CS213 Spring 2021 Dr. Lily Chang

Project #2 (65 points)

Due Date

• Tuesday, February 23, by 11:59pm.

Submission

Submit a copy of the **zipped project folder** to Canvas.

- 1. You must include both team members' names in the comment block on top of EVERY Java file.
- 2. Your project folder must include the following subfolders/files for grading.
 - Source folder, including all Java files [35 points]
 - JUnit Test classes for Company and Management class. [20 points]
 - Javadoc folder, including all the files generated. [5 points]
 - Class Diagram, drawn with either Visual Paradigm or Draw.io. [5 points]

Project Description

In this project, you will develop a **Payroll Processing System** to process the payments to the employees in a company. For simplicity, the system will not process the possible deduction items in the paychecks. You are not allowed to use any Java library classes, **EXCEPT** the Scanner class, StringTokenizer class, Calendar class DecimalFormat class, and Java Exception classes. You will **lose 5 points** for each Java library class imported to the project.

Your project shall process the command lines entered on the console and display the output on the console. The command lines include the instructions for adding/removing an employee, calculating the payments, printing the earning statements, and managing the working hours of the part time employees.

Let's assume the system maintains an employee database, which may include 3 different types of employees: full time, part time and management. Note that an employee with a management role is also a full-time employee. You are required to implement an array-based container class to hold the employee database. Every employee in the database has a profile, including the employee's name, department and the date hired, assuming there are 3 departments in the company: "computer science", "electrical and computer engineering" and "information technology". The payroll is processed every other week. Calculation of the payments are different depending on an employee's employment type. The following table has the details.

Employment Type	Payment Calculation	Additional Compensation
Full time	 There are 26 pay periods per year. The payment for each pay period equals to annual salary divided by 26 	Regular full time: NONE
		There are 3 different types of management roles: 1. Manager: \$5,000 annually 2. Department Head: \$9,500 annually 3. Director: \$12,000 annually
Part time	 Pay by the hours worked during the 2-week period. Each part-time employee has a different hourly rate. Maximum hours per week is 40, i.e., 80 per pay period, NOT to exceed 100 hours per pay period 	• The hours exceed 80 will be paid 1.5 times of the regular hourly rate

Requirements

- 1. This is a **group assignment**. You MUST work in pair in order to get the credit for this project.
- 2. You MUST follow the <u>software development ground rules</u>, or **you will lose points** for not having a good programming style.
- 3. You MUST create a **Class Diagram** for this project to document the software structure. The diagram is worth 5 points. You will **lose the 5 points** if you submit a hand-drawing diagram.
- 4. Each Java class must go in a separate file. -2 points if you put more than one Java class into a file.
- 5. You are not allowed to have redundant code in this project; -2 points for each violation below.
 - Unused code: you write code that was never called or used.
 - Duplicate code segments for the same purpose in more than one places/classes.
 - Define common instance variables in each of the subclasses.
 - Define specific instance variables in the superclass that are not used by all the subclasses.
- 6. You must define classes with the following inheritance relationships. **-5 points** for each class missing, or incorrect inheritance structure. All instances variables must be "private" or **lose 2 points** for each non-private modifier.
 - **Employee** class defines the common data and operations for all employee type; each employee has a profile that uniquely identifies the employee.
 - Fulltime class extends the Employee class and includes specific data and operations to a full-time employee.
 - Parttime class extends the Employee class and includes specific data and operations to a part-time employee.
 - Management class extends the Fulltime class and includes specific data and operations to a full-time employee with a management role.
- 7. **Polymorphism is required**. You cannot use the getClass() method for checking the class type listed in #6 above, or you will **lose 10 points**. Use equals() methods for checking the actual type of an instance of Employee.
 - You must include **toString()** and **equals()** methods in all classes listed in #6 above with the annotation **@Override** on top of the methods. **-2 points** for each toString() or equals() method missing. The toString() methods in all subclasses <u>must reuse the code in the superclass</u> by calling the toString() method in the superclass. **-2 point** for each violation.
 - You must include the following method in Fulltime, Parttime and Management class, and add the @Override tag for this method. -5 points for each violation. You cannot change the signature of this method, and must reuse the code in the superclass whenever possible. -2 points for each violation.

```
@Override
public void calculatePayment() { }
```

