Challenging topic in Intro to core concepts of computer science

Loops and for loops

A for loop is used for iterating over a sequence (that is, either a list, a tuple, a dictionary, a set, or a string), for example, for x in "banana": print(x).

For loops are mostly used to iterate a known number of times, while loops are used when the number of times is not known.

A **break** statement can be used to end loops prematurely.

```
fruits = ["apple", "banana", "cherry"]

for x in fruits:

  print(x)

  if x == "banana":

    Break
```

A **continue** statement is used to stop the loop at the current location and continue to the next item in the loop

```
fruits = ["apple", "banana", "cherry"]

for x in fruits:

  if x == "banana":

    continue

  print(x) .
```

The **range()** function defaults to increment the sequence by 1, however, it is possible to specify the increment value by adding a third parameter: range(2, 30, 3):

for x in range(2, 30, 3):

print(x)

A nested loop repeats what its in the loop a number of times

Eg

```
def printnums(x,y):
    for h in range(y):
        print("We made it here!")
        for i in range(x):
            print("We made it here!")


printnums(5, 3)
```