


A blue parallelogram and a light green parallelogram are positioned in the top-left corner of the slide. The blue shape is partially behind the green one. Both shapes are tilted diagonally. The background of the slide is dark blue with faint, lighter blue diagonal stripes.

# Day 2 with Python:)

# What you did till now ?

- Used python shell
- You were able to execute at most one statement once
- Write once and get once
- Let's start writing a program in python



- 
- Open terminal(ctrl+alt+t)
  - try typing gedit
  - Write your python code
    - Eg :-
  - Save it with “.py” extension
  - Open your terminal and type python3  
<filename >
  - You finally did it .



# Comparison Operators

*Comparison operators* compare two values and evaluate down to a single Boolean value.



# Python comparison operators

“==”

Is Equal to(!!!!)

“!=”

Not equal to

“<”

Less than

“>”

Greater than

“<=”

Less than or equal



# Indentation

It's simply the space you give for each statement from left most point in the file which you use inside a loop or condition where you structure them.



## Blocks of Code

Statements in Python code can be grouped together in *blocks*. You can tell when a block begins and ends from the indentation of the lines of code. There are three rules for blocks.



## Blocks of Code

1. Blocks begin when the indentation increases.
2. Blocks can contain other blocks.
3. Blocks end when the indentation decreases to zero or to a containing block indentation.





## Block 1

Statement1

Statement2

Statement3

.

..

.,.

.....

## Block 2

S...1

S...2

S...3

.

..

.....

.....



To make them separate

Statement1

Statement2

Statement3

S...1

S...2

S...3

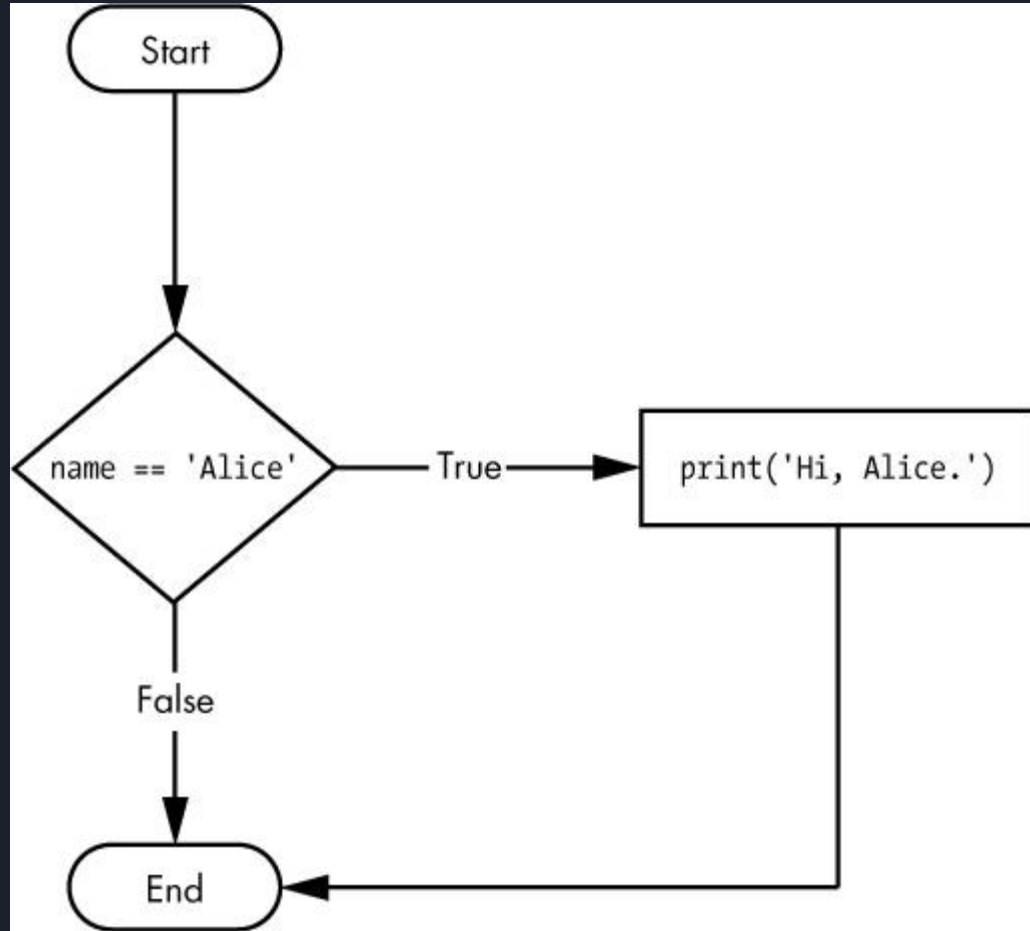
# Conditional Statements : The If, Else and the Elif .....





# If,else...

Syntax:  
if (Condition):  
 Statement  
else:  
 Statement



# Bahubali and Devasena:



Bahubali and devasena together are shooting arrows. Lets see if its possible or not.

It is possible to shoot the arrows if it is a even number of arrows.

Otherwise its not possible to shoot the arrows.



## Task 1 : Who is taller?

Problem : You will be given two integers, heights of two best friends. Find who is taller.

Input : A 160

B 180

Output : B



# Boolean Operators

The three Boolean operators (and, or, and not) are used to compare Boolean values. Like comparison operators, they evaluate these expressions down to a Boolean value.



# Elements of Flow Control

**Condition** → **Clause**

**Condition** : The Boolean expressions you've seen so far could all be considered conditions.

**Clause** : Some basic blocks of code.





Task 2 : Who is taller?(Yes, Again)

Problem : You will be given three integers, heights of three best friends. Find who is tallest.

Input : A 160

B 140

C 150

Output : A



## Task 3 : The Proposal.....

So, it's graduation and our dear Eeshwar is in search of his girl who opted ASE. As it is hard to find her he seeks your help. If you find her give her the rose, If not convey your regards to Eeshwar. So, Are you all 's ready for the search..;)

Input : ASE

Output: Hey! Dear here's your rose..

Input : ASB

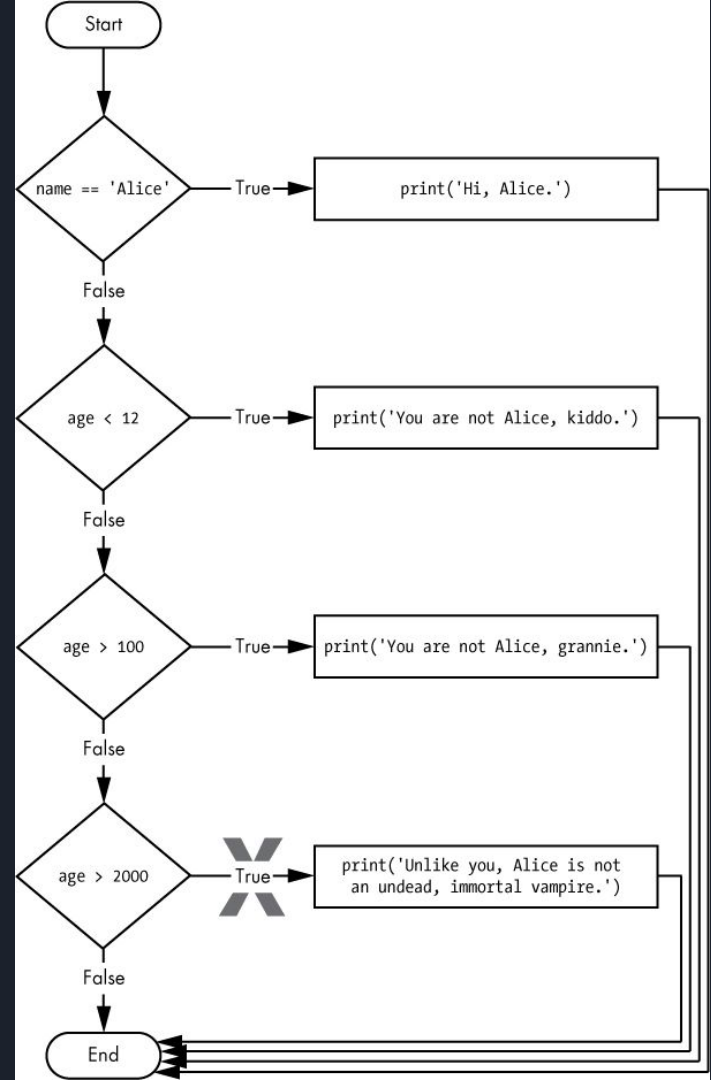
Output: Sorry!




## Elif.....

Syntax :

```
if(Condition):  
    Statement  
elif(Condition):  
    Statement  
else:  
    Statement
```





## Commenting your Python codes (Makes Life easy)

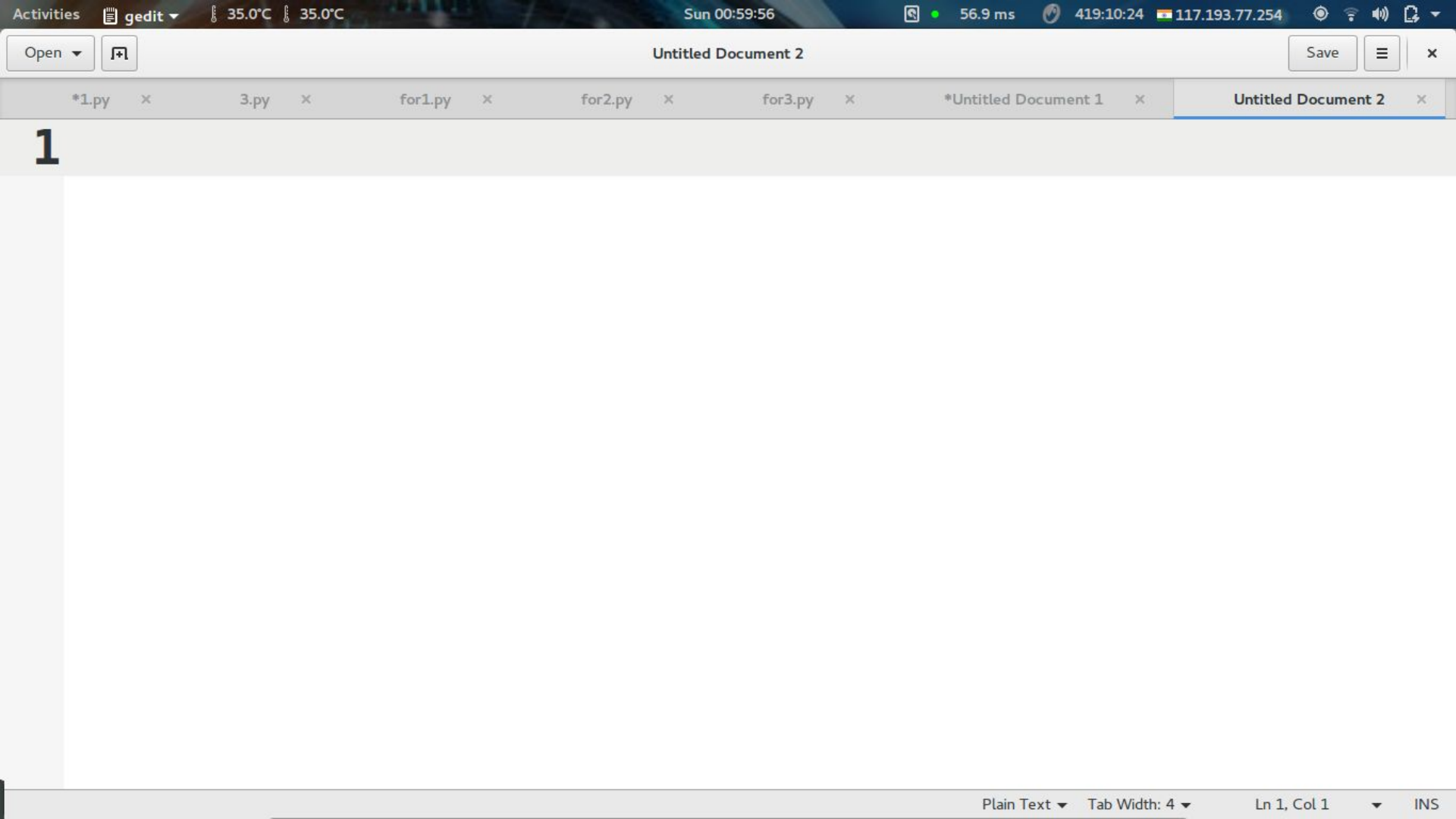
- Use :- It makes your code self - explanatory
- Single line comments
- Multiline comments

```
1#This code prompts the user for integer input
2a = int(input())
3if ( a > 100):
4    print("Dude! U cant have more than 100")
5elif( a > 80):
6    print("More than 80 are playing the battle")
7elif (a >50):
8    print("More than 50 are playing the battle")
9else:
10    print("only few are playing")
11
```

```
1 """ .....
2 ..... """
3 a = int(input())
4 if ( a > 100):
5     print("Dude! U cant have more than 100")
6 elif( a > 80):
7     print("More than 80 are playing the battle")
8 elif (a >50):
9     print("More than 50 are playing the battle")
10 else:
11     print("only few are playing")
12
```



