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Day 3 RPA Master Bootcamp

What are Control Flow

In Python, there are three forms of the if...else statement.

if statement

if...else statement

if...elif...else statement

1. Python if statement

The syntax of if statement in Python is:

```
if condition:
   # body of if statement
```

The if statement evaluates condition.

If condition is evaluated to True, the code inside the body of if is executed.

If condition is evaluated to False, the code inside the body of if is skipped.

Example 1: Python if Statement

```
number = 10

# check if number is greater than 0
if number > 0:
    print('Number is positive.')

print('The if statement is easy')
```

2. Python if...else Statement

An if statement can have an optional else clause.

The syntax of if...else statement is:

```
if condition:
    # block of code if condition is True

else:
    # block of code if condition is False
```

The if...else statement evaluates the given condition:

If the condition evaluates to True,

the code inside if is executed

the code inside else is skipped

If the condition evaluates to False,

the code inside else is executed

the code inside if is skipped

Example 2. Python if...else Statement

```
number = 10

if number > 0:
    print('Positive number')

else:
    print('Negative number')
```

```
print('This statement is always executed')
```

3. Python if...elif...else Statement

The `if...else` statement is used to execute a block of code among two alternatives.

However, if we need to make a choice between more than two alternatives, then we use the `if...elif...else` statement.

The syntax of the `if...elif...else` statement is:

```
if condition1:
    # code block 1

elif condition2:
    # code block 2

else:
    # code block 3
```

Example 3: Python if...elif...else Statement

```
number = 0

if number > 0:
    print("Positive number")

elif number == 0:
    print('Zero')
else:
    print('Negative number')
```

```
print('This statement is always executed')
```

Python Nested if statements

We can also use an if statement inside of an if statement. This is known as a nested if statement.

The syntax of nested if statement is:

```
# outer if statement
if condition1:
    # statement(s)

    # inner if statement
    if condition2:
        # statement(s)
```

```
# Example of using an if-else statement for
grocery shopping

# Your budget for buying groceries
budget = 50

# Prices of your favorite fruits
apple_price = 2
banana_price = 3
orange_price = 4

# Number of fruits you want to buy
apples_needed = 5
bananas_needed = 3
```

```
oranges_needed = 2

# Calculate the total cost of buying your
favorite fruits
total_cost = (apple_price * apples_needed) +
(banana_price * bananas_needed) +
(orange_price * oranges_needed)

# Use an if-else statement to make the
decision
if total_cost <= budget:
    print("You can buy your favorite
fruits!")
    print(f"Total cost: ${total_cost}")
else:
    print("You need to choose cheaper
alternatives.")
    print(f"Total cost: ${total_cost}")
    print(f"Remaining budget: ${budget -
total_cost}")
```

Practice

```
# Control Flow
# if
# el if
# else

# Loops
```

```
# If
num = 10

# if condition

if num > 5 and num == 10:
    print("Number is greater then 5")
    if num == 10:
        print("Number is equal to 2")
    else:
        print("Number is not equal to 2")
else:
    print("Number is less than 5")

# how to use multiple if else statement
if num < 5:
    print("Number is greater then 5")

elif num == 10:
    print("Number is equal to 10")
else:
    print(" Number is less than 5")

# Buy Fruits

print(" Assignment Buy Fruits ")
budget = 50

apple_price = 5
banana_price = 10
oranges_price = 20
```

```
apple_needed = 2
banana_needed_ = 1
oranges_needed = 3

total_cost = (apple_price * apple_needed) +
(banana_price * banana_needed_) +
(oranges_price * oranges_needed)

print("total_cost ", total_cost)

apple_cost = apple_price * apple_needed
banana_cost = banana_price * banana_needed_
orange_cost = oranges_price * oranges_needed

if apple_cost < budget:
    print("I can buy needed apples")

total_cost = apple_cost + banana_cost +
orange_cost
print(total_cost)

if total_cost < budget:
    print("yes we can buy apple and banana
and oranges")
else:
    print(" total cost is greater then
budget ")

# if total_cost < budget:
#     print(" Total is less than budget")
# else:
```

```
#     print("Total cost is greater than
budget")


is_true = True

if is_true:
    print("value if true")
else:
    print("value is false")
```