

Class XII (IP)
Holiday Home work Assignment

JAVA Design Problems

Glamour garments has develop GUI Application for their company as shown below:



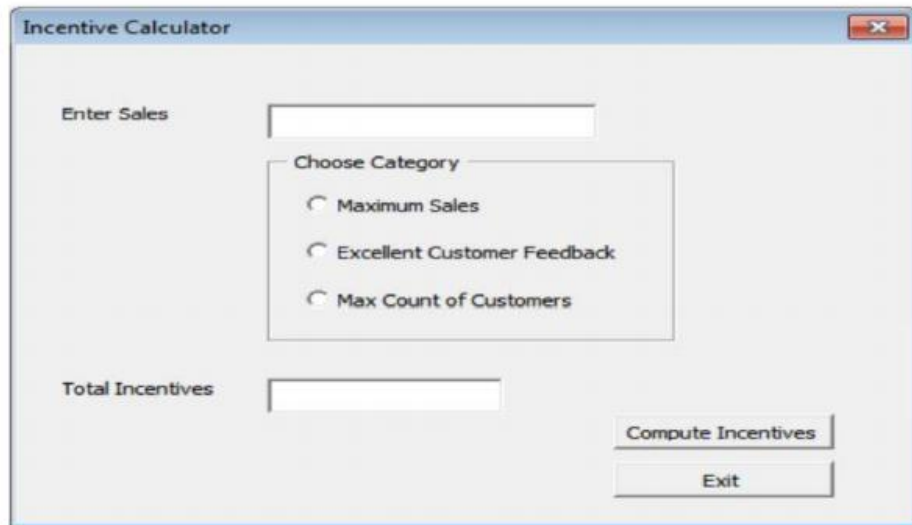
The company accept payments in 3 modes – Cheque, Cash and Credits Cards. The discount given as per mode of payments is as follows:

Mode of Payment	Discount
Cash	8%
Cheque	7%
Credit Card	Nil

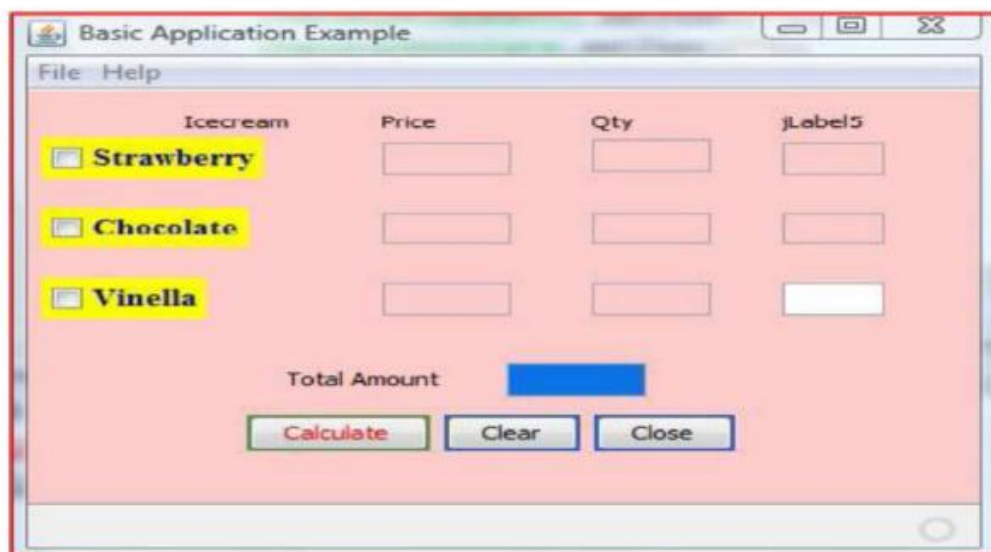
- a. If the bill amount is more tan 15000 then additional 10% discount on bill amount will be given.
 - b. Make discount and net amount non editable and write code to calculate them.
 - c. Write exit and reset code.
1. Create a Java Desktop Application to find the incentive (%) of Sales for a Sales Person on the basis of following feedbacks:

Feedback	Incentive (%)
Maximum Sales	10
Excellent Customer Feedback	8
Maximum Count Customer	5