Gedit preferences.



Open



Untitled Document 2

Save



\*1.py

3.py

for1.py

for2.py

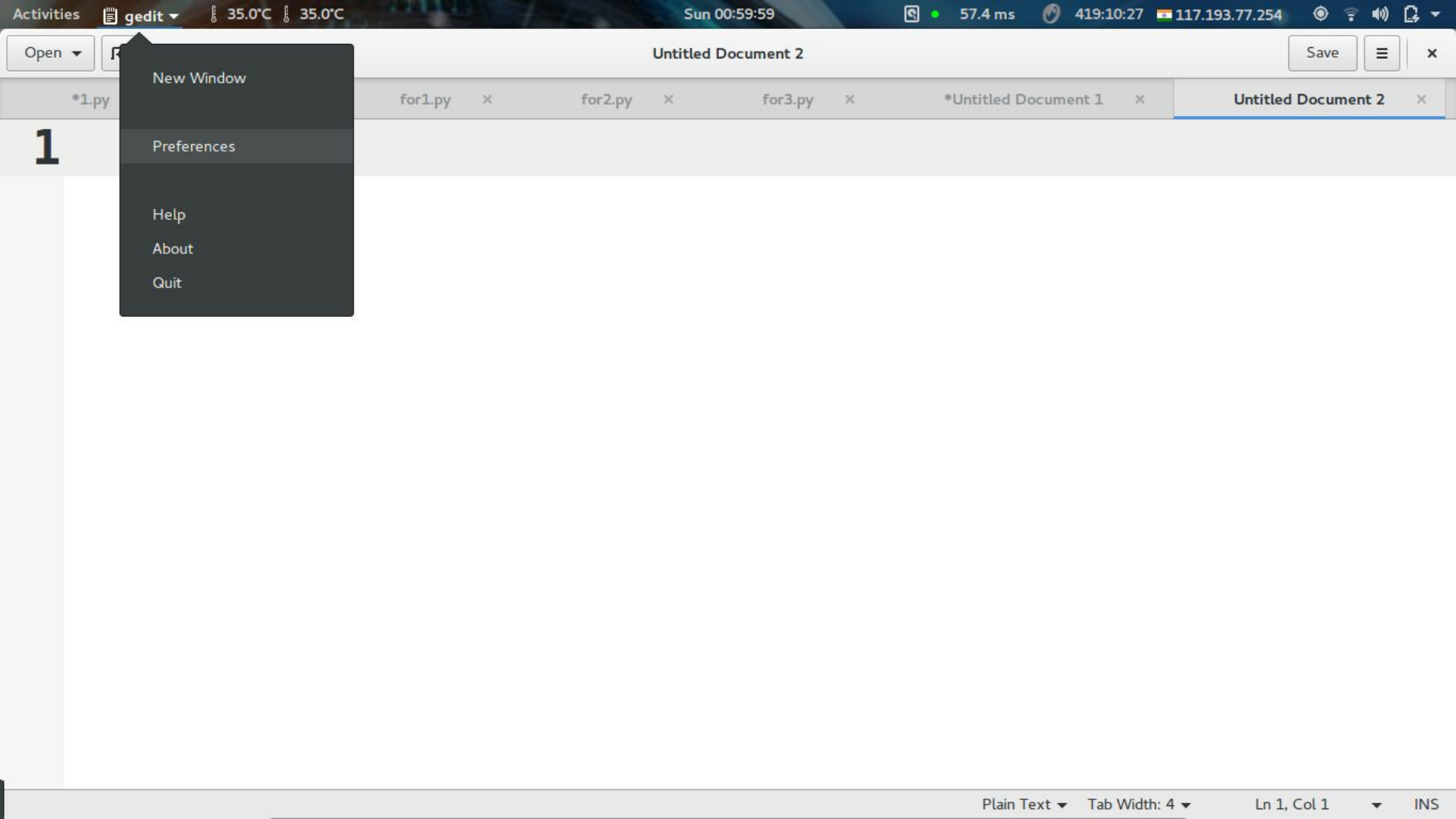
for3.py

\*Untitled Document 1

Untitled Document 2

1





New Window

Preferences

Help

About

Quit

1

Preferences

View Editor Font & Colors Plugins

☒ Display line numbers

☐ Display right margin at column: 80 - +

☒ Display statusbar

☐ Display overview map

☐ Display grid pattern

Text Wrapping

☒ Enable text wrapping

☒ Do not split words over two lines

Highlighting

☒ Highlight current line

☒ Highlight matching brackets

Let's start Day 3.

Let us start with Iron casting.






# Type Casting

`a = input()` and `a = int(input())` are different though if you give same input.

- If programmer don't specify the data type of `input()` by default it will be treated as a string.

- `a = float(input())`
- `a = bool(input())`
- `a = int(input())`
- `a = str(input( ))` same as `a=input( )`



You can try any or every possible combination you want but remember you will get errors in the following cases

- `int("a")`
- `float("a")`
- `str(12432325asz)`
- `bool(fsefsfs)` Why it is giving error?
- `bool(effggg5677)`

## If else

- Eg :- **if** ( a > b):  
    print("a is greater than b")  
**else:**  
    print("a is less than or equal to b")



Find whether a number is multiple of 2 or not.

Input : 16

Output: YES

Input: 3

Output: NO

Can you try coding the same question but this time in just ONE LINE of code?

**ARE YOU**

**KIDDING ME**

Hint: String slicing!

```
print("YNEOS"[ int(input())%2: :2])
```

Let us take the string

Y	N	E	O	S
0	1	2	3	4

“YNEOS”[0: :2]= “YES”

“YNEOS”[1: :2]= “NO”

```
1 #include <stdio.h>
2 #include <string.h>
3 #include <math.h>
4 #include <stdlib.h>
5 int main()
6 {
7     int n,p,x,y;
8     char c[100];
9     scanf("%d\n",&n);
10    for(int i=0;i<n;i++)
11    {
12        scanf("%100[^\n]\n",c);
13        p=strlen(c);
14        for(int j=0;j<=(p/2);j++)
15        {
16            x=2*j;
17            printf("%c",c[x]);
18        }
19        printf(" ");
20        for(int k=0;k<(p/2);k++)
21        {
22            y=(2*k)+1;
23            printf("%c",c[y]);
24        }
25        printf("\n");
26    }return 0;
27 }
```

```
1 ▼ for i in range(int(input())):  
2     k=input()  
3     print(k[0::2],k[1::2])
```

That's the beauty of coding in Python :)





