

Conditional Statements

Conditional statements (also called conditionals or if-statements) look at a condition and use it to decide whether or not to execute a group of statements. In the simplest implementation, a condition is used to “turn on” or “turn off” a group of statements.

#You are going to comment the code!!! At each #, write down what each step does after you try it out!

```
# STEP1 :
```

```
number_donuts = int(input("How many donuts do you want? "))
```

```
# STEP2:
```

```
less_than_half_dozen = number_donuts < 6
```

```
# STEP3:
```

```
print("Mmmmm...eating", number_donuts, "donut(s) sounds yummy.")
```

```
# STEP4:
```

```
if less_than_half_dozen:
    print("You know you are not getting the best value.")
    print("If you get a half-dozen or more, you get a discount.")
    print("You know what sounds even better?", number_donuts*2,
          "donuts.")
```

QUESTIONS:

What happens if less_than_half_dozen = 2?

What happens if less_than_half_dozen = 9?

What happens if less_than_half_dozen = 6? Why?

If-else statements:

The next-simplest implementation involves executing one group of statements if a condition is True and an alternative group if it is False. The keyword else tells Python which statements to execute if the initial condition is not met. Comment out your previous code and enter the code below.

```
##Uses if-else to run one group of statements or another
number = int(input("Enter an integer: "))
even_number = number%2==0;

if even_number:
    print(number, "is even.")
    print("Is", number, "also divisible by 4?", number%4==0)
else:
    print(number, "is odd.")
    print("Is", number, "also divisible by 3?", number%3==0)
    print("What a great number.")
```

QUESTIONS:

What is the output when the number is 12?

What is the output when the number is 17?

If-elif

Using the keyword `elif` in your `if`-statement makes it possible to check a variety of conditions in deciding which group of statements to run.

```
##Uses if-elif to sort through coffee possibilities
```

```
cream = "yes";  
sugar = "yes";  
  
if (cream == "no" and sugar == "no"):  
    preference = "black";  
elif (cream == "no" and sugar == "yes"):  
    preference = "sweet";  
elif (cream == "yes" and sugar == "no"):  
    preference = "white";  
else:  
    preference = "regular";  
print("You like your coffee " + preference);
```

What happens if cream is 'yes' and sugar is 'yes'?

Change to cream = 'no' and sugar to 'yes'? What's the result?

Answer the question before you try it out: What would happen if you changed sugar to 'no' and cream to 'yes'?

Answer the question before you try it out: What would happen if cream = "YES" and sugar = "no"?