/\*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***Well documented source code(implemented) of the GasPump class and the test driver**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*/

import java.util.\*;

import java.io.\*;

public class GasPump {

private int Rprice;

private int Sprice;

private int w;

private int price;

private int G;

private int total;

private int cash;

private int s;

public GasPump() {

Rprice = 0;

Sprice = 0;

w = 0;

price = 0;

G = 0;

total = 0;

cash = 0;

s = -1;

}

**public int Activate(int a, int b)** {

if ((s == -1) && (a > 0) && (b > 0)) {

s = 0;

Rprice = a;

Sprice = b;

System.out.print("GAS PUMP IS ON");

System.out.print("\n");

return 1;

} else {

return 0;

}

}

**public int Start()** {

if (s == 0) {

s = 1;

System.out.print("WELCOME!!!");

System.out.print("\n");

System.out.print("DO YOU WANT TO PAY BY CASH OR CREDIT CARD?");

System.out.print("\n");

return 1;

} else {

return 0;

}

}

**public int PayCredit()** {

if (s == 1) {

s = 2;

System.out.print("CHECKING CREDIT CARD.");

System.out.print("\n");

return 1;

} else {

return 0;

}

}

**public int Reject()** {

if (s == 2) {

s = 0;

System.out.print("CREDIT CARD IS REJECTED.");

System.out.print("\n");

return 1;

} else {

return 0;

}

}

**public int Cancel()** {

if (s == 3) {

s = 0;

System.out.print("TRANSACTION IS CANCELLED.");

System.out.print("\n");

if (w == 0) {

System.out.print("$");

System.out.print(cash);

System.out.print(" OF CASH IS RETURNED");

System.out.print("\n");

}

return 1;

} else {

return 0;

}

}

**public int Approved()** {

if (s == 2) {

s = 3;

w = 1;

System.out.print("CREDIT CARD APPROVED.");

System.out.print("\n");

System.out.print("SELECT TYPE OF GASOLINE:");

System.out.print("\n");

System.out.print("a. REGULAR");

System.out.print("\n");

System.out.print("b. SUPER");

System.out.print("\n");

return 1;

} else {

return 0;

}

}

**public int PayCash(int c)** {

if ((s == 1) && (c > 0)) {

s = 3;

w = 0;

cash = c;

System.out.print("SELECT TYPE OF GASOLINE:");

System.out.print("\n");

System.out.print("a. REGULAR");

System.out.print("\n");

System.out.print("b. SUPER");

System.out.print("\n");

return 1;

} else {

return 0;

}

}

**public int Regular()** {

if (s == 3) {

s = 4;

System.out.print("REGULAR IS SELECTED.");

System.out.print("\n");

price = Rprice;

return 1;

} else {

return 0;

}

}

**public int Super()** {

if (s == 3) {

s = 4;

System.out.print("SUPER IS SELECTED.");

System.out.print("\n");

price = Sprice;

return 1;

} else {

return 0;

}

}

**public int StartPump()** {

if (s == 4) {

s = 5;

G = 0;

total = 0;

System.out.print("PUMP IS READY TO DISPOSE ");

System.out.print("\n");

System.out.print("# OF GALLONS PUMPED: ");

System.out.print(G);

System.out.print("\n");

System.out.print("TOTAL CHARGE: $");

System.out.print(total);

System.out.print("\n");

return 1;

} else {

return 0;

}

}

**public int PumpGallon()** {

if (s == 5) {

if ((w == 1) || ((cash >= price \* (G + 1)) && (w == 0))) {

G = G + 1;

total = G \* price;

System.out.print("# OF GALLONS PUMPED: ");

System.out.print(G);

System.out.print("\n");

System.out.print("TOTAL CHARGE: $");

System.out.print(total);

System.out.print("\n");

System.out.print("CONTINUE PUMPING");

System.out.print("\n");

return 1;

} else if ((w == 0) && (cash < price \* (G + 1))) {

s = 6;

System.out.print("PUMP STOPPED. NOT SUFFICIENT FUNDS. ");

System.out.print("\n");

System.out.print("# OF GALLONS PUMPED: ");

System.out.print(G);

System.out.print("\n");

System.out.print("TOTAL CHARGE: $");

System.out.print(total);

System.out.print("\n");

if ((w == 0) && (total < cash)) {

System.out.print("$");

System.out.print(cash - total);

System.out.print(" OF CASH IS RETURNED");

System.out.print("\n");