PUBG

## Usage of if elif statements

Eg : - `a = int(input())`

`if ( a > 100):`

`print("Dude! U can't have more than 100")`

`elif( a > 80):`

`print("More than 80 are playing the battle")`

`elif (a >50):`

`print("More than 50 are playing the battle")`

`else:`

`print("Only few are playing")`

How many of you got this error?

```
1 a = input()
2 if ( a > 100):
3     print("Dude! U cant have more than 100")
4 elif( a > 80):
5     print("More than 80 are playing the battle")
6 elif (a >50):
7     print("More than 50 are playing the battle")
8 else:
9     print("only few are playing")
```

```
krishna@krishna-Lenovo-ideapad-320-15IKB:~/python-w
orkshop$ python3 ifelif.py
101
Traceback (most recent call last):
  File "ifelif.py", line 2, in <module>
    if ( a > 100):
TypeError: unorderable types: str() > int()
krishna@krishna-Lenovo-ideapad-320-15IKB:~/python-w
orkshop$
```



aditya561

Winner Winner Chicken Dinner!!

Last Enemy: aditya561

EliteShayan

Ranking #1 Kill 7 Player

Reward 670

EXP 715

Total Rating +56

Survival Rating +43

Kill Rating +68

#1 / 100

Classic (TPP) - Solo - Erangel



Medals

4 >

PLAYERUNKNOWN'S  
**BATTLEGROUNDS**  
MOBILE



Continue

Share

## Usage of if else statements

Eg : - `a = int(input())`

`if ( a > 100):`

`print("Dude! U can't have more than 100")`

`if( a > 80):`

`print("More than 80 are playing the battle")`

`if (a >50):`

`print("More than 50 are playing the battle")`

`else:`

`print("Only few are playing")`

```
krishna@krishna-Lenovo-ideapad-320-15IKB:~/python-workshop$ python3 ifelif.py
101
Dude! U cant have more than 100
More than 80 are playing the battle
More than 50 are playing the battle
krishna@krishna-Lenovo-ideapad-320-15IKB:~/python-workshop$
```

```
krishna@krishna-Lenovo-ideapad-320-15IKB:~/python-workshop$ python3 ifelif.py
101
Dude! U cant have more than 100
krishna@krishna-Lenovo-ideapad-320-15IKB:~/python-workshop$
```

Let us try to find a square of a number.

You have to take the input from the user  
and print the square of it.

Input: 5

Output: 25



Let us try printing squares of first 3 positive numbers.

As we all know 1,4,9 are the squares of first 3 positive numbers.

So how do we do that, Simple right?

Probably you will do,

```
print(1*1)
```

```
print(2*2)
```

```
print(3*3)
```

Or Maybe in this way also it is fine.

