A Project Report submitted

For Database Management System (UCS310)

by

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CLASSROOM LOCATOR

Submitted to

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PATIALA, PUNJAB

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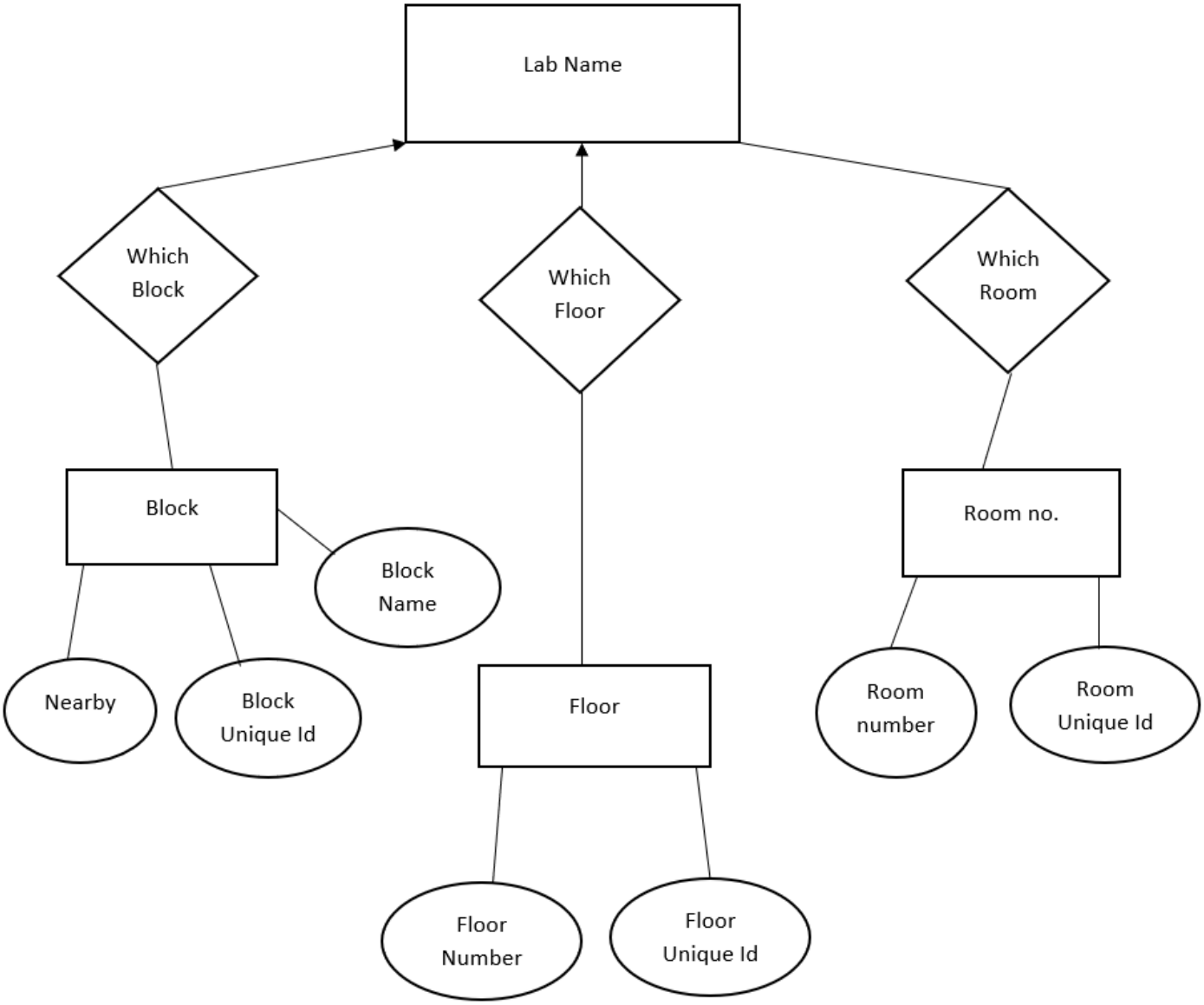
PROBLEM STATEMENT

We all, as students of Thapar boast of our huge campus but a huge campus with a lot of additional obstacles! Many students find it extremely frustrating to figure out where exactly the labs and halls stated in their time tables located. The solution we have developed aims to solve this issue. It provides an easy-to-use and convenient method to locate them. Even when we talk about examinations and sessional, the majority of the time the rooms allocated are completely alien to the students.

The website has a user-friendly and simple interface where you can enter the lab/hall name given in the time table and as a result, you will get the exact location of it in words with all the possible evident landmarks to make it even simpler, the room number, block and the level in which it is located. This would not just help save a lot of time and effort but make things less chaotic and more organized.

