Reflection Logs

Credit name: Chapter 7
Assignment Name: Mastery - mySaving

```
public mySaving() {
    total = 0; //amount of money at the beginning
}
```

Set the default amount of money at the beginning of the program, before user add anything in

```
public mySaving(int penny, int nickel, int dime, int quarter) {
    total = penny*0.01+nickel*0.05+dime*0.1+quarter*0.25; //how
}
```

Create the equation in order to calculate the amount of money depends on the type of coin and how many coins user put in

```
public void setTotal() {
    total = penny*0.01+nickel*0.05+dime*0.1+quarter*0.25;
}
public void setPenny(int p) {
    penny += p;
}
public void setNickel(int n) {
    nickel += n;
}
public void setDime(int d) {
    dime += d;
}
public void setQuarter(int q) {
    quarter += q;
}
```

* Use the setTotal() method to set the amount of money in dollars after 1 time the user puts the coin in.
* setPenny, setNickel, setDime, setQuarter with the += to automatically update the amount of coins from each type so that the total don't have to calculate the total amount of money after every time the user puts the coins in.

```
public boolean TakeMoney(double TOMoney) {
    if (TOMoney<=total) {
        total-=TOMoney;
        return true;
    }
    else {
        return false;
    } //use to calculate the remain money after user take the money off//
}
```

A method used to calculate the remainder after users take out the money from a bank.

```
Scanner userinput = new Scanner (System.in);
mySaving PiggyBank = new mySaving();
DecimalFormat decimalFormat = new DecimalFormat("$0.00");
int userChoice;
do {
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 bank.");
System.out.println("Enter 0 to quit.");
System.out.print("Enter your choice: ");
userChoice = userinput.nextInt(); //prompts user about the options//
```

Prompts the user about the options.

```
switch (userChoice) {
case 1:
    PiggyBank.setTotal();
    System.out.println("Here is your money in your bank account: "+decimalFormat.format(PiggyBank.getTotal()));
    System.out.println("------------------------------");
    break;
case 2:
    System.out.print("Enter the amount of pennies: ");
    PiggyBank.setPenny(userinput.nextInt());
    System.out.println("------------------------------");
    break;
case 3:
    System.out.print("Enter the amount of nickels: ");
    PiggyBank.setNickel(userinput.nextInt());
    System.out.println("------------------------------");
    break;
case 4:
    System.out.print("Enter the amount of dimes: ");
    PiggyBank.setDime(userinput.nextInt());
    System.out.println("------------------------------");
    break;
case 5:
    System.out.print("Enter the amount of quarters: ");
    PiggyBank.setQuarter(userinput.nextInt());
    System.out.println("------------------------------");
    break;
case 6:
    System.out.print("Enter number of money you want to take out: $");
    double MoneyTakeOut = userinput.nextDouble();
    if (PiggyBank.TakeMoney(MoneyTakeOut)) {
        System.out.println("Now your account remains: $"+PiggyBank.getTotal());
    }
    else {
        System.out.println("Invalid, please try again.");
    }
    System.out.println("------------------------------");
    break;
}
} while(userChoice !=0);

System.out.print("End of Program! Thanks for using."); //End of program//
```

A switch statement used to done all the options user choose.