Department of Computer Science & Engineering, RUET

Question: CSE 502, Lab 7-8

Believe you enough confident about the SQL and Database Management System with appropriate constrains already. The following is a snapshot of IT procject for **Huon Contractors Pty Limited,** Canberra for the management of its construction project. You have been hired to develop an automatic system for the billing of the employee. Please provide right efforts for the optimal implementation of the following assignments.

Database Schema for a Employee-pay scenario

employee(**emp_id**, emp_name, dept_id, type_of_work, hourly_rate)
dept(**dept_id**, dept_name, dept_location)
address(**emp_id**, street_no, street_name, city, zip_code)
project(**project_id**, project_name, project_location)
ft_pt_work(project_id, emp_id, dept_id, num_of_hours)
salary(**emp_no**, basic, allowance, deduction, net_salary, salary_date)

Remarks:
type_of_work: defines the type of employment (e.g., full time/part time)
dept_name: could be Engineering, Foreman and Labor;
net_salary: is a derrive attaribute and calculated as **basic + allowance (i.e., 45 % of basic) – deduction (i.e., 9% of basic as super annuation + 25% tax of the basic)**

For the full time employee the basic is a standard rate and not less than 5000$ (apply check constraints), but, for the parttime employee the basic is **hourly_rate* num_of_hours** and the hourly rates is between **25$ to 60$** (i.e., apply check constraints) for a particular project.

For the above schema, perform the following—

1. List the names of all **Engineers** in **Googong Subdivision** project located at **Googong** city
2. List the names of all **Labour** in **Googong Subdivision** project located at **Googong** city who work more than *20 hours* per week.
3. Retrieve the names and addresses of all employees who work on at least one project located in **Burton Canberra** but whose department has no location in **Canberra**.
4. Retrieve the names of employees who work on both the **Googong Subdivision** and **Burton Highway** project
5. Create a view which lists out the emp_name, dept_name, type_of_work, basic, deduction, net_salary from the above relational databases.

Your report should contain the followings:

1. Introduction to the problem.
2. Problem statement.
3. Designed database (i.e., Relational or Entity Relationship model)
4. Submitted query including the create table/view at the Query processor.
5. Results/output
6. Conclusion

The report must be handwritten for the all the laboratory tasks and should not be copied by any means. Answer each question individually.