- -1 points for each @Override tag missing.
- 8. In addition to the classes in #6, you must include the 5 classes listed below. -5 points for each class missing. You CANNOT do I/O in all classes, EXCEPT the PayrollProcessing class, and the print methods in the Company class. -2 points for each violation. The floating-point numbers must be displayed with 2 decimal places. -1 point for each violation.
 - (1) **Date class.** Import this class from your Project 1. The class implements the Java Interface Comparable. You must implement the overriding **comareTo()** method, or you will **lose 2 points.**

(2) **Profile class.** Define the profile of an employee with the following. You cannot add additional instance variables and must include toString() and equals() methods. **-2 points** for each violation.

```
public class Profile {
    private String name; //employee's name in the form "lastname, firstname"
    private String department; //department code: CS, ECE, IT
    private Date dateHired;
    @Override
    public String toString() { }
    @Override
    public boolean equals(Object obj) { } //compare name, department and dateHired
}
```

(3) **Company class.** This class is an array-based container class that implements the employee database. The array will store a list of employees, which may include the instances of full-time, part-time and management. The initial capacity of the container is 4. It will automatically grow the capacity by 4 if the array is full. You must implement and use the methods listed and you cannot add additional instances variable or change the signatures of the methods. **-2 points** for each violation. You can add additional methods.

```
public class Company {
    private Employee[] emplist;
    private int numEmployee;
    ...
    private int find(Employee employee) { }
    private void grow() { }
    public boolean add(Employee employee) { } //check the profile before adding public boolean remove(Employee employee) { } //maintain the original sequence public boolean setHours(Employee employee) { } //set working hours for a part time public void processPayments() { } //process payments for all employees public void print() { } //print earning statements for all employees public void printByDepartment() { } //print earning statements by department public void printByDate() { } //print earning statements by date hired
```

(4) PayrollProcessing class. This is the user interface class that reads/writes from/to the console. This class handles all exceptions and invalid data before it calls the methods in Company class to complete the associated commands. For example, InputMismatchException, NumberFormatException, invalid dates, invalid department codes, invalid codes for management roles, and negative values. Whenever there is an exception or invalid data, display a message on the console. -2 points for each exception not caught or invalid data not checked in this class or messages not displayed.

A command line always begins with a command in uppercase letters followed by some data tokens delimited by whitespaces. A whitespace could be a single space, multiple spaces, a tab or a new line (\n). The commands are case-sensitive, i.e., the commands with lowercase letters are invalid. In addition, you are required to handle the bad commands that are not supported. **-2 points** for each invalid command not handled.

• A command – add a new employee to the company database. For management role, use the integer codes 1 for Manager, 2 for Department Head and 3 for Director. Display "invalid management code." if the integer code is not supported. An employee's name starts with the last name followed by a comma and the first name. Department codes are CS, ECE or IT for the 3 different departments, display "invalid department code." if the code is not supported. If the same employee profile exists in the database, display "Employee is already in the list.", otherwise, display "Employee added.". Hourly rate and salary cannot be negative. Some examples for the valid command lines for adding are shown below.

```
AP Doe, Jane CS 7/1/2020 45.9 //add a part-time employee with the hourly pay rate AF Doe, Jane CS 1/1/2005 85000 //add a full-time employee with the annual salary AM Doe, Jane CS 2/28/2012 85000 1 //add a full-time with the role "Manager" AM Doe, John CS 2/28/2012 85000 2 //add a full-time with the role "Department Head" AM Doe, John ECE 2/28/2012 85000 3 //add a full-time with the role "Director"
```

• R command – remove an employee from the company database. If there is no such employee profile in the database, display "Employee doesn't exist.", otherwise, display "Employee removed.".

```
R Doe, Jane CS 7/1/2020 //find the employee with the same profile and remove it
```

- C command calculate the payments for all employees.
- S command set the working hours for a part-time employee; the number of hours cannot be negative.

```
S Doe, Jane 7/1/2020 100 //set the hours to 100 with the employee profile
```

• P commands – print the earning statements.

```
PA //print the earning statements for all employee
PH //print the earning statements for all employee in the order of date hired
PD //print the earning statements for all employee grouped by department
```

- Q command display "Payroll Processing completed." and stop the program execution.
- (5) **RunProject2 class.** This is the driver class to run Project 2

```
public class RunProject2 {
    public static void main(String[] args) {
        new PayrollProcessing().run();
    }
}
```

- 9. You must follow the instructions in the <u>Software Development Ground Rules</u> and comment your code. You are required to **generate the Javadoc** after you properly commented your code. Your Javadoc must include the documentations for the constructors, private methods and public methods of all Java classes. Generate the Javadoc in a single folder and include it in your project folder to be submitted to Canvas. You will **lose 5 points** for not including the Javadoc.
- 10. You must create a JUnit test class for Company class, and write test cases for the add(), remove() and setHours() methods. You are also required to create a JUnit test class for Management class, and write test cases for the calculatePayment() method. Each test method is worth 5 points.

