

wrezzw9v7

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Python Programming - 2301CS404

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Lab - 3

1 for and while loop

1.0.1 01) WAP to print 1 to 10.

```
[2]: for i in range(1,11):  
      print(i)
```

```
1  
2  
3  
4  
5  
6  
7  
8  
9  
10
```

1.0.2 02) WAP to print 1 to n.

```
[4]: n=int(input("enter n"));  
      for i in range(1,n+1):  
          print(i);
```

```
enter n 5
```

```
1  
2  
3  
4  
5
```

1.0.3 03) WAP to print odd numbers between 1 to n.

```
[5]: n=int(input("enter n"));  
for i in range(1,n+1):  
    if(i%2!=0):  
        print(i);
```

enter n 10

1
3
5
7
9

1.0.4 04) WAP to print numbers between two given numbers which is divisible by 2 but not divisible by 3.

```
[6]: n1=int(input("enter n1"));  
n2=int(input("enter n2"));  
while(n1!=n2):  
    if(n1%2==0 and n1%3!=0):  
        print(n1);  
    n1+=1;
```

enter n1 5
enter n2 10

8

1.0.5 05) WAP to print sum of 1 to n numbers.

```
[10]: n=int(input("enter n"));  
sum=0;  
for i in range (1,n+1):  
    sum=sum+i;  
print(sum);
```

enter n 5

15

1.0.6 06) WAP to print sum of series $1 + 4 + 9 + 16 + 25 + 36 + \dots n$.

```
[11]: n=int(input("enter n"));  
sum=0;  
for i in range (1,n+1):  
    ans=i*i;  
    sum=sum+ans;
```

```
print(sum);
```

enter n 5

55

1.0.7 07) WAP to print sum of series $1 - 2 + 3 - 4 + 5 - 6 + 7 \dots n$.

```
[17]: n=int(input("enter n"));
sum=0;
for i in range (1,n+1):
    if(i%2==0):
        sum=sum-i;
    else:
        sum=sum+i;
print(sum);
```

enter n 4

-2

1.0.8 08) WAP to print multiplication table of given number.

```
[20]: n=int(input("enter n"));
for i in range(1,11):
    print(f'{n} * {i} = {n*i}');
```

enter n 5

5 * 1 = 5

5 * 2 = 10

5 * 3 = 15

5 * 4 = 20

5 * 5 = 25

5 * 6 = 30

5 * 7 = 35

5 * 8 = 40

5 * 9 = 45

5 * 10 = 50

1.0.9 09) WAP to find factorial of the given number.

```
[22]: n=int(input("enter n"));
ans=1;

for i in range(1,n+1):
    ans=ans*i;
print(ans)
```

enter n 5

120

1.0.10 10) WAP to find factors of the given number.

```
[24]: n=int(input("enter n"));
      for i in range(1,n+1):
          if(n%i==0):
              print(i)
```

enter n 6

1
2
3
6

1.0.11 11) WAP to find whether the given number is prime or not.

```
[60]: n=int(input("enter n"));
      flag=True;
      for i in range(2,n):
          if(n%i==0):
              flag=False;
              print('number is not prime');
              break
      if(flag==True):
          print('number is prime');
```

enter n 5

number is prime

1.0.12 12) WAP to print sum of digits of given number.

```
[37]: n=int(input("enter n"));
      ans=0;
      while(n!=0):
          temp=n%10
          ans=ans+temp;
          n=n//10;
      print(ans)
```

enter n 123

6

1.0.13 13) WAP to check whether the given number is palindrome or not

```
[42]: n=int(input("enter n"));
number=n;
ans=0;
while(n!=0):
    temp=n%10
    ans=ans*10+temp;
    n=n//10;
if(ans==number):
    print('palindrome');
else:
    print('not palindrome');
```

enter n 121

palindrome

1.0.14 14) WAP to print GCD of given two numbers.

```
[46]: n1=int(input("enter n1"));
n2=int(input("enter n2"));
gcd=0;
for i in range(1,n2):
    if(n1%i==0 and n2%i==0):
        gcd=i;
print(gcd)
```

enter n1 6

enter n2 12

6

```
[58]: n=int(input("enter n1"));
for i in range(1,n+1):
    for j in range(1,i+1):
        print(i,end="");
    print();
```

enter n1 5

1

22

333

4444

55555

```
[21]: #extra
```

```

# #33333
# #32223
# #32123
# #32223
# #33333
n=int(input("enter n1"));
for i in range(1,n+1):
    for j in range(1,n+1):
        if(i==1 or i==n or j==1 or j==n):
            print(n,end="");
        elif(i==2 or i==n-1 or j==2 or j==n-1):
            print(n-1,end="");
        elif(i == 3 or i == n - 2 or j == 3 or j == n - 2):
            print(n - 2, end="")
        elif(i==j):
            print(i,end="");
        else:
            pass

    print();
# n = int(input("Enter n: "))
# for i in range(1, n + 1):
#     for j in range(1, n + 1):
#         if(i == 1 or i == n or j == 1 or j == n):
#             print(n, end="") # Print n on the borders
#         elif(i == 2 or i == n - 1 or j == 2 or j == n - 1):
#             print(n - 1, end="") # Print n-1 on the second layer
#         ;# Leave the center empty or adjust for other patterns
#     print()

```

enter n1 5

```

55555
54445
54345
54445
55555

```

[]: