

## Lab 2.1.3 Some actual evaluations - converting measurement systems

### Objectives

Familiarize the student with:

- finding information useful to solving typical problems;
- implementing a simple conversational interface;
- constructing branched, multifunctional code;
- preparing clearly formatted output.

### Scenario

Among the many measurement systems available, two seem to be the most widespread: metric and imperial. To make things simpler, we assume that the first one uses the "meter" as its only unit (expressed as a real number), while the second uses the "foot" (always an integer) and the "inch" (a real number).

Your task is to write a simple "measurement converter". We want it to perform the following actions:

- ask the user which system she/he uses to input data; we assume that 0 means "metric" and 1 means "imperial";
- depending on the user's answer, ask either for meters or feet and inches;
- output the distance in proper (different) units: either in feet and inches or in meters;
- a result outputted as metric should look like **123.4m**;
- a result outputted as imperial should look like **12'3.5"**.

Look at the code below – it's only a template. Use it to implement the whole converter.

Make your code smart – it shouldn't be fooled by stupid or unreasonable inputs.

Test your code using the data we've provided.

```
#include <iostream>

using namespace std;

int main(void) {
    int sys;
    float m, ft, in;

    // Insert your code here

    return 0;
}
```

### Example input

```
0
1
```

### Example output

```
3'3.37008"
```

### Example input

```
1
3
3.37008
```

### Example output

1m

### Example input

0  
0.0254

### Example output

0'1"

### Example input

1  
0  
1

### Example output

0.0254m