Note: that the sales entry should not be space. Calculate the total incentive as : Sales amount* Incentive. The feedback will be implemented in JCheckBox controls. Using a JButton's (Compute Incentive) click event handler, display the total incentives in a JTextField control. Assume the nomenclature of the swing components of your own. Note that the JFrame from IDE window will be shown as given:



2. Assume the following interface built using Net beans used for bill calculation of a ice-cream parlor. The parlor offers three varieties of ice-cream – vanilla, strawberry, chocolate. Vanilla ice-cream costs Rs. 30, Strawberry Rs. 35 and Chocolate Rs. 50. A customer can choose one or more ice-creams, with quantities more than one for each of the variety chosen. To calculate the bill parlor manager selects the appropriate check boxes according to the varieties of ice-cream chosen by the customer and enter their respective quantities. Write Java code for the following:
- On the click event of the button ‘Calculate’, the application finds and displays the total bill of the customer. It first displays the rate of various ice-creams in the respective text fields. If a user doesn’t select a check box, the respective ice-cream rate must become zero. The bill is calculated by multiplying the various quantities with their respective rate and later adding them all.
 - On the Click event of the clear button all the text fields and the check boxes get cleared.
 - On the click event of the close button the application gets closed.



3. Read the following case study and answer the questions that follow.
- TeachWell Public School wants to computerize the employee salary section. The School is having two categories of employees :
 - Teaching and Non Teaching.** The Teaching employees are further categorized into PGTs, TGTs and PRTs having different Basic salary.
 - The School gives addition pay of 3000 for employees who are working for more than 10 years.

Employee Type	Basic Salary	DA (% of Basic Sal)	HRA (% of Basic Sal)	Deductions (% of Basic sal)
Non-Teaching	25001	31	30	12
PGT	14500	30	30	12
TGT	12500	21	30	12
PRT	11500	20	25	12

- a. Write the code to calculate the Basic salary, deductions, gross salary and net salary based on the given specification. Add 3000 to net salary if employee is working for more than 10 years.

$$\text{Gross salary} = \text{Basic salary} + \text{DA} + \text{HRA}$$

$$\text{Net salary} = \text{Gross salary} - \text{deductions}$$
 - b. Write the code to exit the application.
 - c. Write the code to disable text fields for gross salary, deductions and netsalary.
4. ABC School uses the following interface built in java to check the eligibility of a student for a particular stream from science, commerce and humanities. The user first enters the total percentage and selects the desired stream by selecting the appropriate option button. An additional 5% is marks is given to students of NCC. Write Java Code for the following
- a. On Action event of the button 'Calc Percentage' Net percentage of the student is calculated and displayed in the appropriate text filed. Net percentage is same as that of the actual percentage if the student doesn't opts for NCC otherwise 5% is added to actual percentage.
 - b. On Action event of the button 'Result', the application checks the eligibility of the students. And display result in the appropriate text field. Minimum percentage for science is 70, 60 for commerce and 40 for humanities.
 - c. On the Click event of the clear button all the text fields and the check boxes get cleared.
 - d. On the click event of the close button the application gets closed.

SQL Problems

1. Consider the following tables ACTIVITY and COACH. Write SQL commands for the statements (i) to (iv) and give outputs for SQL queries (v) to (viii).

Table: ACTIVITY

ACode	ActivityName	ParticipantsNum	PrizeMoney	ScheduleDate
1001	Relay 100x4	16	10000	23-Jan-2004
1002	High jump	10	12000	12-Dec-2003
1003	Shot Put	12	8000	14-Feb-2004
1005	Long Jump	12	9000	01-Jan-2004
1008	Discuss Throw	10	15000	19-Mar-2004

Table: COACH

PCode	Name	ACode
1	Ahmad Hussain	1001
2	Ravinder	1008
3	Janila	1001
4	Naaz	1003

- To display the name of all activities with their ACodes in descending order.
 - To display sum of PrizeMoney for each of the Number of participants groupings (as shown in column ParticipantsNum 10,12,16).
 - To display the coach's name and ACodes in ascending order of ACode from the table COACH.
 - To display the content of the GAMES table whose ScheduleDate earlier than 01/01/2004 in ascending order of ParticipantNum.
 - SELECT COUNT(DISTINCT ParticipantsNum) FROM ACTIVITY;
 - SELECT MAX(ScheduleDate),MIN(ScheduleDate) FROM ACTIVITY;
 - SELECT SUM(PrizeMoney) FROM ACTIVITY;
 - SELECT DISTINCT ParticipantNum FROM COACH;
2. Consider the following tables GAMES and PLAYER. Write SQL commands for the statements (i) to (iv) and give outputs for SQL queries (v) to (viii).

