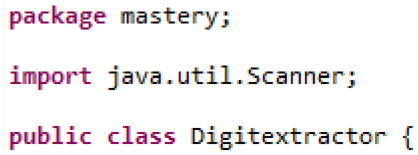
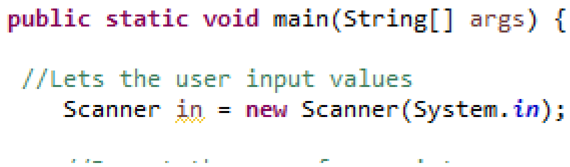
REFLECTION LOG



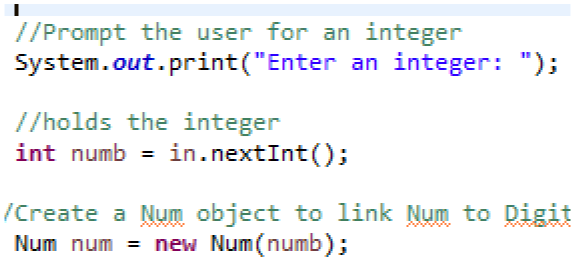
```
package mastery;

import java.util.Scanner;

public class Digitextractor {
```

Imports scanner and creates class



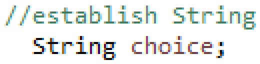
```
public static void main(String[] args) {

  //Lets the user input values
     Scanner in = new Scanner(System.in);
```

Creates new scanner object to record input



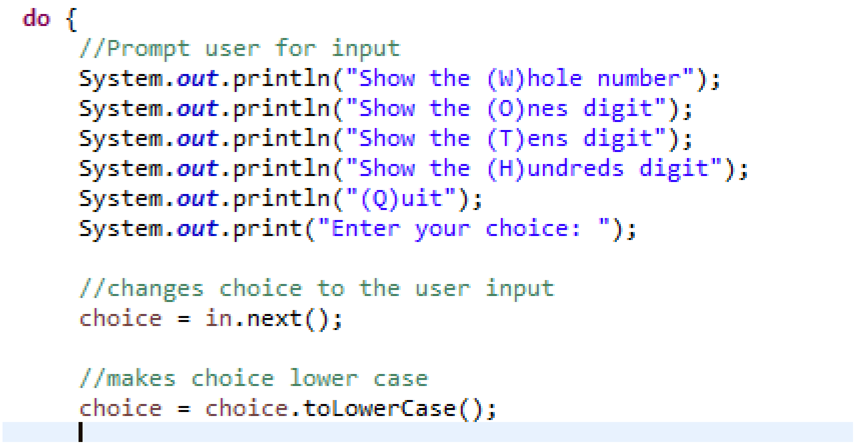
```
//Prompt the user for an integer
System.out.print("Enter an integer: ");

//holds the integer
int numb = in.nextInt();

/Create a Num object to link Num to Digit
Num num = new Num(numb);
```

Prompts user for input then puts that input into a variable
Connects Num to Digitextractor through the num variable and puts numb inside of num



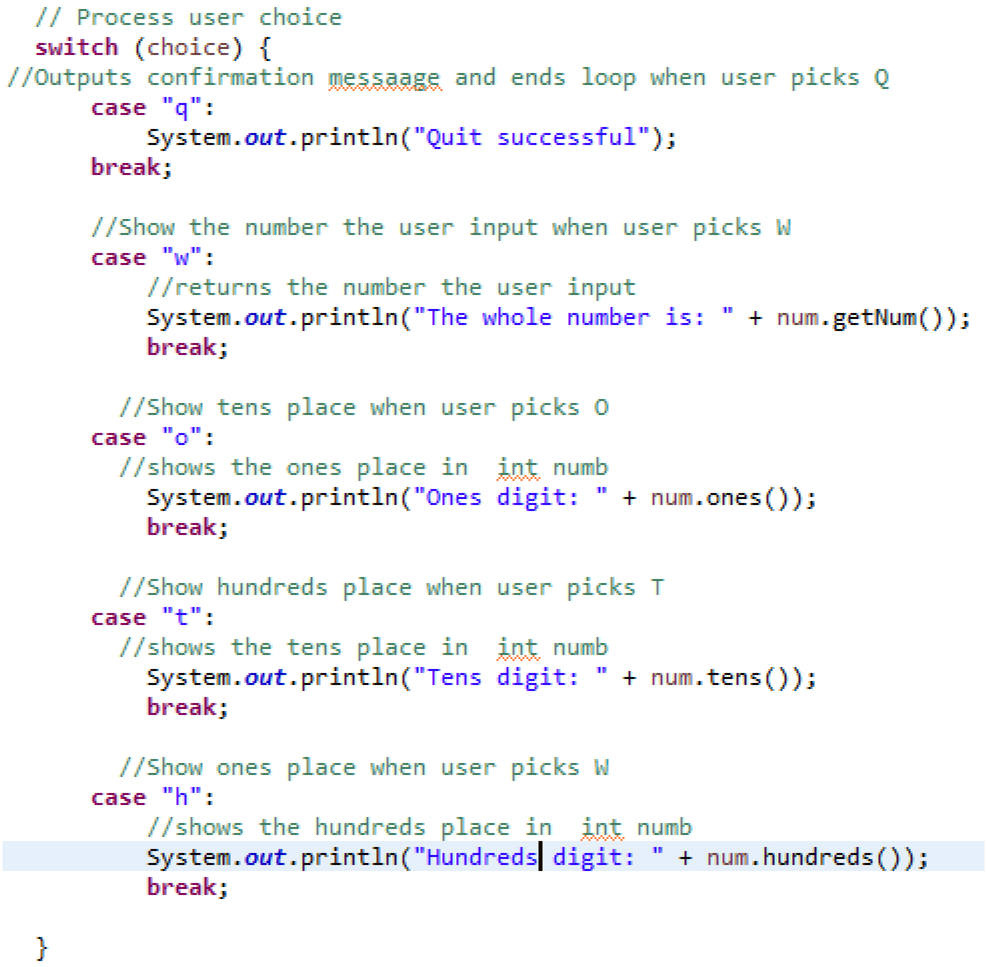
```
//establish String
  String choice;
```

