Temperature conversion

COMP 102

Victoria University of Wellington

Temperature conversion program

- Task: Write a temperature conversion program
- Step 1: Specification: what is it supposed to do?
  - Write a program that will let the user do two things:
    - print out the conversion formula
    - let user enter temperature in Fahrenheit, and print out in Celsius.
- Step 2: Design:
  - For print action:
    - Print the formula on the window
  - For calculate action:
    - Ask user for the Fahrenheit value to be converted
    - Calculate Celsius value out of given value: (F-32.0)*5.0/9.0
    - Print out the answer

Designing the Java program

Step 3: Editing

- Need to write this design in the Java language, using BlueJ

  ➔ Need an ***object*** : a "temperature calculator"
  - all actions must be performed on some object

  ➔ Need a ***class*** to describe the object

  ➔ The class needs a name

  ➔ The class needs to specify the two actions its objects can do

  ➔ Define ***methods*** to do things.

  ➔ Give names to the methods

  ➔ specify what the methods will do

Compiling and Running

Step 4: Compiling

- If there are syntax errors (invalid Java)
  then the compiler will complain and list all the errors
  - ⇒ read the error message to work out what's wrong
  - ⇒ fixing syntax errors until it compiles without complaint
    - BlueJ makes this process easier

Step 5: Running and Testing

- Must run the program and test it on lots of different input.
  - BlueJ makes it easy to run individual methods.