

## **2c Control Structure Repetitive**

Q1: Write a program that reads 15 temperatures in degrees Fahrenheit from a weather station. Use a loop to convert each Fahrenheit temperature into Celsius and display the converted temperatures on the screen. After all 15 temperatures have been processed, display the message "All temperatures processed" on the screen. Use any type of loop structure in your program.

(Note: The formula for converting Fahrenheit to Celsius is  $C = (F - 32) * 5/9$ .)

Q2: Write a program that reads the names and exam scores of students using an appropriate loop structure. The program should calculate the class average and print it at the end of the report. The exam scores range from 0 to 100. The last record in the input contains a blank name and a score of 999, which should not be included in the calculation of the class average.

Q3: Write a program that uses a nested if structure to prompt the user for a student's assignment marks, test marks, and exam marks. The program will proceed step by step, only checking the value of the next assessment component if the previous assessment is passed. The program should display a message for each assessment component indicating whether it has been fulfilled or not. Note that the passing marks for the assignment, test, and exam are 25, 25, and 50 respectively. You should use sentinel-controlled loop, break and continue in your program.

Use the following sample input and output:

Sample Input/Output:

Enter your assignment marks: 34

Enter your test marks: 25

Enter your exam marks: 70

Congratulations, you have passed the module!

Enter your assignment marks: 23

Please redo the assignment.

Enter your assignment marks: 30

Enter your test marks: 23

Please resit the test.

Enter your assignment marks: 35

Enter your test marks: 30

Enter your exam marks: 45

Please resit the exam.