

Infinite Loop - break - continue - pass

- Infinite loop is a loop that goes on, which never stops such type of loop is called infinite loop
- The following example is of infinite loop

//This while loop never stops, you need to keep on giving input and it generated results it never stops

```
while True:
    n = int(input('Enter a number'))
    if n > 0:
        print('Positive')
    else:
        print('Negative')
```

```
Enter a number-2
Negative
Enter a number-4
Negative
Enter a number12
Positive
```

- To stop such infinite loop we can use **break** statement
- A break statement will stop the loop then and there
- A break statement can be used in other loop situations as well apart from infinite loop
- The below example shows the use of break statement

```

while True:
    n = int(input('Enter a number'))
    if n > 0:
        print('Positive')
    elif n < 0:
        print('Negative')
    else:
        break;

```

```

Enter a number-3
Negative
Enter a number0
Process finished with exit code 0

```

- **Continue** means it'll not execute the rest of the loop it'll simply go to beginning of the loop and continue its execution lets understand this with an example

```

count = 0
while count < 10:
    n = int(input('Enter a number'))
    if n % 3 == 0:
        continue
    print(n)
    count += 1

```

```

Enter a number1
1
Enter a number2
2
Enter a number3
Enter a number4
4
Enter a number

```

- Continue is used for logical design

- **Pass** - In some cases when you don't have to do anything use them just pass the it
- Pass means nothing to do
- In python when you write a block of code you must write something if there's nothing to write , then simply write pass statement.

```
count = 0

while count < 10:
    n = int(input('Enter a number'))
    if n % 3 == 0:
        pass
    else:
        print(n)
    count += 1
```

```
Enter a number2
2
Enter a number3
Enter a number4
4
Enter a number5
5
Enter a number6|
```