

Select and submit one of the programs below.

### **Roman Numeral Converter**

Write a program that asks the user to enter a number within the range of 1-10. Use a switch statement to display the Roman numeral version of that number. Display an error message if the number entered is outside the range of 1-10.

### **Magic Dates**

Write a program that asks the user to enter a month, day, and two-digit year all in numeric format. The program should check to see if the month times the day is equal to the year. If so, the program should display a message stating that the date is magic. Otherwise, it should display a message stating that the date is not magic.

Ex. 6/10/60 is magic because  $6 * 10 = 60$                       2/21/17 is not magic because  $2 * 21 \neq 17$

Display an error message and abort the program if the month is not in the range 1-12 or the day is not in the range 1-31.

### **Book Club Points**

An online book club awards points to its customers based on the number of books purchased each month. Points are awarded as follows:

| Books Purchased | Points Earned |
|-----------------|---------------|
| 0               | 0             |
| 1               | 5             |
| 2               | 15            |
| 3               | 30            |
| 4 (or more)     | 60            |

Write a program that asks the user to enter the number of books purchased this month and then displays the number of points awarded.

### **Math Tutor**

Write a program that can be used as a math tutor for a young student. The program should display two random numbers between 10 and 50 that are to be added, such as:

$$\begin{array}{r} 24 \\ + 12 \\ \hline \end{array}$$

The program should wait for the student to enter an answer. If the answer is correct, a message of congratulations should be printed. If the answer is incorrect, a message should be printed showing the correct answer.