Assignment 2

Flow Control

1. Write a code to classify an input character as a lower-case letter, an upper-case letter, a digit, or a special symbol. The ASCII codes for different characters are given in **Table. 1**.

   Input: a character
   Display: its classification.

Characters	ASCII
A-Z	65-90
a-z	97-122
0-9	48-57
Special Symbols	0-47, 58-64, 91-96, 123-127

Table. 1. Characters ASCII codes.

2. Write a code to determine whether a point lies inside a circle or not. Given, the circle radius and the coordinates of its center. If the point lies outside the circle, the user is asked to input another point. (**Hint**: use **pow()** and **sqrt()** functions).

   Input: circle radius, circle center coordinates, a point.

   Display: Point lies outside the circle (input another point), Point lies within the circle.

3. Write a code to decode a message from a spy using **Switch-Case**. The message is encoded according to **Table. 2**. The input is the digit the spy transmitted, and the output of the program is the decoded message.

   Input: Message code
   Display: Decoded message

Code	Decoded message
0	The enemies are about to attack.
1	The enemies are summoning new forces.
2	The enemies are withdrawing their forces.

Table. 2. Message decoding table.