}

System.out.print("DO YOU WANT A RECEIPT?");

System.out.print("\n");

return 1;

}

;

}

;

return 0;

}

**public int StopPump()** {

if (s == 5) {

s = 6;

System.out.print("PUMP STOPPED. ");

System.out.print("\n");

System.out.print("# OF GALLONS PUMPED: ");

System.out.print(G);

System.out.print("\n");

System.out.print("TOTAL CHARGE: $");

System.out.print(total);

System.out.print("\n");

if ((w == 0) && (total < cash)) {

System.out.print("$");

System.out.print(cash - total);

System.out.print(" OF CASH IS RETURNED");

System.out.print("\n");

}

System.out.print("DO YOU WANT A RECEIPT?");

System.out.print("\n");

return 1;

} else {

return 0;

}

}

**public int NoReceipt()** {

if (s == 6) {

s = 0;

System.out.print("NO RECEIPT IS PRINTED ");

System.out.print("\n");

return 1;

} else {

return 0;

}

}

**public int Receipt()** {

if (s == 6) {

s = 0;

System.out.print("RECEIPT IS PRINTED: ");

System.out.print("\n");

System.out.print("# OF GALLONS PUMPED: ");

System.out.print(G);

System.out.print("\n");

System.out.print("TOTAL CHARGE: $");

System.out.print(total);

System.out.print("\n");

return 1;

} else {

return 0;

}

}

**public int TurnOff()** {

if (s == 0) {

s = -2;

System.out.print("GAS PUMP IS TURNED OFF ");

System.out.print("\n");

return 1;

} else {

return 0;

}

}

/\*

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**DRIVER FOR GAS PUMP CLASS**

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

\*/

public static void main(String[] args)

{

try

{

GasPump gas=new GasPump();

BufferedReader br=new BufferedReader (new InputStreamReader(System.in));

System.out.println("Software testing and Analsysis(CS 589)-Project");

System.out.println("----------------------------------------------");

System.out.println(" Prof: Dr. Bogdan Korel");

System.out.println(" ");

System.out.println("Test Driver for Gas Pump Implementation...");

System.out.println("Enter your choice");

System.out.println("1.Activate");

System.out.println("2.Start");

System.out.println("3.PayCredit");

System.out.println("4.Reject");

System.out.println("5.Approved");

System.out.println("6.PayCash");

System.out.println("7.Cancel");

System.out.println("8.Regular");

System.out.println("9.Super");

System.out.println("10.StartPump");

System.out.println("11.PumpGallon");

System.out.println("12.StopPump");

System.out.println("13.NoReceipt");

System.out.println("14.Receipt");

System.out.println("15.TurnOff");

int a,b,c,output;

while(true)

{

System.out.println("Enter your Choice:");

String str = br.readLine();

int ch = Integer.parseInt(str);

switch(ch)

{

case 1:

System.out.println("Enter the price for Regular fuel:");

a = Integer.parseInt(br.readLine());

System.out.println("Enter the price for Super fuel:");

b = Integer.parseInt(br.readLine());

output=gas.Activate(a,b);

System.out.println("Result="+output);

break;

case 2:

output=gas.Start();

System.out.println("Result="+output);

break;

case 3:

output=gas.PayCredit();

System.out.println("Result="+output);

break;

case 4:

output=gas.Reject();

System.out.println("Result="+output);

break;

case 5:

output=gas.Approved();

System.out.println("Result="+output);

break;

case 6:

System.out.println("Please enter the cash amount");

c = Integer.parseInt(br.readLine());

output=gas.PayCash(c);

System.out.println("Result="+output);

break;

case 7:

output=gas.Cancel();

System.out.println("Result="+output);

break;

case 8:

output=gas.Regular();

System.out.println("Result="+output);

break;

case 9:

output=gas.Super();

System.out.println("Result="+output);

break;

case 10:

output=gas.StartPump();

System.out.println("Result="+output);

break;

case 11:

output=gas.PumpGallon();

System.out.println("Result="+output);

break;

case 12:

output=gas.StopPump();

System.out.println("Result="+output);

break;

case 13:

output=gas.NoReceipt();

System.out.println("Result="+output);

break;

case 14:

output=gas.Receipt();

System.out.println("Result="+output);

break;

case 15:

output=gas.TurnOff();

System.out.println("Result="+output);

break;

}

}

}

catch(NumberFormatException e)

{

System.out.println(

"**Exit successfully from the program.**");

}

catch(IOException e)

{

}

}

}