Establish int choice outside of the do while loop to use to end the loop when needed



```
do {
    //Prompt user for input
    System.out.println("Show the (W)hole number");
    System.out.println("Show the (O)nes digit");
    System.out.println("Show the (T)ens digit");
    System.out.println("Show the (H)undreds digit");
    System.out.println("(Q)uit");
    System.out.print("Enter your choice: ");

    //changes choice to the user input
    choice = in.next();

    //makes choice lower case
    choice = choice.toLowerCase();
    
```

Do while loop to run code until user types “Q” into choice
Prompt user for input
Store user input into choice
Turns choice into lower case so that it works when user inputs upper and lower case inputs



```
  // Process user choice
  switch (choice) {
//Outputs confirmation messaage and ends loop when user picks Q
      case "q":
          System.out.println("Quit successful");
      break;

      //Show the number the user input when user picks W
      case "w":
          //returns the number the user input
          System.out.println("The whole number is: " + num.getNum());
          break;

        //Show tens place when user picks O
      case "o":
        //shows the ones place in  int numb
          System.out.println("Ones digit: " + num.ones());
          break;

        //Show hundreds place when user picks T
      case "t":
        //shows the tens place in  int numb
          System.out.println("Tens digit: " + num.tens());
          break;

        //Show ones place when user picks W
      case "h":
          //shows the hundreds place in  int numb
          System.out.println("Hundreds digit: " + num.hundreds());
          break;

  }
```

Uses switch case on choice to choose which method to run based off of the menu the user picked from. Switch case is inside the do while loop which loops the code until the user enters the quit option

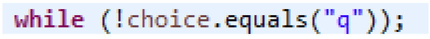
Case q gives a confirmation message of ending the code

Case w returns the same number the user input

Case o adds a penny to the bank with num.ones

Case t adds a nickel to the bank with num.tens

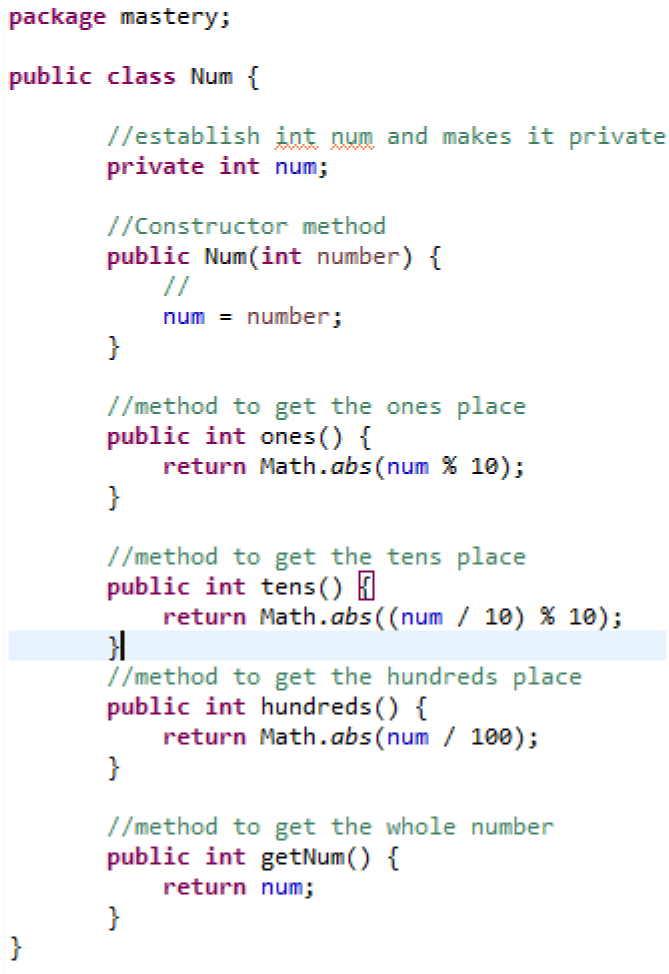
Case h adds a dime to the bank with num.hundreds



```
while (!choice.equals("q"));
```

ends the do while loop and stops the code with !choice.equals which means that if String choice does not equal q then the loop keeps running

Had to use !choice.equals because strings are different from ints for running the do while loop conditions



```java
package mastery;

public class Num {

        //establish int num and makes it private
        private int num;

        //Constructor method
        public Num(int number) {
            //
            num = number;
        }

        //method to get the ones place
        public int ones() {
            return Math.abs(num % 10);
        }

        //method to get the tens place
        public int tens() {
            return Math.abs((num / 10) % 10);
        }
        //method to get the hundreds place
        public int hundreds() {
            return Math.abs(num / 100);
        }

        //method to get the whole number
        public int getNum() {
            return num;
        }
}
```

Public Num is the constructor method

public int ones divides the user input by 10 and returns the remainder

public int tens divides the user input by 10 and then takes that number and divides it by 10 again then returns the remainder

public int hundreds divides the user input by 100 and returns the answer

public int getNum just returns the number the user input