

CSci 111 - Computer Science I

Fall 2022

Closed Lab 5

Programming Activity

An **ISBN-10** (International Standard Book Number) consists of 10 digits: $d_1d_2d_3d_4d_5d_6d_7d_8d_9d_{10}$. The last digit, d_{10} , is a checksum, which is calculated from the other nine digits using the following formula: $d_{10} = (d_1 * 1 + d_2 * 2 + d_3 * 3 + d_4 * 4 + d_5 * 5 + d_6 * 6 + d_7 * 7 + d_8 * 8 + d_9 * 9) \% 11$

If the checksum is **10**, the last digit is denoted as **X** according to the ISBN-10 convention (check sample output below).

Write a program that prompts the user to enter the first 9 digits and displays the 10-digit ISBN. Your program should read the input (first 9 digits) as an integer.

How do you extract each individual digit? Remember the example we did in class?

In this lab, you can use either if statement **or** switch statement.

You can name your program **ISBN.java**

When done, **raise your hand** to let the TA know that you are ready to demonstrate your code for grading.

```
// import statement(s), class header, and main method header

// declare variables for the inputs and outputs

// prompt for inputs

// calculate d10

// display the output
```

Sample Output

```
Enter the first 9 digits of an ISBN as an integer: 113601267

The ISBN-10 number is 1136012672
>>
Enter the first 9 digits of an ISBN as an integer: 213031905

The ISBN-10 number is 213031905X
```