**CMPP269 Assignment #2**

**Pay and Go Parking**

**Please submit via D2L.**

You have recently been employed at Pay and Go Parking by their IT department as a Junior Developer to write a program for a parking vending machine. The parking vending machine prints tickets and collects payments for parkers wanting to use the lot.

Parkers use their credit card to purchase a ticket to park and they leave the ticket on the dash. Although we collect credit card information you will notice that your code doesn’t do anything with it, don’t worry about that. Another team who is a specialist in electronic payments is going to write a function to process the credit card payment and that code will be added later.

To make the program more interesting you can use the following code to clear the screen in BlueJ:

System.out.print (”\f”);

**Remember to comment this code OUT before providing your sample run though!**

Here is a sample run:  
***User input is shown in bold underline.***

Welcome to Pay and Go Parking

+ to add 30 minutes ($1.00 charge)

p to print the ticket

r to restart

x to exit the program

Please enter your selection: +

=================================================

Current Time: 6-6 11:08

Paid Till: 6-6 11:38

Current Charge $1.00

=================================================

Welcome to Pay and Go Parking

+ to add 30 minutes ($1.00 charge)

p to print the ticket

r to restart

x to exit the program

Please enter your selection: **+**

=================================================

Current Time: 6-6 11:08

Paid Till: 6-6 12:08

Current Charge $2.00

=================================================

Welcome to Pay and Go Parking

+ to add 30 minutes ($1.00 charge)

p to print the ticket

r to restart

x to exit the program

Please enter your selection: **p**

Enter Credit Card Number: **5269-5236-5245-1143**

Enter 3 digit security code from back of Credit Card: **956**

==================================================

Pay and Go Parking

Lot Location: 123 Main St,

Honululu, Hawaii

--------------------------------------------------------------------------------

Current Time: 6-6 11:08

Paid Till: 6-6 12:08

Total charged to Credit Card $2.00

=================================================

Tear off receipt and place on dash

Press any key to continue

=================================================

Current Time: 6-6 11:08

Paid Till: 6-6 11:08

Current Charge $0.00

=================================================

Welcome to Pay and Go Parking

+ to add 30 minutes ($1.00 charge)

p to print the ticket

r to restart

x to exit the program

Please enter your selection: **+**

=================================================

Current Time: 6-6 11:09

Paid Till: 6-6 11:39

Current Charge $1.00

=================================================

Welcome to Pay and Go Parking

+ to add 30 minutes ($1.00 charge)

p to print the ticket

r to restart

x to exit the program

Please enter your selection: **r**

=================================================

Current Time: 6-6 11:09

Paid Till: 6-6 11:09

Current Charge $0.00

=================================================

Welcome to Pay and Go Parking

+ to add 30 minutes ($1.00 charge)

p to print the ticket

r to restart

x to exit the program

Please enter your selection: **+**

=================================================

Current Time: 6-6 11:09

Paid Till: 6-6 11:39

Current Charge $1.00

=================================================

Welcome to Pay and Go Parking

+ to add 30 minutes ($1.00 charge)

p to print the ticket

r to restart

x to exit the program

Please enter your selection: **+**

=================================================

Current Time: 6-6 11:09

Paid Till: 6-6 12:09

Current Charge $2.00

=================================================

Welcome to Pay and Go Parking

+ to add 30 minutes ($1.00 charge)

p to print the ticket

r to restart

x to exit the program

Please enter your selection: **+**

=================================================

Current Time: 6-6 11:09

Paid Till: 6-6 12:39

Current Charge $3.00

=================================================

Welcome to Pay and Go Parking

+ to add 30 minutes ($1.00 charge)

p to print the ticket

r to restart

x to exit the program

Please enter your selection: **+**

=================================================

Current Time: 6-6 11:09

Paid Till: 6-6 13:09

Current Charge $4.00

=================================================

Welcome to Pay and Go Parking

+ to add 30 minutes ($1.00 charge)

p to print the ticket

r to restart

x to exit the program

Please enter your selection: **p**

Enter Credit Card Number: **1293-4949-2939-9485**

Enter 3 digit security code from back of Credit Card: **526**

================================================

Pay and Go Parking

Lot Location: 123 Main St,

Honululu, Hawaii

--------------------------------------------------------------------------------

Current Time: 6-6 11:09

Paid Till: 6-6 13:09

Total charged to Credit Card $4.00

=================================================

Tear off receipt and place on dash

Press any key to continue

=================================================

Current Time: 6-6 11:09

Paid Till: 6-6 11:09

Current Charge $0.00

=================================================

Welcome to Pay and Go Parking

+ to add 30 minutes ($1.00 charge)

p to print the ticket

r to restart

x to exit the program

Please enter your selection: **x**

Totals for Pay and Go Parking

================================================

Totals $6.00

**Test Plan**

Since the time will be dependent on when you run the program describe in general terms how you are doing to test the program to ensure ALL functionality works correctly. Use the following as the start of your test plan.

**Test Plan for Assignment #2**

Step 1

Input:

* Press + two times
* Press ‘p’

Expected output:

* paid time should be one hour > current time
* Charge should be $2.00

Step 2

Input



Output



Step x

Input

* Press ‘x’ to exit the program

Output

* Total charged should be xx

Since dealing with dates can be tricky in Java the following sample program shows you how to add time to the current date and print it out, use this code as part of your solution:

/\*\* Sample program that reads today's date and time, reads in a number of minutes from the

user and adds those minutes to the time and prints the result

\*

\*/

import java.util.\*;

import java.io.\*;

public class Example {

public static void main (String [] args) throws IOException

{

Calendar now = Calendar.getInstance();

Calendar paidTill;

int min;

Scanner k = new Scanner (System.in);

// Print out the current time

// Get the 24 clock hour and print

System.out.println ("Current Time");

System.out.println ("Hour: " + now.get(Calendar.HOUR\_OF\_DAY));

// get the minute and print

System.out.println ("Minute: " + now.get(Calendar.MINUTE));

// set paidTill to be a COPY of the current time in 'now'

paidTill = (Calendar)now.clone();

System.out.print ("How many minutes do you want to add to the current time?");

min = k.nextInt();

// add the mins to paidTill

paidTill.add(Calendar.MINUTE, min);

// Print out the new time

// Get the 24 clock hour and print

System.out.println ("New Time");

System.out.println ("Hour: " + paidTill.get(Calendar.HOUR\_OF\_DAY));

// get the minute and print

System.out.println ("Minute: " + paidTill.get(Calendar.MINUTE));

System.out.print ("Press any key to continue...");

// waits for the user to press ANY key

System.in.read();

}

}

**Design Submission 30%**

**NO late submissions will be accepted, plan ahead to be done well before the deadline.**

Write pseudocode to explain how to solve this problem. Pseudocode is due BEFORE the source code is written. Consult with your instructor for guidelines on writing pseudocode for this problem.

Submit the following via D2L:

* Pseudocode or Java Code
* Test Plan

**Source Code, Execution and Sample Run 70%**

**NO late submissions will be accepted, plan ahead to be done well before the deadline.**

Submit the following via D2L:

* Source Code
  + documentation of Source Code
* Test Plan (as previously submitted)
* Sample Run that matches the process described in the test plan