

## ASSIGNMENT 1: BASIC SQL

❖ Write the following Queries for Railway Schema.

Create the Railway schema using the commands in the Railway DDL script; The DDL script also contains a description of the railway Schema. Insert sample data using the command in the file SampleRailwayData.

1. Find pairs of stations (station codes) that have a track (direct connection) with distance less than 20Kms between them.

**Query:** select stcode1, stcode2, from track where distance < 20;

**Output:**

STCODE1	STCODE2
CST	BYC
CST	DR
CST	KRL
BYC	DR
BYC	KRL
GRP	TNA

```
mysql> select stcode1 ,stcode2 from track where distance <20;
+-----+-----+
| stcode1 | stcode2 |
+-----+-----+
| BYC     | DR      |
| BYC     | KRL     |
| CST     | BYC     |
| CST     | DR      |
| CST     | KRL     |
| GRP     | TNA     |
+-----+-----+
6 rows in set (0.00 sec)
```

## 2. Find the IDs of all the trains which have a stop at THANE

**Query:** select id from trainhalts where stcode = (select stcode from station where name='THANE');

**Output:**

ID
A65
KP11

```
mysql> select id from trainhalts where stcode=(select stcode from station where name='THANE');
+-----+
| id    |
+-----+
| A65   |
| KP11  |
+-----+
2 rows in set (0.00 sec)
```

## 3. Find the names of all trains that start at MUMBAI.

**Query:** select name from train where id in (select id from trainhalts where seqno=0 and stcode=(select stcode from station where name='MUMBAI'));

**Output:**

NAME
CST- AMR_LOCAL
CST-KYN

```
mysql> select name from train where id in (select id from trainhalts where seqno=0 and stcode=(select stcode from station where name='MUMBAI'));
+-----+
| name          |
+-----+
| CST-AMR_LOCAL |
| CST-KYN       |
+-----+
2 rows in set (0.00 sec)
```

**4. List all the stations in order of visit by the train 'CST-AMR\_LOCAL'.**

**Query:** select name from station where stcode in (select stcode from trainhalts where id=(select id from train where name='CST-AMR\_LOCAL'));

**Output:**

NAME
MUMBAI
BYCULLA
DADAR
KURLA
GHATKOPAR
THANE
DOMBIVALI
KALYAN
AMBARNATH

```
mysql> select name from station where stcode in (select stcode from trainhalts where id =(select id from train where name='CST-AMR_LOCAL'));
+-----+
| name |
+-----+
| MUMBAI |
| BYCULLA |
| DADAR |
| KURLA |
| GHATKOPAR |
| THANE |
| DOMBIVALI |
| KALYAN |
| AMBARNATH |
+-----+
9 rows in set (0.00 sec)
```