Sample Input

```
ра
pd
R Doe, Jane CS 7/1/2020
r Doe, Jane CS 7/1/2020
С
С
S Doe, Jane CS 7/1/2020
PΑ
PD
PΗ
AP Doe, Jane CS 7/1/2020 45.9
AF Doe, Jane ECE 1/1/2005 85000
AM Doe, Jane IT 2/28/2012 85000 1
PΑ
С
PΑ
AP Doe, Jane CS 7/1/2020 35.9
AF Doe, Jane ECE 1/1/2005 70000
AM Doe, Jane IT 2/28/2012 70000 2
AP Doe, Jane ECE 8/1/2020 39
AF Doe, Jane ECE 3/31/2005 69900
AM Doe, Jane ECE 6/28/2012 96756 0
AM Doe, Jane ECE 6/28/2012 96756 4
AM Doe, Jane ECE 6/28/2012 96756 3
PΑ
AP Doe, Jane IT 7/1/2020 25.9
AF Doe, Jane IT 1/1/2005 78000
```

```
AM Doe, Jane IT 2/28/2012 101100 2
PΑ
AM Doe, Jane it 2/28/2012 85000 2
AP Doe, Jane ece 7/1/2020 45.9
AF Doe, Jane cs 2/28/2012 70000
AF Doe, Jane AA 2/28/2012 70000
AF Doe, Jane CS 2/29/2012 70000
AF Doe, Jane CS 2/2/200 70000
AF Doe, Jane CS 6/29/2021 70000
PΑ
S Doe, Jane ECE 7/1/2020 100
PΑ
R Doe, Jane CS 7/1/2020
R Doe, Jane ECE 3/31/2005
R Doe, Jane IT 7/1/2020
R Doe, Jane CS 7/1/2020
R Doe, Jane ECE 3/31/2005
R Doe, Jane IT 7/1/2020
PD
ΡН
AM Doe, John CS 2/29/2008 85000 1
AM Brown, Charlie IT 10/28/2012 75500 2
AP Doe, John CS 7/11/2019 40
AF Moore, Lucy CS 1/31/2012 -70000
AF Moore, Lucy CS 1/31/2012 70000
AP Doe, Jane IT 7/1/2020 -22
AP Doe, Jane IT 7/1/2020 22
PΑ
S Doe, John CS 7/11/2019 80
S Doe, Jane IT 7/1/2020 77
PD
AP Harrison, Rob CS 10/31/2018 32.99
S Harrison, Rob CS 10/31/2020 -100
S Harrison, Rob CS 10/31/2020 101
S Doe, John CS 7/1/2020 120
S Harrison, Rob CS 10/31/2018 93
ΡН
```

