UE18CS101:
INTRODUCTION TO COMPUTING USING

Department of Computer Science and Engineering
PES UNIVERSITY

Lecture 11

Problem Solving using selection and looping

Display 1 2 4 8 ... until n

Reverse a given number

```python
n = int(input("enter an integer : "))
rev = 0
while n :
        rev = rev * 10 + n % 10
        n //= 10
print("reverse number : ", rev)
```

```
# check whether given two strings are same
a = input("enter string 1  ")
b = input("enter string 2  ")
#if a = b :
#assignment is not an expr  #print("equal")
if a == b :
        print("equal")
else:   print("not equal")
```

```
# compare two strings; find the order of the given strings.
a = input("enter string 1 : ")
b = input("enter string 2 : ")
if a == b :
        print("equal")
if a < b :
        print(a , " before ", b)
if a > b :
        print(a, " after ", b)
```

```python
if a == b :
        print("equal")
elif a < b :
        print(a , " before ", b)
# elif : not required here
#elif a > b :
else:
        print(a, " after ", b)
```

```python
# dangling else problem#   two if and single else
#           else is paired with the if based on indentation
a = int(input())
b = int(input())
c = int(input())
if a == b :
        if b == c :
                print("nooru")
else:  # paired with the outer if; control reaches here if a not equal to b  print("innoru")
if a == b :
        if b == c :
                print("munnuru")
        else: # paired with the inner if; control reaches here if a equals b and b is not equal to c
        print("naanuru")
```

find all factors of a given number

factors can vary from 1 to n

algorithm:

#get n

factor <- 1

while factor <= n do

if factor is a factor of n

display the factor# increment factor

```python
n = int(input("enter an integer : "))
f = 1
while f <= n :
        if n % f == 0 :
                print(f, end = " ")
        f = f +  1  # f += 1
print()
```