## Exercise 1

### Everyone should be able to write this program

Write a simple program in Python that reads the weight, height and body built of an athlete.

The weight is given in kilograms; The height is given in centimetres; The body built as either athletic or slim

Take the height and subtract 100.

Compare the remainder to the weight as numbers

For a male person

If the weight is higher than the remainder of the height, then the person is overweight

Print this on screen

If the weight is equal to the remainder of the height, then check the body build

If the body type is athletic then the weight is normal

If the body type is slim then the person is overweight

In either case, print the outcome on screen

If the weight is lower than the remainder of the height, follow the matrix below

| WEIGHT/HEIGHT REM | 85% | 75% | 65% OR LESS |
|---|---|---|---|
| BODY TYPE - ATHLETIC<br>CONDITION | FINE | BORDERLINE | UNDERWEIGHT |
| BODY TYPE – SLIM<br>CONDITION | SLIGHTLY OVER | BORDERLINE | FINE |

In each case print the outcome on screen.

## Exercise 2

You should have studied your notes on searching and sorting first

Taking the principles of the above program

Consider the list of personal data below. Implement a program in Python that will allow you to sort the data into the following five categories in the order they appear here - Overweight, Slightly Over, Fine Borderline, Underweight.

| **PERSON** | F01 | F02 | M11 | M14 | M17 | M01 | F12 | F05 | F14 |
|---|---|---|---|---|---|---|---|---|---|
| **WEIGHT** | 79 | 85 | 72 | 88 | 90 | 76 | 55 | 48 | 52 |
| **HEIGHT** | 167 | 198 | 180 | 168 | 211 | 184 | 170 | 160 | 172 |
| **BODY TYPE** | ATHLETIC | ATHLETIC | ATHLETIC | ATHLETIC | SLIM | SLIM | SLIM | SLIM | SLIM |

F – DENOTES FEMALE

M – DENOTES MALE

For females the table given for exercise 1 is adapted as below

| WEIGHT/HEIGHT REM | 75% | 65% | 55% OR LESS |
|---|---|---|---|
| BODY TYPE - ATHLETIC | FINE | BORDERLINE | UNDERWEIGHT |
| CONDITION | | | |
| BODY TYPE – SLIM | SLIGHTLY OVER | BORDERLINE | FINE |
| CONDITION | | | |

As a further condition try splitting the original table into two one for Male and one for Female

Print the output on screen