Sample Output

```
Payroll Processing starts.
Command 'pa' not supported!
Command 'pd' not supported!
Command 'ph' not supported!
Employee database is empty.
Command 'r' not supported!
Employee database is empty.
Command 'c' not supported!
Command 's' not supported!
Employee database is empty.
Employee database is empty.
Employee database is empty.
Employee database is empty.
Employee added.
Employee added.
Employee added.
--Printing earning statements for all employees--
Doe, Jane::CS::7/1/2020::Payment $0.00::PART TIME::Hourly Rate $45.90::Hours worked this period: 0
Doe, Jane::ECE::1/1/2005::Payment $0.00::FULL TIME::Annual Salary $85,000.00
Doe, Jane::IT::2/28/2012::Payment $0.00::FULL TIME::Annual Salary $85,000.00::Manager Compensation $192.31
Calutlation of employee payments is done.
--Printing earning statements for all employees--
Doe, Jane::CS::7/1/2020::Payment $0.00::PART TIME::Hourly Rate $45.90::Hours worked this period: 0
Doe, Jane::ECE::1/1/2005::Payment $3,269.23::FULL TIME::Annual Salary $85,000.00
Doe, Jane::IT::2/28/2012::Payment $3,461.54::FULL TIME::Annual Salary $85,000.00::Manager Compensation $192.31
Employee is already in the list.
```

```
Employee is already in the list.
Employee is already in the list.
Employee added.
Employee added.
Invalid management code.
Invalid management code.
Employee added.
--Printing earning statements for all employees--
Doe, Jane::CS::7/1/2020::Payment $0.00::PART TIME::Hourly Rate $45.90::Hours worked this period: 0
Doe, Jane::ECE::1/1/2005::Payment $3,269.23::FULL TIME::Annual Salary $85,000.00
Doe, Jane::IT::2/28/2012::Payment $3,461.54::FULL TIME::Annual Salary $85,000.00::Manager Compensation $192.31
Doe, Jane::ECE::8/1/2020::Payment $0.00::PART TIME::Hourly Rate $39.00::Hours worked this period: 0
Doe, Jane::ECE::3/31/2005::Payment $0.00::FULL TIME::Annual Salary $69,900.00
Doe, Jane::ECE::6/28/2012::Payment $0.00::FULL TIME::Annual Salary $96,756.00::Director Compensation $461.54
Employee added.
Employee added.
Employee is already in the list.
--Printing earning statements for all employees--
Doe, Jane::CS::7/1/2020::Payment $0.00::PART TIME::Hourly Rate $45.90::Hours worked this period: 0
Doe, Jane::ECE::1/1/2005::Payment $3,269.23::FULL TIME::Annual Salary $85,000.00
Doe, Jane::IT::2/28/2012::Payment $3,461.54::FULL TIME::Annual Salary $85,000.00::Manager Compensation $192.31
Doe, Jane::ECE::8/1/2020::Payment $0.00::PART TIME::Hourly Rate $39.00::Hours worked this period: 0
Doe, Jane::ECE::3/31/2005::Payment $0.00::FULL TIME::Annual Salary $69,900.00
Doe, Jane::ECE::6/28/2012::Payment $0.00::FULL TIME::Annual Salary $96,756.00::Director Compensation $461.54
Doe, Jane::IT::7/1/2020::Payment $0.00::PART TIME::Hourly Rate $25.90::Hours worked this period: 0
Doe, Jane::IT::1/1/2005::Payment $0.00::FULL TIME::Annual Salary $78,000.00
'it' is not a valid department code.
'ece' is not a valid department code.
'cs' is not a valid department code.
'AA' is not a valid department code.
Employee added.
2/2/200 is not a valid date!
6/29/2021 is not a valid date!
Calculation of employee payments is done.
--Printing earning statements for all employees--
Doe, Jane::CS::7/1/2020::Payment $0.00::PART TIME::Hourly Rate $45.90::Hours worked this period: 0
Doe, Jane::ECE::1/1/2005::Payment $3,269.23::FULL TIME::Annual Salary $85,000.00
Doe, Jane::IT::2/28/2012::Payment $3,461.54::FULL TIME::Annual Salary $85,000.00::Manager Compensation $192.31
Doe, Jane::ECE::8/1/2020::Payment $0.00::PART TIME::Hourly Rate $39.00::Hours worked this period: 0
Doe, Jane::ECE::3/31/2005::Payment $2,688.46::FULL TIME::Annual Salary $69,900.00
Doe, Jane::ECE::6/28/2012::Payment $4,182.92::FULL TIME::Annual Salary $96,756.00::Director Compensation
Doe, Jane::IT::7/1/2020::Payment $0.00::PART TIME::Hourly Rate $25.90::Hours worked this period: 0
Doe, Jane::IT::1/1/2005::Payment $3,000.00::FULL TIME::Annual Salary $78,000.00
Doe, Jane::CS::2/29/2012::Payment $2,692.31::FULL TIME::Annual Salary $70,000.00
Working hours set.
--Printing earning statements for all employees--
Doe, Jane::CS::7/1/2020::Payment $0.00::PART TIME::Hourly Rate $45.90::Hours worked this period: 0
Doe, Jane::ECE::1/1/2005::Payment $3,269.23::FULL TIME::Annual Salary $85,000.00
Doe, Jane::IT::2/28/2012::Payment $3,461.54::FULL TIME::Annual Salary $85,000.00::Manager Compensation $192.31
Doe, Jane::ECE::8/1/2020::Payment $0.00::PART TIME::Hourly Rate $39.00::Hours worked this period: 100
Doe, Jane::ECE::3/31/2005::Payment $2,688.46::FULL TIME::Annual Salary $69,900.00
Doe, Jane::ECE::6/28/2012::Payment $4,182.92::FULL TIME::Annual Salary $96,756.00::Director Compensation
$461.54
Doe, Jane::IT::7/1/2020::Payment $0.00::PART TIME::Hourly Rate $25.90::Hours worked this period: 0
