

# ReflectionLog: DigitExtractor

Youdis

## Num Class

```
package Mastery;

public class Num {
    //number variable which will store the integer the user enters
    private int number;
```

Declaring variable that will store the user's integer.

```
//constructor method to create num object with variable of number which equals the parameter needed to create object
public Num (int integer) {
    number = integer;
}
```

constructor method with a parameter. The number variable will be initialized with the value of the parameter the user enters.

```
//method returns the number variable
public int wholeNum() {
    return number;
}
```

wholeNum get/accessor method that will just return the integer.

```
// method returns ones place of number
public int onesPlace() {
    return number%10;
}
//method returns tens place of number
public int tensPlace() {
    return (number/10)%10;
}
// method returns hundreds place of number
public int hundredsPlace() {
    return (number/100)%10;
}
```

The ones, tens, hundreds place , get/accessor method will each return what their names say. The ones, tens, and hundreds place of the integer stored in the number variable.

## DigitExtractor

```
Scanner input = new Scanner(System.in);
System.out.print("Enter an integer: ");
Num number = new Num(input.nextInt());
```

Creating a scanner object. Prompting the user for an integer, then using that answer as the parameter to create a Num object.

```
// declaring variable for users choice on what to do with integer
String choice;
```

Creating a choice variable which will store users options on what to do with the number.

```
//while loop to let the user do multiple things with integer
while (true) {
    //prompting user with 5 choice on what to do with integer
    System.out.println("Show (W)hole number.");
    System.out.println("Show (O)nes place number.");
    System.out.println("Show (T)ens place number.");
    System.out.println("Show (H)undreds place number.");
    System.out.println("(Q)uit");

    System.out.print("Enter your choice: ");
    //recording users choice in choice variable
```

Then will prompt the user for 5 choices on to show the number they entered, the others to either show the ones, tens, or hundreds place of the number. Then will prompt user for their choice out of the 5 options on what to do. Is in a while loop so user can get prompted the choices again after they pick one.

```
//if they picked choice q then it will exit out of the while loop which then ends the program
if (choice.equals("q")) {
    break;
}
```

If user picks the fifth option of quit then will enter an if statement that will break out of the loop and end the program.

```
// if they picked choice W,O,T, or H then the corresponding action will run
switch (choice) {
    // choice W will output the whole integer
    case "w":System.out.println("your integer is " + number.wholeNum()); break;
    //choice O accesses method which outputs ones places of number
    case "o": System.out.println("The ones place digit is: " + number.onesPlace()); break;
    //choice T accesses method which outputs ten place of number
    case "t":System.out.println("The tens place digit is: " + number.tensPlace());break;
    //choice H accesses method which outputs hundreds place of number
    case "h":System.out.println("The hundreds place digit is: " + number.hundredsPlace()); break;
    //if user enters a choice that is not displayed then will tell user to try again
    default:System.out.println("You entered a invalid choice please try again");
```

If the user picks one of the four options then it will enter a switch case which will run the corresponding action to the option chosen by outputting the return values of the methods in Num class. If the user enters a character that is not an option they will be prompted with an error message to try again. After the option the user picks has run its course the loop will repeat letting the user pick again from the previous 5 options.