**Problem 1**

**EMP salary raise and Retirement list**

**Emp**( eno(pk), ename, designation,address,sal,ph.no,dojoin,dob,deptno(fk))

**Dept**( deptno(pk),dname,Dept\_head)

**Project** (Pno, Deptno,eno, Pname)

**Emp\_History** (eno, retirement\_sal, address,date\_of\_retirement, years\_of\_experience)

Write a PL/SQL program to raise the salary of HR by 20%, R&D by 30% and all others by 10%. According to 31-03-2022 identify the retiring staffs (having age 55).

Query : Display all employees whose Dept\_Head is John.

**Problem 2**

**Hospital Discharge**

PL/SQL Trigger to backup discharge summary of patient during discharge. The patient has to pay Rs1000 for non ac and Rs1500 for Ac room per day. Also ensure that discharge is not possible on Sundays

Patient (pid, pname, department, dateofadmission, roomtype(ac/nonac), status(admit/Discharge))

Admit\_history(pid, pname, department, roomtype, daysadmitted, billamount)

Query: Display the patients who got discharge on 9 Feb 2023 with their bill amount.

**Problem 3**

Create the following relations with the given constraints:

Event (eventid, name, description,city)

Participant (playerid, name, eventid, gender, year)

Prizes (prizeid, prize-money, eventid, rank,year)

Winners (prizeid, playerid)

1. Choose appropriate primary keys for each table.

2. Choose foreign keys wherever needed.

3. Prize-money is of format xxxx.xx and maximum prize that can be awarded is

1500.00 and minimum prize awarded is 500.00

5. playerid should contain at least one digit character.

6. Event names cannot be repeated.

7. Player name, event name, prize-money and dateofevent cannot be blank.

8. Rank can take any of these values only - 1, 2, 3.

9. Prevent users from giving bogus gender values

**Questions**

* populate each relation with 10 tuples.
* Retrieve the names of the persons who have won the highest number of 1st, 2nd and 3rd prizes.
* Retrieve the name of events where all prize winners are females.
* Retrieve the name of the person who has won the highest amount of prize,

That is, if ‘Alice’ got two prices, the amount of prize would be the sum of prize money

* Retrieve the name of the events which do not have 3 prize winners.
* Retrieve the name of all 2nd prize winners along with the event name.

**Problem 4**

**College Admission**

To implement admission of the college

* + Close the admission of college after ’30-Nov-2021’
  + Update the number of vacancies and admitted after inserting/updating /deleting a student details in the admission table.

College\_vacancies(br\_id(pk),deptname,totalseats,admitted,vacancy)

admission(br\_id(fk),sid(auto\_generate),sname,Dob,Address,m\_phy,m\_che,m\_bio\_com,m\_maths,m\_tot)

Query: Display the students details applied for admission in CSE branch.

**Problem 5**

**Student Database**

PL/SQL procedure to calculate the Total marks and Grade of Dbms of students and add to corresponding tables.

Student (Rno, Name, dbms, os, maths, mp, lsd, pe,total\_marks(calculate using program))

Grade(rno, g\_dbms,g\_os,g\_maths, g\_mp, g\_lsd,g\_pe)

Grade calculation: (mark>90 -S, total between 80 – 90 A+, total between 80 – 90 A+ etc).

Query: Display the Marklist of students.

**Problem 6**

**Fees moderation**

To implement fee moderation for top 5 students of a class who is having marks greater than 1000/1200.

Student (regno, name, class, fee)

S5 CSE (regno, Sub1, Sub2, Sub3, Sub4, Sub5, Sub6, Sub7, Sub8, totalmarks)

The Sub is the mark of each subject out of 150. Using PL/SQL calculate total marks for each student in the class. Give a moderation of 10% for the top 5 students of a class and make necessary modifications in the table.

Query: Display the student details with their marks.

**Problem 7**

**Library database**

Tables:

BookDetails : Book\_No (pk),category (Educational,Fiction,Autobigraphy, Novel), book\_name, author, issued\_status(y/n)

Book\_issued :issueid(pk), std\_id (fk), Book\_No(fk), issued\_date, return\_date

StudentDetails : std\_id (pk), book\_No (fk), std\_name, Dept, Total\_fine(set default as 0)

Write a PL/SQL program to perform book return using procedure. Calculate the fine of a student in a library. If a book is already issued for more than 15 days, apply a fine of Rs2/ per day to that student.

Query: Display the Students who have taken Novels

**Problem 8**

**Bank Transaction**

Write a PL/SQL block to perform necessary updates in the account table upon each transaction ie withdraw/deposit. Make sure that minimum balance of Rs1000 is maintained in the account.

Account (Acno(pk), Cname, Balance)

Transaction (Acno(fk), tr\_date, amount, deposit/withdraw)

Query: Display the details of transaction done by Aswin

**Problem 9**

**Sales man Commission**

Write a PL/SQL block to perform the following action.

Calculate commissions for sales persons for the month of January and add the details into Commission. When the total sale is less than or equal to Rs.10,000 the rate of commission is 1% and if it is greater than 10,000 the commission will be 2% of sale amount.

Salesman\_Details (s\_id, s\_name, salary)

Sales (sid, sale\_amount, month)

Commission (sid, commission\_amount, month)

Query: Display the total salary of John in the month of Jan

**Problem 10**

**Sessional Marks**

Stud\_session(regno,s\_name,subjectname,ass1,ass2,mark1,mark2,atten%,sessional(initially 0),univ\_marks,Totalmarks(out of 150 and initially 0), status( Pass/Fail))

1. Marks for attendance (>=80 then 10, >=70 then 8, others 7). Attendance % should not be less than 65.
2. Mark 1 and mark 2 will be in 12.5. Sum of marks will be out of 25.
3. Assignment 1 and Assignment 2 will be in 15. Average of 2 assignments will be taken.

Write a PL/SQL procedure to calculate sessional mark, totalmark of all students for subject DBMS and modify the status of the subject. Pass mark needs 50% of total marks.