MySavings Reflection Logs -

I started by making the MySavings.java class where the constructor methods would be stored. And the MySavingsClient will be the client code which we and other users interact with. Starting off, I declared a variable which will be used to store values.

```
package Mastery;

public class MySavings {

    private double savings;
```

Following that, I set up part of the client code which would display all the choices that the user can make.

```
package Mastery;
import java.util.*;

public class MySavingsClient {

    public static void main(String[] args) {

        int choice;
        MySavings PiggyBank = new MySavings();
        Scanner Input = new Scanner(System.in);
        System.out.println("1. Show total in bank");
        System.out.println("2. Add a penny");
        System.out.println("3. Add a nickel");
        System.out.println("4. Add a dime");
        System.out.println("5. Add a quarter");
        System.out.println("6. Take money out of the bank");
        System.out.println("Enter 0 to quit");
        System.out.println("");
```

After that, I went back to the other file and set up some constructor methods. AddCoins() will add or remove a certain amount of money from the bank. Whereas the total() function returns the amount of money remaining in bank.

```
/*
 * Adds or withdraws money to/from the bank.
 * pre: none
 * post: Savings have been changed.
 */
 public void AddCoins(double input) {
 savings += input; }


/*
 * Returns the total money in the bank.
 * pre: none
 * post: The total money in the bank has been returned.
 */
 public double total() {
 double total = savings;
 return(total); }
```

The do-while loop runs at least once, and depending on the choice the user makes, executes different lines of code. They can add money, withdraw money, and check their total. Eventually they can also exit the program and terminate the loop.

```
// Executes at least once, and more if the user does not quit
do {
    System.out.print("Enter your choice - ");
    choice = Input.nextInt();

    // Depending on the choice the user makes, different code is run
    // AddCoins() function either adds or withdraws money from bank
    switch(choice) {
        case 0: break;
        case 1: System.out.println("The total money in the bank is " + PiggyBank.total()); break;
        case 2: PiggyBank.AddCoins(0.01); break;
        case 3: PiggyBank.AddCoins(0.05); break;
        case 4: PiggyBank.AddCoins(0.1); break;
        case 5: PiggyBank.AddCoins(0.25); break;
        case 6: System.out.print("Enter the amount you would like to withdraw ");
                double withAmount = Input.nextDouble();
                PiggyBank.AddCoins(-(withAmount)); break;
    }

} while(choice != 0);
```