Doe, Jane::IT::1/1/2005::Payment $3,000.00::FULL TIME::Annual Salary $78,000.00
Doe, Jane::CS::2/29/2012::Payment $2,692.31::FULL TIME::Annual Salary $70,000.00
Employee removed.
Employee removed.
Employee removed.
--Printing earning statements for all employees--
Doe, Jane::ECE::1/1/2005::Payment $3,269.23::FULL TIME::Annual Salary $85,000.00
Doe, Jane::IT::2/28/2012::Payment $3,461.54::FULL TIME::Annual Salary $85,000.00::Manager Compensation $192.31
Doe, Jane::ECE::8/1/2020::Payment $0.00::PART TIME::Hourly Rate $39.00::Hours worked this period: 100
Doe, Jane::ECE::6/28/2012::Payment $4,182.92::FULL TIME::Annual Salary $96,756.00::Director Compensation
$461.54
```

```
Doe, Jane::IT::1/1/2005::Payment $3,000.00::FULL TIME::Annual Salary $78,000.00
Doe, Jane::CS::2/29/2012::Payment $2,692.31::FULL TIME::Annual Salary $70,000.00
Employee does not exist.
Employee does not exist.
Employee does not exist.
--Printing earning statements by department--
Doe, Jane::CS::2/29/2012::Payment $2,692.31::FULL TIME::Annual Salary $70,000.00
Doe, Jane::ECE::8/1/2020::Payment $0.00::PART TIME::Hourly Rate $39.00::Hours worked this period: 100
Doe, Jane::ECE::6/28/2012::Payment $4,182.92::FULL TIME::Annual Salary $96,756.00::Director Compensation
$461.54
Doe, Jane::ECE::1/1/2005::Payment $3,269.23::FULL TIME::Annual Salary $85,000.00
Doe, Jane::IT::1/1/2005::Payment $3,000.00::FULL TIME::Annual Salary $78,000.00
Doe, Jane::IT::2/28/2012::Payment $3,461.54::FULL TIME::Annual Salary $85,000.00::Manager Compensation $192.31
--Printing earning statements by date hired--
Doe, Jane::ECE::1/1/2005::Payment $3,269.23::FULL TIME::Annual Salary $85,000.00
Doe, Jane::IT::1/1/2005::Payment $3,000.00::FULL TIME::Annual Salary $78,000.00
Doe, Jane::IT::2/28/2012::Payment $3,461.54::FULL TIME::Annual Salary $85,000.00::Manager Compensation $192.31
Doe, Jane::CS::2/29/2012::Payment $2,692.31::FULL TIME::Annual Salary $70,000.00
Doe, Jane::ECE::6/28/2012::Payment $4,182.92::FULL TIME::Annual Salary $96,756.00::Director Compensation
$461.54
Doe, Jane::ECE::8/1/2020::Payment $0.00::PART TIME::Hourly Rate $39.00::Hours worked this period: 100
Employee added.
Employee added.
Employee added.
Salary cannot be negative.
Employee added.
Pay rate cannot be negative.
Employee added.
--Printing earning statements for all employees--
Doe, Jane::ECE::1/1/2005::Payment $3,269.23::FULL TIME::Annual Salary $85,000.00
Doe, Jane::IT::1/1/2005::Payment $3,000.00::FULL TIME::Annual Salary $78,000.00
Doe, Jane::IT::2/28/2012::Payment $3,461.54::FULL TIME::Annual Salary $85,000.00::Manager Compensation $192.31
Doe, Jane::CS::2/29/2012::Payment $2,692.31::FULL TIME::Annual Salary $70,000.00
Doe, Jane::ECE::6/28/2012::Payment $4,182.92::FULL TIME::Annual Salary $96,756.00::Director Compensation
Doe, Jane::ECE::8/1/2020::Payment $0.00::PART TIME::Hourly Rate $39.00::Hours worked this period: 100
Doe, John::CS::2/29/2008::Payment $0.00::FULL TIME::Annual Salary $85,000.00::Manager Compensation $192.31
Brown, Charlie::IT::10/28/2012::Payment $0.00::FULL TIME::Annual Salary $75,500.00::DepartmentHead
Compensation $365.38
Doe, John::CS::7/11/2019::Payment $0.00::PART TIME::Hourly Rate $40.00::Hours worked this period: 0
Moore, Lucy::CS::1/31/2012::Payment $0.00::FULL TIME::Annual Salary $70,000.00
\texttt{Doe,Jane::IT::} 7/1/2020::\texttt{Payment $0.00::PART TIME::Hourly Rate $22.00::Hours worked this period: 0}
Working hours set.
Working hours set.
Calutlation of employee payments is done.
--Printing earning statements by department--
Doe, Jane::CS::2/29/2012::Payment $2,692.31::FULL TIME::Annual Salary $70,000.00
Doe, John::CS::2/29/2008::Payment $3,461.54::FULL TIME::Annual Salary $85,000.00::Manager Compensation $192.31
Doe, John::CS::7/11/2019::Payment $3,200.00::PART TIME::Hourly Rate $40.00::Hours worked this period: 80
Moore,Lucy::CS::1/31/2012::Payment $2,692.31::FULL TIME::Annual Salary $70,000.00
Doe, Jane::ECE::6/28/2012::Payment $4,182.92::FULL TIME::Annual Salary $96,756.00::Director Compensation
$461.54
Doe, Jane::ECE::8/1/2020::Payment $4,290.00::PART TIME::Hourly Rate $39.00::Hours worked this period: 100
Doe, Jane::ECE::1/1/2005::Payment $3,269.23::FULL TIME::Annual Salary $85,000.00
Brown, Charlie::IT::10/28/2012::Payment $3,269.23::FULL TIME::Annual Salary $75,500.00::DepartmentHead
Compensation $365.38
Doe, Jane::IT::2/28/2012::Payment $3,461.54::FULL TIME::Annual Salary $85,000.00::Manager Compensation $192.31
Doe, Jane::IT::1/1/2005::Payment $3,000.00::FULL TIME::Annual Salary $78,000.00
Doe, Jane::IT::7/1/2020::Payment $1,694.00::PART TIME::Hourly Rate $22.00::Hours worked this period: 77
Employee added.
Working hours cannot be negative.
Invalid Hours: over 100.
Invalid Hours: over 100.
```

