

KEY CONCEPTS:

1. We create separate branches in code or make decisions using the `if...` Statement

The general format format for the statement is as follows:

```
if condition:  
    statement 1  
    statement 2
```

Example:

```
length = 30  
breadth = 30  
if length == breadth:  
    print("Length and breadth are equal")
```

Things to pay attention to:

- a. There is a colon sign (`:`) after the condition statement
 - b. You need to insert a tab (or 4 spaces) to indent the statements that will be executed if the condition is true
 - c. When testing for equality, you need TWO equal signs `==`
2. OPTIONALLY, you can test for multiple conditions one after the other by using the `elif` clause.

The general format format for the statement is as follows:

```
if condition1:  
    statement 1  
    statement 2  
elif condition2:  
    statement 3  
    statement 4
```

Here if `condition1` is true, statements 1 and 2 will be run. IF the `condition1` is false, then `condition2` will be tested, and if that is true, the next code block (statements 3 and 4) will run

Example:

```
length = 30
breadth = 30
if length != breadth:
    print("Length and breadth are not equal")
elif length == breadth:
    print("Length and breadth are equal")
```

Things to pay attention to:

- a. There is a colon sign (:) after the condition2
 - b. You need to insert a tab (or 4 spaces) to indent the statements that will be executed if the condition is true
 - c. When testing for inequality, we use !=
3. OPTIONALLY, you can have a set of statements executed if NONE of the conditions are true using the `else` clause.

The general format format for the statement is as follows:

```
if condition1:
    statement 1
    statement 2
elif condition2:
    statement 3
    statement 4
else:
    statement 5
```

Here if NONE of the tested conditions are true, statement 5 will be run.

Example:

```
length = 30
breadth = 30
if length > breadth:
    print("Length is greater than breadth")
elif length == breadth:
    print("Length and breadth are equal")
else:
    print("Breadth is greater than length")
```

Note, There is a colon sign (:) after `else`

HOMEWORK:

No homework for this week.