**Lab Exercise 02**

Syntax:

using System;

using System.Reflection;

namespace UserAccountNamespace

{

public abstract class Item

{

protected string item\_name;

protected double item\_price;

protected int item\_quantity;

private double total\_price;

public Item(string name, double price, int quantity)

{

this.item\_name = name;

this.item\_price = price;

this.item\_quantity = quantity;

}

public virtual double getTotalPrice()

{

return total\_price = item\_price \* item\_quantity;

}

public virtual void setPayment(double amount)

{

//overided this method.

}

}

public class DiscountedItem : Item

{

private double item\_discount;

private double discounted\_price;

private double payment\_amount;

private double change;

public DiscountedItem(string name, double price, int quantity, double discount) : base(name, price, quantity)

{

this.item\_discount = (discount \* 0.01) \* price;

this.discounted\_price = price - this.item\_discount;

}

public override double getTotalPrice()

{

return discounted\_price \* item\_quantity;

}

public override void setPayment(double amount)

{

this.payment\_amount = amount;

}

public double getChange()

{

return this.change = this.payment\_amount - getTotalPrice();

}

}

public abstract class UserAccount

{

private string full\_name;

protected string user\_name;

protected string user\_password;

public UserAccount(string name, string uName, string password)

{

this.full\_name = name;

this.user\_name = uName;

this.user\_password = password;

}

public virtual bool validateLogin(string uName, string password)

{

if (this.user\_name.Equals(uName) && this.user\_password.Equals(password))

{

return true;

}

else

{

return false;

}

}

public string getFullName()

{

return this.full\_name;

}

}

public class Cashier : UserAccount

{

private string department;

public Cashier(string name, string department, string uName, string password) : base(name, uName, password)

{

this.department = department;

}

public override bool validateLogin(string uName, string password)

{

if (user\_name.Equals(uName) && user\_password.Equals(password))

{

return true;

}

else

{

return false;

}

}

public string getDepartment()

{

return this.department;

}

}

public class MainClass

{

public static void Main(string[] args)

{

UserAccount cashier = new Cashier("Matthew Molina", "Finance", "user", "pass");

runLogin((Cashier) cashier);

}

static void runCashierApp()

{

String name;

int discount, quantity;

double price;

Console.WriteLine("Purchase Discounted Item.\n");

Console.Write("Item : ");

name = Console.ReadLine();

Console.Write("Discount : ");

discount = Convert.ToInt32(Console.ReadLine());

Console.Write("Price : ");

price = Convert.ToDouble(Console.ReadLine());

Console.Write("Quantity : ");

quantity = Convert.ToInt32(Console.ReadLine());

DiscountedItem item = new DiscountedItem(name, price, quantity, discount);

item.setPayment(4000);

Console.WriteLine("\nTotal amount : " + item.getTotalPrice());

Console.WriteLine("Change : " + item.getChange());

}

static void runLogin(Cashier cashier)

{

while (true)

{

Console.WriteLine("User Login\n");

Console.Write("Username : ");

string uName = Console.ReadLine();

Console.Write("Password : ");

string pass = Console.ReadLine();

if (cashier.validateLogin(uName, pass))

{

Console.WriteLine("\nWelcome " + cashier.getFullName() + " of " + cashier.getDepartment() + "\n");

runProgram(cashier);

}

else

{

Console.WriteLine("\nInvalid Credentials.\n");

}

}

}

static void runProgram(Cashier cashier)

{

while (true)

{

Console.WriteLine("\n1. Open Cashier App.");

Console.WriteLine("2. Log out.");

Console.WriteLine("3. Exit.");

Console.Write("Ano gusto mo gawin : ");

int input = Convert.ToInt32(Console.ReadLine());

if (input == 1)

{

runCashierApp();

}

else if (input == 2)

{

runLogin(cashier);

}

else if (input == 3)

{

Environment.Exit(0);

}

else

{

Console.WriteLine("Wala namang ganyan e.");

}

}

}

}

}

Output:



