

Exercise 11: More on Overloading

Due Date:

- MW class: **Monday, October 19**, at the beginning of class.
- TTh class: **Tuesday, October 20**, at the beginning of class.

Turn in:

- Your project named **A250_E11_YourLastName_YourFirstName**

You may work on this exercise with another student. If you do, write **both names in the header**, but turn in **two copies** of the project, one with your name on the folder and the other with the other student's name on the folder.

Using the **ex_11_more_on_overloading** project, implement a class named **MyInteger** that has only one member variable, an **int**, and the necessary **accessor** and **mutator functions**. Overload the **subscript operator []** so that the index returns the digit in position **i**, where **i = 0** is the least-significant digit. If no such digit exists (could be a negative index or an index out of bound) then output an error message and return -1.

For example, if **x** is of type **MyInteger** and is set to **418**, then

x[0] should return 8
x[1] should return 1
x[2] should return 4

Consider the case when the index given is **negative** and when the index is **out of range**.

If you enter **418**, the generated output should be as follows (items **in red** are entered by the user):

```
Enter an integer: 418
Enter an index <-1 to quit>: 0
Digit at index 0 is 8
Enter an index <-1 to quit>: 1
Digit at index 1 is 1
Enter an index <-1 to quit>: 2
Digit at index 2 is 4
Enter an index <-1 to quit>: 3
Out of array bounds.
Enter an index <-1 to quit>: -2
There are not negative indices.
Enter an index <-1 to quit>: 4
Out of array bounds.
Enter an index <-1 to quit>: -1
Press any key to continue . . .
```