**Technology**

**1)2Front-end** HTML, CSS, JavaScript, ReactJS.

**2)Back-end** i) Middle- java, Spring-boot, Micro-Services, Hibernate(ORM), Active MQ .

ii) Database- Oracle, DB2(in memory).

**Step1**

i)Download & Install Oracle & **remember password** that is asked while installing it .

ii)Download & install SQL Developer. Here we can write SQL query for oracle database.

**Step2** How to connect from oracle database?

i)Open **cmd prompt** & type **sqlplus** then press **enter**. (ii)**Username: system**, **password**: **oracle**

& thus Connect SQL developer to Oracle database.

**Step3** create database & create table & Write query in SQL developer .

**VARCHAR**   **VARCHAR2**

1)2Varchar is ANSI standard/created. varchar2 is oracle standard/created.

2)Varchar can store up to 2000 bytes of characters. varchar2 can store up to 4000bytes of characters.

3)Varchar occupies space for the null values. varchar2 does not occupy space for the null values.

4)Varchar is an external data type. varchar2 is an internal data type.

5)if you define a varchar of maximum size 10 , & If you enter value less than 10 digits in varchar then remaining space cannot be deleted, it uses total of 10 spaces.

If you define a varchar2 of maximum size 10 & If you enter value less than 10 digits in varchar2 then remaining space is automatically deleted.

Varchar is used to store character values.it is called dynamic data type. since it is dynamic memory will not be wasted.

**Note**-There is no difference between varchar & varchar2 in oracle. but it is advised not to use varchar for storing data, as it is reserved for future use for storing some other type of variable .Hence it is advised to use char datatype when the length of character string is fixed & will not change in the future. if the length of the character string is not fixed, then Varchar2 is used.

If init.ora parameter max\_String\_Size is default, the maximum length of a varchar2 can be 4000 bytes.

If init.ora parameter max\_String\_Size=extended, the maximum length of a varchar2 can be 32767 bytes.

**Q.2) Write SQL query for table.**

**Task SQL Query**

i)Describe table(with no duplicate & no null values)- desc table-Name;

ii)Insert data into table- a) *insert into table-Name values(val1,val2,val3…..);*

b) *insert into table-Name(col1,col2…….) values(val1,val2……);*

iii)Select col1,col2…. From table *Select \* from table -Name*;

iv)Find sum of two values a) *Select val1+val2 from dual;*

b) *select sum(salary) from employee where salary>20000;*

v)Drop table *drop table table-Name;*

vi)delete data from a particular Row a) *delete from table-Name where id=101;*

b) *delete from table-Name where id in(102,103);*

vii)Delete all data from table *truncate table-Name;*

**Q1).write a note on join, type of join ,outer join(left,right)?**

**Q2).What are the different types of constraints?**

**Q3).what is view?**

**Q4).what is trigger, commit, Rollback?**

**Q.5)What is the difference between drop, delete, truncate?**

**Q.6)SQL datatype- number,char,varchar2,date,blob(binary), clob;**