

Iteration tasks: while

Task 1 - Fin

Write a program that uses `while` to repeatedly ask someone to input their name. Each time a name is entered, the program should respond *xxx is a nice name* where `xxx` actually says the name they input.

The program ends when the name "Fin" is entered, e.g.

```
Enter a name: Harry
Harry is a nice name
Enter a name: Erik
Erik is a nice name
Enter a name: Fin
Fin is a nice name
```

Task 2 - Print individual letters in a string

Write a program that in the first line stores the letters "ABCDEFG" into a variable. Use a `while` loop, a count variable and the `len()` function to print each letter in the string, one after another, until there are no more letters to print.

Check your program still works without any other changes when you change the string in the first line to "ABCDEFGHIJK"

Task 3 - Countdown

Write a program that prints a countdown from 5 to 1 and then the words "lift off!"

Task 4 - Ask me again

Write a program that asks the user to enter a number between 1 and 10 which is the number of times we are going to repeat for. The program should then ask if you like programming. If the user enters 'y' the program prints "I like programming too!", otherwise it prints nothing. It should keep doing this until it has asked the question as many times as the user originally chose.

```
How many times do you want to repeat?2
Do you like programming? y
I like programming too!
Do you like programming? y
I like programming too!
```

Task 5 - Times table

Write a program that prints out the 7 times table using a while loop.

```
1 x 7 = 7
2 x 7 = 14
3 x 7 = 21
4 x 7 = 28
...
11 x 7 = 77
12 x 7 = 84
```



Task 6 - Building up

Modify the program in task two, so that it first prints A, then AB, then ABC, then ABCD and so on.

Task 7 - User Input

Modify the program you wrote in task 6 so that instead of using the same string every time, the user is asked to enter a string and the program then prints the first letter of that string, then the first two, the first three and so on until eventually the whole string is printed out, e.g.

```
Enter a string: Computer Science
C
Co
Com
Comp
Compu
...
Computer Science
```

Task 8 - User Input

Modify the program you wrote in task 7 so that instead of continuing to the end of the string, the user is asked how many characters into the string e.g.

```
Enter a string: Computer Science
Enter how many characters: 8
C
Co
Com
Comp
Compu
Comput
Compute
Computer
```

Check that your program does not cause an error if the number of characters entered is bigger than the length of the string (e.g. try "Computer Science" and 17)

