【2018JAVA 物件導向程式設計 Homework14】

注意事項

- 1. 請使用 JAVA 語言,配合 IntelliJ IDEA 寫本次作業並進行測試,並安裝、使用 JAVA SE Development Kit(JDK) 8 函式庫。
 - 2. 請依據作業規定設定 IntelliJ IDEA 專案名稱與 package name,若未依照規定將根據狀況扣分。
 - 3. 嚴禁抄襲其他同學作業,參與者(抄襲與被抄襲)本學期總成績不及格處 理。
 - 4. 請對你的程式碼有深入瞭解, demo 時助教會問。
 - 5. 對題目有問題可以寄信問助教群(java_ta@net.nsysu.edu.tw) 或是到實驗室(EC5018)詢問,但不幫忙 debug。
 - 6. 逾期以零分計算,不接受補交,有任何因素導致無法如期繳交,請事 先告知;Demo 時間會另外通知。

● 作業規定與上傳

- 1. IntelliJ IDEA 專案名稱:<學號>_HW14
- 2. Package path:myjava.homework
- 3. 作業請繳交專案之 tar 或 zip archive 並上傳至網路大學。
- 4. 請於 2018 年 6 月 21日(週四) 23:59 前上傳完畢,逾期以零分計算,不接受補交,再次強調,有任何因素導致無法如期繳交,請事先告知,Demo 時間另外通知。



<<interface>> **Employee**

calculatePay():double checkPromotionEligibility():boolean <<interface>> Shop

COMMISSION RATE:double

TAX:double

calculateCommission():double

calculateStoreRevenue(double):double



StoreEmployee

- -numberOfHoursWorked:double
- -hourlyRate:double
- -storeDetails:String
- -basePay:double
- -employeeName:String
- +StoreEmployee(double, double, String, double, String)
- +calculatePay():double
- +checkPromotionEligibility():boolean
- +calculateCommission():double
- +calculateStoreRevenue(double):double
- +getBasePay():double
- +getEmployeeName():String
- +getHourlyRate():double
- +getNumberOfHoursWorked():double

Manager

- -bonusRate:double
- -salesDone:double
- -totalStoreSales:double
- +Manager(double, double, double, String,
- double, String)
- +calculatePay():double
- +checkPromotionEligibility():boolean
- +getTotalStoreSales():double
- +salesPercentBvManager():double

Seller

- -salesRate:double
- +Seller(double, double, double,
- String, String, double)
 +calculateCommission():double
- +calculatePay():double
- +checkPromotionEligibility():boolean
- +getSalesRate():double

請根據上方UML圖製作報表分析升遷系統(除以上提供方法外可自行增加所需的方法或屬性)

- 1.讀取附件所提供之報表,並且以report.txt作為輸出
- 2.圖中Manager、Seller為繼承StoreEmployee,而Employee、Shop為interface介面
- 3.Shop內COMMISION_RATE與TAX皆為0.15
- 4.Seller:
- (1)銷售率(salesRate)<mark>超過30%</mark>則可以獲得Commision (basepay * commision_Rate)
- (2)升遷條件: 當基本薪資 + Commision + (工作時數 * 時薪)大於25000且銷售率不得低於10%即可升遷
- 5.Manager:
- (1)Manager個人銷售價若大於25000則bonus rate為15%,若介於5000~25000則為10%,低於5000則為1%
- (2) Sales Percent: Manager Sales Done/Total Store Sales
- (3)升遷條件:當Bonus + (基本薪資 + 工作時數 * 時薪)大於50000,即為 GrossPayment > 50000,並且SalesPercent不得低於50%與StoreRevenue不得低於自身基本薪資4倍即可升遷
- 6.StoreEmployee:
- (1)StoreRevenue:

公司總銷售 - 州稅 - 支付給該經理之金額(Grosspayment) - 營業稅

(PS. 營業稅為總銷售若大於255000則收5%, 介於155000~255000收3%, 低於155000收1%)

州稅:公司總銷售*稅率 營業稅:公司總銷售*營業稅率

以下為附件資料之說明:

9	Manager	position
10	Level1	Level
11	Mark	Name
12	28000	Base pay
13	25	Work hours
14	533	Payment of hour
15	17403	Sales Done
16	203396	Total sale
17		
18	SalesAss	ociationposition
19	Level2	Level
20	Bill	Name
21	19000	Base pay
22	15	Work hours
23	229	Payment of hour
24	34	Sale rate
	9.1	

Sample Output:(此為示意圖,與功課內附加檔案數值不同)

Number of employees working as MANAGER are: 1

Manager Details:
 Store Details: Level3
 Employee Name: Aaron
 Base Pay: \$30000.0

Number of Hours worked: 40.0hrs Payment Rate per hour: \$600.0/hr Total Sales in store: \$300000.0

Sales done: \$150000.0

Percentage of sales done: 50.00%

Gross Payment: \$62100.0

Remaining store revenue: \$186105.0

Is Aaron eligible for promotion? Yes, he/she is

Sales Associate Details:

Store Details: Level2 Employee Name: April Base Pay: \$19000.0

Number of Hours worked: 20.0hrs Payment Rate per hour: \$300.0/hr

Sales Rate: 50.0%

Total commission: \$1900.0 Gross Payment: \$26900.0

Is April eligible for promotion? Yes, he/she is eligible