Command Line Exercises

Temperature Convert

The Fahrenheit to Celsius conversion formula is:

```
Tc = (Tf - 32) / 1.8
```

where 'Tc' is the temperature in Celsius, and 'Tf' is the temperature in Fahrenheit

The Celsius to Fahrenheit conversion formula is:

```
Tf = Tc * 1.8 + 32
```

Write a command line program which prompts a user to enter a temperature, and whether its in degrees (C)elsius or (F)arenheit. Convert the temperature to the opposite degrees, and display the old and new temperatures to the console.

```
Please enter the temperature: 58 <br/>
Is the temperature in (C)elcius, or (F)arenheit? F <br/>
58F is 14C.
```

Linear Convert

Write a program that converts meters to feet and vice-versa.

The foot to meter conversion formula is:

```
m = f * 0.3048
```

The meter to foot conversion formula is:

```
f = m * 3.2808399
```

Write a command line program which prompts a user to enter a length, and whether the measurement is in (m)eters or (f)eet. Convert the length to the opposite measurement, and display the old and new measurements to the console.

```
Please enter the length: 58
Is the measurement in (m)eter, or (f)eet? f
58f is 17m.
```

Fibonacci

The Fibonacci numbers are the integers in the following sequence:

```
0, 1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89, 144, ...
```

By definition, the first two numbers in the Fibonacci sequence are 0 and 1, and each subsequent number is the sum of the previous two.

Write a command line program which prompts the user for an integer value and display the Fibonacci sequence leading up to that number.

```
Please enter the Fibonacci number: 25

0, 1, 1, 2, 3, 5, 8, 13, 21
```

Decimal to Binary

Write a command line program which prompts the user for a series of decimal integer values
and displays each decimal value as itself and its binary equivalent

```
Please enter in a series of decimal values (separated by spaces): 460 8218 1 31313 987654321

460 in binary is 111001100
8218 in binary is 10000000011010
1 in binary is 1
31313 in binary is 111101001010001
987654321 in binary is 111010110111100110100010110001
```