Table: GAMES

GCode	GameName	Number	PrizeMoney	ScheduleDate
101	Carom Board	2	5000	23-Jan-2004
102	Badminton	2	12000	12-Dec-2003
103	Table Tennis	4	8000	14-Feb-2004
105	Chess	2	9000	01-Jan-2004
108	Lawn Tennis	4	25000	19-Mar-2004

Table: PLAYER

PCode	Name	Gcode
1	Nabi Ahmad	101
2	Ravi Sahai	108
3	Jatin	101
4	Nazneen	103

- To display the name of all Games with their Gcodes.
- To display details of those games which are having PrizeMoney more than 7000.
- To display the content of the GAMES table in ascending order of ScheduleDate.
- To display sum of PrizeMoney for each of the Number of participation groupings (as shown in column Number 2 or 4).
- SELECT COUNT(DISTINCT Number) FROM GAMES;

- vi. SELECT MAX(ScheduleDate),MIN(ScheduleDate) FROM GAMES;
- vii. SELECT SUM(PrizeMoney) FROM GAMES;
- viii. SELECT DISTINCT Gcode FROM PLAYER;

3. Consider the following tables HOSPITAL. Give outputs for SQL queries (i) to (iv) and write SQL commands for the statements (v) to (viii).

No	Name	Age	Department	Dateofadmin	Charge	Sex
1	Arpit	62	Surgery	21/01/06	300	M
2	Zayana	18	ENT	12/12/05	250	F
3	Kareem	68	Orthopedic	19/02/06	450	M
4	Abhilash	26	Surgery	24/11/06	300	M
5	Dhanya	24	ENT	20/10/06	350	F
6	Siju	23	Cardiology	10/10/06	800	M
7	Ankita	16	ENT	13/04/06	100	F
8	Divya	20	Cardiology	10/11/06	500	F
9	Nidhin	25	Orthopedic	12/05/06	700	M
10	Hari	28	Surgery	19/03/06	450	M

- i. Select SUM(Charge) from HOSPITAL where Sex='F';
- ii. Select COUNT(DISTINCT Department) from HOSPITAL;
- iii. Select SUM(Charge) from HOSPITAL group by Department;
- iv. Select Name from HOSPITAL where Sex='F' AND Age > 20;
- v. To show all information about the patients whose names are having four characters only.
- vi. To reduce Rs 200 from the charge of female patients who are in Cardiology department.
- vii. To insert a new row in the above table with the following data : 11, 'Rakesh', 45, 'ENT', {08/08/08}, 1200, 'M'
- viii. To remove the rows from the above table where age of the patient > 60.

4. Consider the following tables BOOKS. Write SQL commands for the statements (i) to (iv) and give outputs for SQL queries (v) to (viii).

Table : BOOKS

B Id	Book Name	Author Name	Publisher	Price	Type	Quantity
C01	Fast Cook	Lata Kapoor	EPB	355	Cookery	5
F01	The Tears	William Hopkins	First	650	Fiction	20
T01	My C++	Brain & Brooke	FPB	350	Text	10
T02	C++ Brain	A.W.Rossaine	TDH	350	Text	15
F02	Thunderbolts	Anna Roberts	First	750	Fiction	50

- i. To list the names from books of Text type.
- ii. To display the names and price from books in ascending order of their price.
- iii. To increase the price of all books of EPB publishers by 50.
- iv. To display the Book_Name, Quantity and Price for all C++ books.
- v. Select max(price) from books;
- vi. Select count(DISTINCT Publishers) from books where Price >=400;
- vii. Select Book_Name, Author_Name from books where Publishers = 'First';
- viii. Select min(Price) from books where type = 'Text';