Lab 1
Identifiers,Keywords, andTypes

Exercise 1: Investigating Reference Assignment

Task 1 – Creating the TestMyPoint Class

```
public class myTestPoint {
    public static void main(String[] args) {
        MyPoint start = new MyPoint();
        MyPoint end = new MyPoint();

        start.x = 10;
        start.y = 10;

        end.x = 20;
        end.y = 30;

        System.out.println("Start point is: " + start);
        System.out.println("End point is: " + end);

        MyPoint stray = new MyPoint();

        stray = end;

        System.out.println("Start point is: " + stray);
        System.out.println("End point is: " + end);

        stray.x = 47;
        stray.y = 50;

        System.out.println("Start point is: " + stray);
        System.out.println("End point is: " + end);
        System.out.println("End point is: " + start);


    }
}
```

Task 2 – Compiling the TestMyPoint Class

```
PS C:\Users\Ismael\Documents\Uasd2023-2\TeoProgramacion2\Lab3> javac myTestPoint.java
PS C:\Users\Ismael\Documents\Uasd2023-2\TeoProgramacion2\Lab3>
```

Task 3 – Running the TestMyPoint Program

```
PS C:\Users\Ismael\Documents\Uasd2023-2\TeoProgramacion2\Lab3> javac myTestPoint.java
PS C:\Users\Ismael\Documents\Uasd2023-2\TeoProgramacion2\Lab3> java myTestPoint.java
Start point is: [10,10]
End point is: [20,30]
Start point is: [20,30]
End point is: [20,30]
Start point is: [47,50]
End point is: [47,50]
End point is: [10,10]
PS C:\Users\Ismael\Documents\Uasd2023-2\TeoProgramacion2\Lab3>
```

Exercise 2: Creating Customer Accounts

Task 1 – Creating the Customer Class

```java
package Exersice2.com.mybank.domain;

import com.mybank.domain.Account;

public class Customer {
    private String firstName;
    private String lastName;
    private Account account;

    public Customer(String f, String l) {
        firstName = f;
        lastName = l;
    }

    public String getFirstName() {
        return firstName;
    }

    public String getLastName() {
        return lastName;
    }
```

```
    public Account getAccount() {
        return account;
    }
    public void setAccount(Account account) {
        this.account = account;
    }
}
```

Task 2 – Copying the TestBanking Class

```
package com.mybank.test;

import com.mybank.domain.*;

/*
 * This class creates the program to test the banking classes.
 * It creates a new Customer and Account (with an initial balance),
 * and performs a series of transactions with the Account object.
 */
public class TestBanking {

  public static void main(String[] args) {
    Customer customer;
    Account  account;

    // Create an account that can has a 500.00 balance and type savings.
    System.out.println("Creating the customer Jane Smith.");
    customer = new Customer("Jane", "Smith");
    System.out.println("Creating her account with a 500.00 balance.");
    customer.setAccount(new Account(500.00));

    account = customer.getAccount();
    System.out.println("Withdraw 150.00");
    account.withdraw(150.00);

    System.out.println("Deposit 22.50");
    account.deposit(22.50);

    System.out.println("Withdraw 47.62");
    account.withdraw(47.62);

    // Print out the final account balance
    System.out.println("Customer [" + customer.getLastName()
           + ", " + customer.getFirstName()
```

```
            + "] has a balance of " + account.getBalance());
    }
}
```

Task 3 – Compiling the TestBanking Class

```
PS C:\Users\Ismael\Documents\Uasd2023-2\TeoProgramacion2\Lab3\Exersice2> javac -cp . com/mybank/test/TestBanking.java
PS C:\Users\Ismael\Documents\Uasd2023-2\TeoProgramacion2\Lab3\Exersice2>
```

Task 4 – Running the TestBanking Program

```
PS C:\Users\Ismael\Documents\Uasd2023-2\TeoProgramacion2\Lab3\Exersice2> javac -cp . com/mybank/test/TestBanking.java
PS C:\Users\Ismael\Documents\Uasd2023-2\TeoProgramacion2\Lab3\Exersice2> java -cp . com/mybank/test/TestBanking.java
Creating the customer Jane Smith.
Creating her account with a 500.00 balance.
Withdraw 150.00
Deposit 22.50
Withdraw 47.62
Customer [Smith, Jane] has a balance of 324.88
PS C:\Users\Ismael\Documents\Uasd2023-2\TeoProgramacion2\Lab3\Exersice2>
```