C# Programming: Practical 9

**Question 1**: Write a Program using a SWITCH Statement, which reads a single digit from the user and displays its value as a word. For example, an input of 5 will display the word ‘Five’ on screen.

**Question 2**: Write a Program using a SWITCH Statement, which reads a value between 1 and 7. Display the day of the week corresponding to the number entered, e.g. 1 = Monday, 2 = Tuesday, etc.

If the user types a number outside of the specified range, an appropriate error message should be displayed on screen.

**Question 3**: Write a Program using a SWITCH Statement that will prompt the user to enter a grade and will display the appropriate message depending on the grade entered.

|  |  |
| --- | --- |
| **Grade** | **Message** |
| A | Excellent Student. |
| B | Good Student. |
| C or D | Fair Student. |
| E or F | Poor Student. |
| Any Other Value | Invalid Grade. |

**Question 4**: Update the code from Question 3 to cover the user entering Grades in either UPPERCASE text or LOWERCASE text.

|  |  |
| --- | --- |
| **Grade** | **Message** |
| A or a | Excellent Student. |
| B or b | Good Student. |
| C or c or D or d | Fair Student. |
| E or e or F or f | Poor Student. |
| Any Other Value | Invalid Grade. |

**Question 5**: Using the knowledge you gained from answering Question 4, write a Program using a SWITCH Statement that will prompt the user to enter one character, *i.e. A, a, … Z, z, etc*. and which will then display whether or not the character entered is a vowel or not.

* NOTE: You can use either the String or char Data Types.
* Vowels: A, E, I, O, U.

**Question 6**: Re-attempt Question 1, but this time answer the question using IF Statements (as well as ELSE-IF and ELSE Statements if you deem them necessary). Compare the answer to Question 1 with the answer to Question 6.

**Question 7**: Re-attempt Question 2, but this time answer the question using IF Statements (as well as ELSE-IF and ELSE Statements if you deem them necessary). Compare the answer to Question 1 with the answer to Question 7.

**Question 8**: Re-attempt Question 4, but this time answer the question using IF Statements (as well as ELSE-IF and ELSE Statements if you deem them necessary). Compare the answer to Question 1 with the answer to Question 8.

**Question 9**: Re-attempt Question 5, but this time answer the question using IF Statements (as well as ELSE-IF and ELSE Statements if you deem them necessary). Compare the answer to Question 1 with the answer to Question 8.

**Question 10**: Which do you prefer – the SWITCH Statement or the IF Statement?

**Question 11**: Write a Program (using both a SWITCH Statement and an IF Statement) that will display the following menu on screen:

Calculation Menu:

1. ADD
2. SUBTRACT

Please Enter Choice:

* The Program should enable the user to enter option 1 or option 2.
* After the user has selected option 1 or option 2, they should then be asked to enter to two numbers.
* If the user has chosen option 1, the Program should display the sum of the two numbers entered (no1 + no2).
* If the user has chosen option 2, the Program should display the difference of the two numbers entered (no2 – no1).
* If any other Value other than 1 or 2 is entered an error message should be display, *e.g. Incorrect Option Chosen*.

**Question 12**: Using a SWITCH Statement, write a Program that behaves like a basic calculator. The program should first ask the user to enter two numbers and then a Mathematical operator, *e.g. +, -, \*, /, %*. Based on the Mathematical operator entered, the Program should then carry out the specified calculation. Finally, the result of this calculation should be displayed on screen.

If an invalid Mathematical operator is entered, an appropriate error message should be displayed on screen.

**NOTE:** The SWITCH Statement should examine the operator entered and then carry out the math specified, *e.g. addition, multiplication, etc*.