Lab Three

ID1303: Introduction to Programming

1. Write a program to accept three integers from the user and print them in increasing order.

2. Accept an English letter from the user and an integer n; shift the letter by n. For example, if the character is 'a' and $n = 3$, the output is 'd'. If the character is 'x' and $n = 5$, the output is 'c'.

3. Accept three integers d, m, y (for date, month, year respectively) and find the day of the week corresponding to that date; assume that the year is between 2000 and 2100. If any of the input values is incorrect, output an appropriate message. HINTS: Jan 1, 2000 is a Saturday. Use a switch-case operator to print the day of the week. *Optional:* Rewrite your program by replacing the integer values using enum type.

4. Write a program to accept three pairs $(x_1, y_1), (x_2, y_2), (x_3, y_3)$ of real numbers from the user, each describing a point on the plane and do the following.

   (i) Check if they are collinear.

   (ii) *Optional:* If they are not collinear, find the area of the triangle described the points, and find the three angles in the triangle (use appropriate functions from math.h for arcsin/arccos).