***SQL:***

**Employees**

| **EMP\_ID** | **FIRST\_NAME** | **LAST\_NAME** | **SALARY** | **JOINING\_DATE** | **DEPARTMENT** |
| --- | --- | --- | --- | --- | --- |
| 001 | Manish | Agarwal | 700000 | 2019-04-20 09:00:00 | HR |
| 002 | Niranjan | Bose | 20000 | 2019-02-11 09:00:00 | DA |
| 003 | Vivek | Singh | 100000 | 2019-01-20 09:00:00 | DA |
| 004 | Asutosh | Kapoor | 700000 | 2019-03-20 09:00:00 | HR |
| 005 | Vihaan | Banerjee | 300000 | 2019-06-11 09:00:00 | DA |
| 006 | Atul | Diwedi | 400000 | 2019-05-11 09:00:00 | Account |
| 007 | Satyendra | Tripathi | 95000 | 2019-03-20 09:00:00 | Account |
| 008 | Pritika | Bhatt | 80000 | 2019-02-11 09:00:00 | DA |

**Variables Details**

| **EMP\_REF\_ID** | **VARIABLES\_DATE** | **VARIABLES\_AMOUNT** |
| --- | --- | --- |
| 1 | 2019-02-20 00:00:00 | 15000 |
| 2 | 2019-06-11 00:00:00 | 30000 |
| 3 | 2019-02-20 00:00:00 | 42000 |
| 4 | 2019-02-20 00:00:00 | 14500 |
| 5 | 2019-06-11 00:00:00 | 23500 |

**Designation Table**

| **EMP\_REF\_ID** | **EMP\_TITLE** | **AFFECTED\_FROM** |
| --- | --- | --- |
| 1 | Asst. Manager | 2019-02-20 00:00:00 |
| 2 | Senior Analyst | 2019-01-11 00:00:00 |
| 8 | Senior Analyst | 2019-04 -06 00:00:00 |
| 5 | Manager | 2019-10-06 00:00:00 |
| 4 | Asst. Manager | 2019-12-06 00:00:00 |
| 7 | Team Lead | 2019-06-06 00:00:00 |
| 6 | Team Lead | 2019-09-06 00:00:00 |
| 3 | Senior Analyst | 2019-08-06 00:00:00 |

**Salary Updation Table**

| **EMP\_ID** | **SALARY** | **JOINING\_DATE** | **Project** |
| --- | --- | --- | --- |
| 001 | 700000 | 2019-04-20 09:00:00 | P1 |
| 008 | 80000 | 2019-02-11 09:00:00 | P2 |
| 003 | 100000 | 2019-01-20 09:00:00 | P3 |
| 004 | 700000 | 2019-03-20 09:00:00 | P1 |
| 005 | 300000 | 2019-06-11 09:00:00 | P1 |
| 004 | 570000 | 2019-01-20 09:00:00 | P4 |
| 002 | 20000 | 2019-02-11 09:00:00 | P3 |
| 008 | 68000 | 2019-01-11 09:00:00 | P2 |

Please use MSSQL/MYSQL/Oracle for the following, First question(Q1) is mandatory:

1. Write a SQL query to create these tables in your database with the following characteristics:
   * 1. Add the primary key “Emp\_ID” to the Employees Table.
     2. Add foreign key “EMP\_REF\_ID” in Variables Details and Designation Table and Salary Updation Table that references “Emp\_ID” in Employees Table
2. Write a query to get the employee details(full name and department) who received the highest and the least variables.
3. Create an empty table with the same structure as the Employees table
4. Write a query to get the designation that has got the highest and second lowest amount (salary + variables) for the whole year of 2019. Get the corresponding amount values.
5. Write a query to fetch the EmpIds that are present in Employees but not in Salary Updation.
6. Write a query to fetch only the odd rows from the Employees table.
7. Write a query to get the most recent salary for each employee. The resultant table should contain EmployeeID, RecentSalary, and Date columns.
8. Write a query to fetch the Employee details who are not working on any project.
9. Write a query to perform a cross join on the Employees table and Designation table.
10. Write a query to get the employee details who got their designations updated in the second half of the year 2019(July to December), sorted by the “variables\_amount” (highest to lowest) where the department name of the Employee has the letter ‘A’ in it.
11. Write a query/queries to use the cursor to store the Employees Name( full name) for the HR department into a variable called ‘emp\_names’.