

## Practice Exercise #25: Making a Date

[http://www.comp.nus.edu.sg/~cs1020/4\\_misc/practice.html](http://www.comp.nus.edu.sg/~cs1020/4_misc/practice.html)

### Objective:

- Creating and throwing your own exceptions and handling exceptions.

### Task Statement

You are given an incomplete Java program consisting of the following files:

- `TestMyDate.java`
- `MyDate.java`
- `InvalidDateException.java`

You are to complete the program to read in three integers from the input (as the *year*, *month* and *day* of the date), create a `MyDate` object instance with the input integers and finally print the date.

In the `main()` method, you should use the `Scanner` method `nextInt()` to read the inputs, and handle the possible `InputMismatchException` thrown by the `nextInt()` method. Please refer to the Java API documentation of `java.util.Scanner` class for the possible exceptions that can be thrown by `Scanner`'s methods. Refer to the instructions in `TestMyDate.java` for more details on this task.

The *year*, *month* and *day* read from the input are then used as arguments to construct a `MyDate` object instance. The `MyDate` constructor should check the validity of the input parameters, and if any of them is not valid according to the condition specified in `MyDate.java`, an `InvalidDateException` must be thrown. `InvalidDateException` is not predefined in the Java library, so you have to define the class yourself in `InvalidDateException.java`.

The `main()` method must check for and handle `InvalidDateException` according to the instructions given in `TestMyDate.java`.

(Hint: In the `main()` method, you can use a `return` statement to terminate the program.)

### Sample Input #1

2015 2 8

### Sample Output #1

Enter the year, month and day (as integers):  
The date you entered is 2015-2-8.

**Sample Input #2**

2015 Feb 8

**Sample Output #2**

Enter the year, month and day (as integers):  
Invalid integer input.

**Sample Input #3**

-20 2 48

**Sample Output #3**

Enter the year, month and day (as integers):  
MyDate: Invalid date.

**Sample Input #4**

1900 2 29

**Sample Output #4**

Enter the year, month and day (as integers):  
MyDate: Invalid date.

**Sample Input #5**

2000 2 29

**Sample Output #5**

Enter the year, month and day (as integers):  
The date you entered is 2000-2-29.

**Sample Input #6**

1234 9 31

**Sample Output #6**

Enter the year, month and day (as integers):  
MyDate: Invalid date.