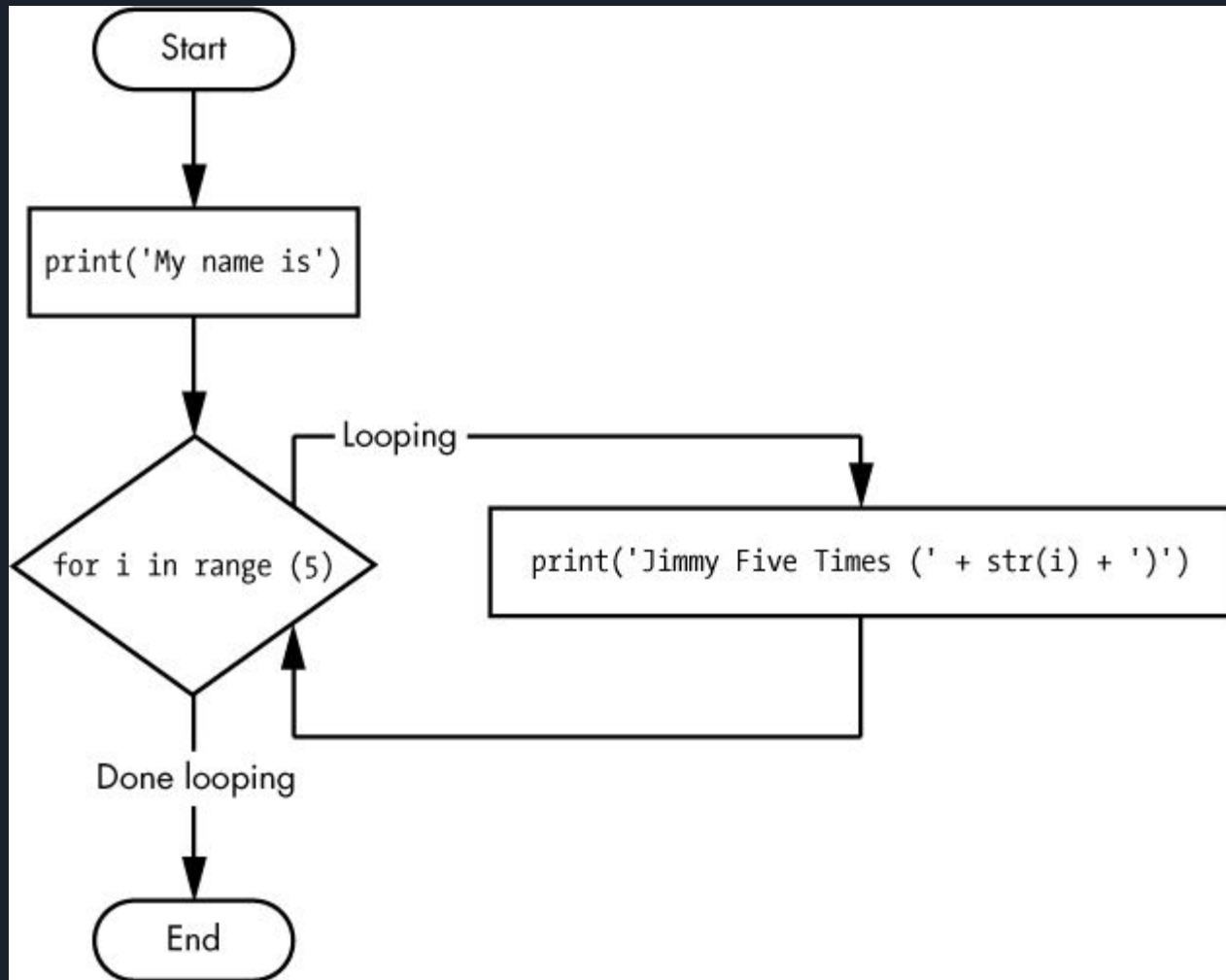
```
print(1**2)
```

```
print(2**2)
```

```
print(3**2)
```

What if I ask you to print first 100 squares?

- You may think like printing each of them i.e
  - `print(1**2)`
  - `print(2**2)`
  - `print(3**2)`
  - `print(4**2)`
  - ...
  - ...
  - ...
  - `print(100**2)`





For.....

Syntax: for <variable> in (“range”):  
Statement

```
1#For loop syntax == 1
2for i in range(10):
3    print(i)
4
```





For.....

Syntax: `for <variable> in range(start,end):`  
Statement

```
1#for loop syntax == 2
2for i in range(10,20):
3    print(i)
```



# For.....

Syntax: for <variable> in range(start,end,updation):  
Statement

```
1 #for loop syntax == 3
2 for i in range(10,20,10):
3     print(i)
4
```

## Task 5 : The Freshers day...

As a part of Freshers Day our Ritwik is now in welcome committee. He has to welcome all n number of guests. As you know, Ritwik is busy in some other business ;), He asks for your help....

Input: 5 ----- (i.e n=5)

Output: Welcome!!

Welcome!!

....

Welcome!!

(5 times)



You can come across a situation  
where you don't know how many  
times you have to iterate