--Printing earning statements by date hired-Doe, Jane::ECE::1/1/2005::Payment \$3,269.23::FULL TIME::Annual Salary \$85,000.00
Doe, Jane::IT::1/1/2005::Payment \$3,000.00::FULL TIME::Annual Salary \$78,000.00
Doe, John::CS::2/29/2008::Payment \$3,461.54::FULL TIME::Annual Salary \$85,000.00::Manager Compensation \$192.31
Moore, Lucy::CS::1/31/2012::Payment \$2,692.31::FULL TIME::Annual Salary \$70,000.00
Doe, Jane::IT::2/28/2012::Payment \$3,461.54::FULL TIME::Annual Salary \$85,000.00::Manager Compensation \$192.31
Doe, Jane::CS::2/29/2012::Payment \$2,692.31::FULL TIME::Annual Salary \$70,000.00
Doe, Jane::ECE::6/28/2012::Payment \$4,182.92::FULL TIME::Annual Salary \$96,756.00::Director Compensation \$461.54
Brown, Charlie::IT::10/28/2012::Payment \$3,269.23::FULL TIME::Annual Salary \$75,500.00::DepartmentHead Compensation \$365.38
Harrison, Rob::CS::10/31/2018::Payment \$3,282.51::PART TIME::Hourly Rate \$32.99::Hours worked this period: 93
Doe, John::CS::7/11/2019::Payment \$3,200.00::PART TIME::Hourly Rate \$40.00::Hours worked this period: 77
Doe, Jane::ECE::8/1/2020::Payment \$4,290.00::PART TIME::Hourly Rate \$22.00::Hours worked this period: 77
Doe, Jane::ECE::8/1/2020::Payment \$4,290.00::PART TIME::Hourly Rate \$39.00::Hours worked this period: 100

Payroll Processing completed.

Working hours set.

Calutlation of employee payments is done.