

Problem solving 2

Quiz

```
for i in range(10, -1, -3):  
    print(i, end = ',')
```

10,7,4,1,

```
for i in range(10, -1, -3):  
    if i == 1:  
        print(i, end = '')  
    else:  
        print(i, end=',')
```

10,7,4,1

Problem 1: Print the following numbers

1, 3, 5, 7, 9, 11

```
for i in range(1, 12, 2):  
    print(i, end=" ")
```

1 3 5 7 9 11

Problem 2: Print the following numbers:

1, 4, 7, 10, 13, 16

AP

```
for i in range(1, 17, 3):  
    print(i, end=" ")
```

1 4 7 10 13 16

Problem 3: Print the following numbers:

1, 3, 6, 10, 15, 21

step?

```
i = 1
```

```
step = 2
```

```
while i <= 21:
    print(i, end=" ")
    i += step
    step += 1
```

1 3 6 10 15 21

```
i = 1
```

```
while i <= 5:
    i += 1
    print(i)
```

2

3

4

5

6

continue, break and pass

Problem 2

Write a program that continually asks the user to enter a number until they enter a number 5. At this point the program should print how many numbers the user has entered. You may assume the user will only enter numbers.

shall we break?

```
count = 0
while True:
    n = int(input())
    count += 1
    if n == 5:
        break

print("count is:", count)
```

1
2
5

count is: 3

```
if True:
    print("Rahul")
```

Rahul

Show using for loop as well

```
for i in range(10):
    if i == 5:
        break
    print("something")
    print(i, end=" ")
```

0 1 2 3 4

will break work for if as well

```
for i in range(6):
    if i == 3:
        continue
    print(i, end=" ")
    print("something")
```

0 something
1 something
2 something

```
4 something
5 something
```

```
for i in range(10):
    if i == 5:
        pass
    print(i, end=" ")
```

```
0 1 2 3 4 5 6 7 8 9
```

Problem 3:

Given a number N, check if it is prime

```
n = int(input())
factor = 0
for i in range(1, n+1):
    if n % i == 0:
        factor += 1
```

```
if factor == 2:
    print("Prime")
    print(factor)
else:
    print("Not prime")
    print(factor)
```

```
10
```

```
Not prime
```

```
4
```

```
n = int(input())
```

```
for i in range(2, n):    # numbers from 2 to n-1
    if n % i == 0:
        print("Not prime")
        break
```

```
    else:
        print("Prime")
```

9

Prime

Not prime

```
n = int(input())
```

```
flag = True
for i in range(2, n):    # numbers from 2 to n-1
    if n % i == 0:
        flag = False
        print("Not prime")
        break
```

```
if flag == True:
    print("prime")
```

1

prime

```
n = int(input())
```

```
flag = True
for i in range(2, n):    # numbers from 2 to n-1
    if n % i == 0:
        flag = False
        print("Not prime")
        break
```

```
if flag == True and n > 1:
    print("prime")
```

```
else:
    print("Not prime")
```

4

Not prime

Not prime

For else

```
n = int(input())
```

```
for i in range(2, n):    # numbers from 2 to n-1
    if n % i == 0:
```

```
        print("Not prime")
        break
else:
    if n > 1:
        print("Prime")
    else:
        print("Not prime")
```

2

Prime