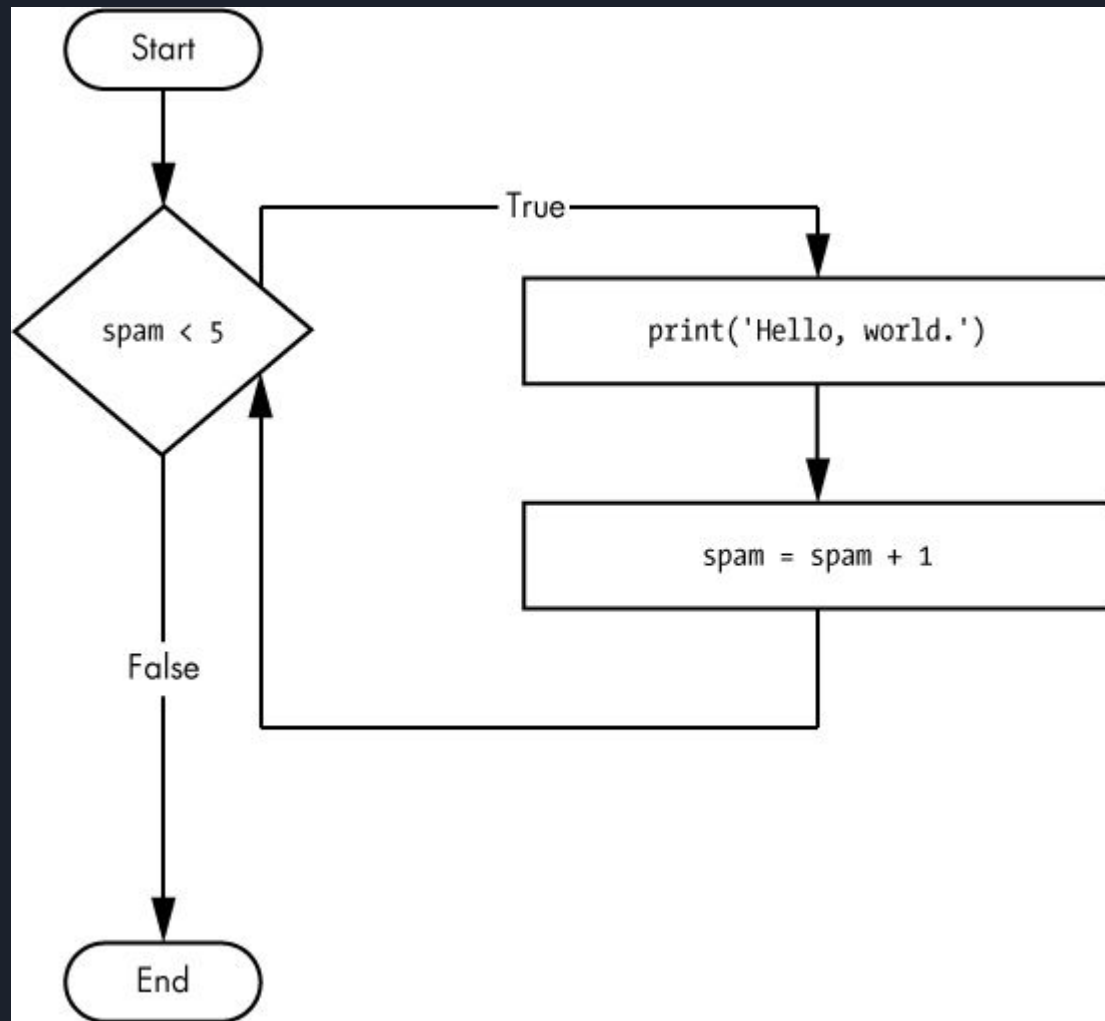
A decorative graphic in the top-left corner consisting of two overlapping diagonal shapes, one blue and one light green.

**SO YOU'RE TELLING ME**

**THERE'S A CHANCE**

# While.....

Syntax:  
while("Condition"):  
Statement  
Iterator





```
1 i=1
2 while( i <= 100):
3     print(i*i)
4     i=i+1
5
```



Task 6 : Dhoni....Finishes off in a style.

Amit is a fan of MS Dhoni, He is watching a match(India vs Pakistan). Dhoni is on strike, every time dhoni hits a boundary Amit screams out “Mahi Mahi”. This continued till Dhoni is not out.If Dhoni hits 0. He is considered to be out and Amit says “Oh no!!”

Input: 4

Output: Mahi Mahi



Input : 6

Output : Mahi Mahi

Input : 6

Output : Mahi Mahi

Input : 0

Output: "Oh no!"

## Task 7: Bhanu's Roses

Bhanumati received some  $n$  roses from many people with their names written on the roses. So, Bhanumati has to count how many roses were given by Bhanu's. Help her out.

Input: 5

Venu

Abhinav

Bhanu

Krishnan

Bhanu

Output: 2