

Cmpe 150 Lab 4: If-Else

Last Week

- Our code always starts from the beginning and executes each instruction in all cases.
- Our focus for today: Run some parts of our code only if some conditions that we define are satisfied.

If Statement

- The syntax for if (Again be careful with indentation)
- if <logical expression>:

code line 1

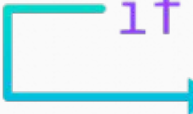
code line 2

code line 3

Condition is True

```
number = 10
```

```
if number > 0:  
    # code
```




```
# code after if
```

Condition is False

```
number = -5
```

```
if number > 0:  
    # code
```



```
# code after if
```

Remember:

Very Commonly Used Logical Operators

- == (Is equal)
- != (Is not equal)
- > (Is greater than)
- >= (Is greater than or equal)
- < (Is less than)
- <= (Is less than or equal)
- Also we can connect them using “and”, “or”, “not”
- For instance, number plate (plaka)
 - (number_plate < 82) and (number_plate > 0) and (not number_plate == 34)

Example

- `number = int(input())`
- `if number < 0:`
 `print('You entered a negative number, be careful')`

If-Else Statement

- if <logical expression>:

code line 1

code line 2

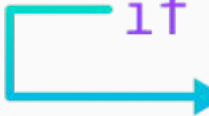
else:

code line 3

code line 4

Condition is True

number = 10




```
if number > 0:  
    # code
```

```
else:  
    # code
```

code after if

Condition is False

number = -5



```
if number > 0:  
    # code
```

```
else:  
    # code
```

code after if

Example

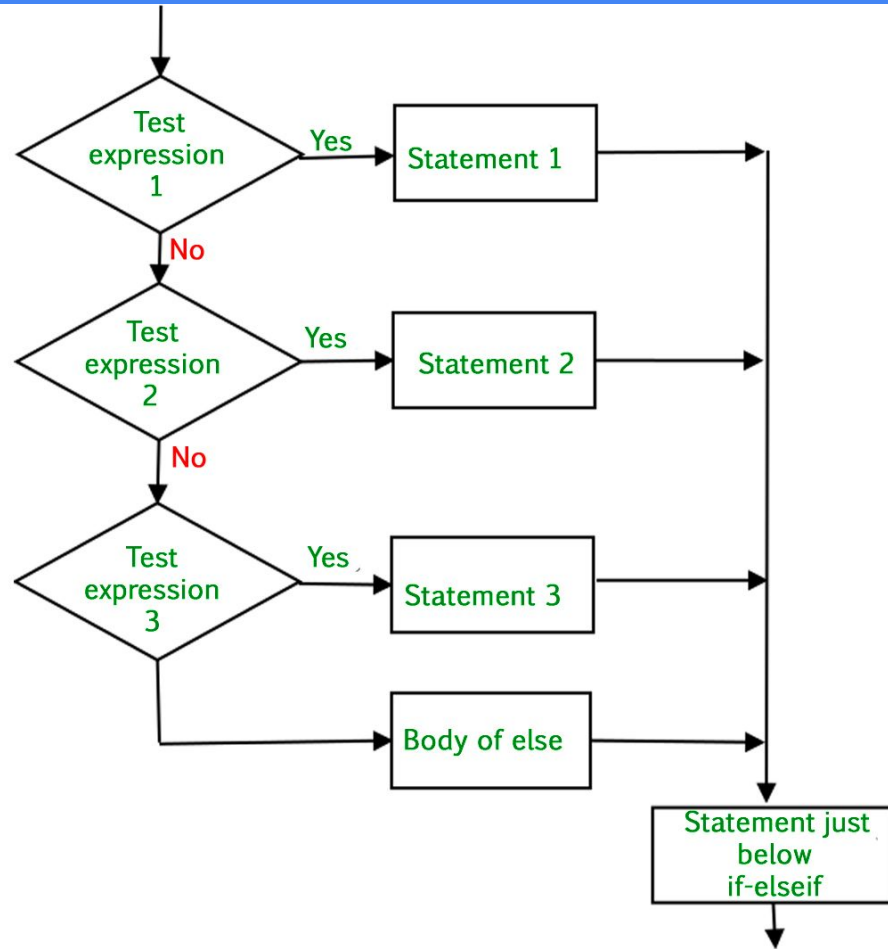
- `number = int(input())`
- `if number % 2 == 1:`
 `print('You entered an odd number')`
`else:`
 `print('You entered an even number')`

Else If-> Elif Statement

- if <logical expression>:
 code line 1
elif <logical expression>:
 code line 2
else:
 code line 3

Example: We can use multiple Elif's

- `time_as_hour = int(input())`
- `if time_as_hour < 11:`
 `print('Good morning')`
`elif time_as_hour < 17:`
 `print('Good afternoon')`
`elif time_as_hour < 24:`
 `print('Good evening')`



Nested If Statements

- It is also possible to use if-elif-else inside another if-elif-else just like nested for loops.
- if a > b:
 if a > c:
 print(a)
 else:
 print(c)

Thanks

Any questions?

References

1. https://www.programiz.com/python-programming/if-elif-else#google_vignette
2. <https://www.geeksforgeeks.org/python-if-else/>