Credit Name: CSE 3120 Object-Oriented Programming 1
Assignment Name: MySavings

Decribe the errors you've encountered while working on this assignment. What caused the error and how do you overcome the error?

```
public double total() { //total $ sum

    double total;
    total = (penny * 0.01)+(nickel * 0.05)+(dime * 0.1)+(quarter*0.25);
    return total;

}
```

```
switch(choice) {
case 1: spot.total();
}
```

```
1. Show total in bank.
2. Add a penny.
3. Add a nickel.
4. Add a dime.
5. Add a quarter.
6. Take money out of the bank.
Enter 0 to quit application

Please enter your choice to continue:
1
```

When attempting to display the total sum to user, forgot to use a print-statement to send the output to the screen.

```
1. Show total in bank.
2. Add a penny.
3. Add a nickel.
4. Add a dime.
5. Add a quarter.
6. Take money out of the bank.
Enter 0 to quit application

Please enter your choice to continue:
1
Your total amount in the bank is: 0.0
```

```
switch(choice) {
case 1: System.out.print("Your total amount in the bank is: " + spot.total());
}
```

Fixed by including a print statement to send output out to user.

```
Welcome to the MySavings Application.

1. Show total in bank.
2. Add a penny.
3. Add a nickel.
4. Add a dime.
5. Add a quarter.
6. Take money out of the bank.
Enter 0 to quit application

Please enter your choice to continue: 2

Successfully added penny

1. Show total in bank.
2. Add a penny.
3. Add a nickel.
4. Add a dime.
5. Add a quarter.
6. Take money out of the bank.
Enter 0 to quit application

Please enter your choice to continue: 1

Your total amount in the bank is: $0.0
Pennies: 0.0 Nickels: 0.0 Dimes: 0.0 Quarters: 0.0

1. Show total in bank.
2. Add a penny.
3. Add a nickel.
4. Add a dime.
5. Add a quarter.
6. Take money out of the bank.
Enter 0 to quit application

Please enter your choice to continue:
```

```
public class testMySavings {

    public static void main(String[] args) {


        System.out.println("Welcome to the MySavings Application.");

        Scanner input = new Scanner(System.in);


        boolean cont = true;

        while (cont == true) {

            System.out.println("");
            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 application");
            System.out.println("");
            System.out.print("Please enter your choice to continue: ");


            int choice = input.nextInt();

            PiggyBank spot = new PiggyBank() ;

            System.out.println("");

            switch(choice) {
            case 1: System.out.println("Your total amount in the bank is: $" + spot.
                    System.out.println("Pennies: " + spot.getPenny() + " Nickels: "
                    spot.getNickel()+ " Dimes: " + spot.getDime() + " Quarters: " +
                    break;

            case 2: spot.addPenny();
                    System.out.println("Successfully added penny"); break;

            case 3: spot.addNickel();
            System.out.println("Successfully added Nickel"); break;


            }
```

When made to add a penny into bank, the penny was not being added and the amount remained at 0.

```
//Greet user
System.out.println("Welcome to the MySavings Application.");

//Preparing for user input + format decimal variables
Scanner input = new Scanner(System.in);
DecimalFormat shorten = new DecimalFormat("#00.00");

//create PiggyBank object
PiggyBank spot = new PiggyBank() ;

//Initialize variable cont to true
boolean cont = true;

//While cont is equal to true:
while (cont == true) {

    //Display choices to user
    System.out.println("");
    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 application");
    System.out.println("");

    //Prompt user for choice and record user input
    System.out.print("Please enter your choice to continue: ");
    int choice = input.nextInt();

    System.out.println("");

    //Process choice chosen by user with corresponding case:
    switch(choice) {

    //Display total value of the coins in the user's currect piggy bank.
    case 1: System.out.println("Your total amount in the bank is: $" + shorten.format(spot.to
            System.out.println("Pennies: " + spot.getPenny() + " Nickels: " +
            spot.getNickel()+ " Dimes: " + spot.getDime() + " Quarters: " + spot.getQuarter()
            break;
    //Add a penny to the PiggyBank
    case 2: spot.addPenny();
            System.out.println("Successfully added penny"); break;

    //Add a nickel to the PiggyBank
    case 3: spot.addNickel();
            System.out.println("Successfully added Nickel"); break;

    //Add a Dime to the PiggyBank
    case 4: spot.addDime();
            System.out.println("Successfully added Dime"); break;
```

```
Welcome to the MySavings Application.

1. Show total in bank.
2. Add a penny.
3. Add a nickel.
4. Add a dime.
5. Add a quarter.
6. Take money out of the bank.
Enter 0 to quit application

Please enter your choice to continue: 2

Successfully added penny

1. Show total in bank.
2. Add a penny.
3. Add a nickel.
4. Add a dime.
5. Add a quarter.
6. Take money out of the bank.
Enter 0 to quit application

Please enter your choice to continue: 1

Your total amount in the bank is: $00.01
Pennies: 1.0 Nickels: 0.0 Dimes: 0.0 Quarters: 0.0

1. Show total in bank.
2. Add a penny.
3. Add a nickel.
4. Add a dime.
5. Add a quarter.
6. Take money out of the bank.
Enter 0 to quit application

Please enter your choice to continue:
```

Fixed by moving the creation of the piggybank object to outside of the while loop. This way, it only creates the object once; not overwriting it and setting the pennies back to 0 everytime.