9.Palindrome or not

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

10. Copy strings

```
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)
```