ER DIAGRAM


Lab Name
Which Block
Which Floor
Which Room
Block
Block Name
Nearby
Block Unique Id
Floor
Floor Number
Floor Unique Id
Room no.
Room number
Room Unique Id

ER TO TABLE

	COLUMN_NAME	DATA_TYPE
1	LAB_NAME	VARCHAR2(20 BYTE)
2	BLOCK_ID	VARCHAR2(10 BYTE)
3	FLOOR_ID	NUMBER(38,0)
4	ROOM_ID	NUMBER(38,0)

	COLUMN_NAME	DATA_TYPE
1	BLOCK_ID	VARCHAR2(10 BYTE)
2	BLOCK_NAME	VARCHAR2(20 BYTE)
3	NEARBY	VARCHAR2(20 BYTE)

	COLUMN_NAME	DATA_TYPE
1	ROOM_ID	NUMBER(38,0)
2	ROOM_NUMBER	NUMBER(38,0)

	COLUMN_NAME	DATA_TYPE
1	FLOOR_ID	NUMBER(38,0)
2	FLOOR_NUMBER	NUMBER(38,0)

NORMALIZATION

```
CREATE TABLE LAB (LAB_NAME VARCHAR(20),
BLOCK_NAME VARCHAR(20),  NEARBY VARCHAR(20),
FLOOR_NUMBER INT, ROOM_NUMBER INT);
```

```
CREATE TABLE LAB (LAB_NAME VARCHAR(20), LAB_ID
VARCHAR(10), FOREIGN KEY(LAB_ID) REFERENCES
DETAILS(LAB_ID));
CREATE TABLE DETAILS(LAB_ID VARCHAR(10) PRIMARY
KEY, BLOCK_NAME VARCHAR(20),  NEARBY VARCHAR(20),
FLOOR_NUMBER INT, ROOM_NUMBER INT);
```

```
CREATE TABLE BBLOCK(BLOCK_ID VARCHAR(10)
PRIMARY KEY, BLOCK_NAME VARCHAR(20), NEARBY
VARCHAR(20));
CREATE TABLE FLOOR(FLOOR_ID INT PRIMARY KEY,
FLOOR_NUMBER INT);
CREATE TABLE ROOM(ROOM_ID INT PRIMARY KEY,
ROOM_NUMBER INT);
CREATE TABLE LAB(LAB_NAME VARCHAR(20),BLOCK_ID
VARCHAR(10),FLOOR_ID INT,ROOM_ID INT,
FOREIGN KEY(BLOCK_ID) REFERENCES
BBLOCK(BLOCK_ID),
FOREIGN KEY(FLOOR_ID) REFERENCES FLOOR(FLOOR_ID),
FOREIGN KEY(ROOM_ID) REFERENCES ROOM(ROOM_ID));
```

SQL CODE

```
create table bblock(block_id varchar(10) primary key, block_name varchar(20),
nearby varchar(20));
create table floor(floor_id int primary key, floor_number int);
create table room(room_id int primary key, room_number int);
create table lab(lab_name varchar(20),block_id varchar(10),floor_id
int,room_id int,
foreign key(block_id) references bblock(block_id),
foreign key(floor_id) references floor(floor_id),
foreign key(room_id) references room(room_id));
insert into bblock values('L','CSED','Library and LT LP');
insert into floor values(00,00);
insert into floor values(01,01);
insert into floor values(02,02);
insert into floor values(03,03);
insert into floor values(04,04);
insert into floor values(05,05);
insert into room values(002,002);
insert into room values(004,004);
insert into room values(005,005);
insert into room values(009,009);
insert into room values(101,101);
insert into room values(102,102);
insert into room values(103,103);
insert into room values(104,104);
insert into room values(105,105);
insert into room values(201,201);
insert into room values(202,202);
insert into room values(206,206);
insert into room values(207,207);
insert into room values(209,209);
insert into room values(307,307);
insert into room values(308,308);
insert into room values(401,401);
insert into room values(402,402);
insert into room values(408,408);
insert into room values(409,409);
insert into room values(429,429);
insert into room values(430,430);
insert into lab values('G&A LAB','L',00,002);
insert into lab values('DSA LAB1','L',00,004);
```

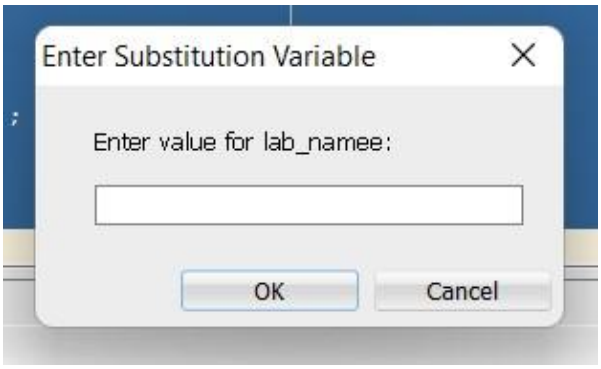
```
insert into lab values('DSA LAB2','L',00,005);
insert into lab values('ML LAB','L',00,009);
insert into lab values('ED LAB1','L',01,101);
insert into lab values('NS LAB1','L',01,102);
insert into lab values('NS LAB2','L',01,103);
insert into lab values('SE LAB1','L',01,104);
insert into lab values('SE LAB2','L',01,105);
insert into lab values('SS LAB1','L',02,201);
insert into lab values('SS LAB2','L',02,202);
insert into lab values('DMS LAB1','L',02,206);
insert into lab values('DMS LAB2','L',02,207);
insert into lab values('ED LAB2','L',02,209);
insert into lab values('AI LAB','L',03,307);
insert into lab values('DS LAB','L',03,308);
insert into lab values('ES LAB1','L',04,401);
insert into lab values('ES LAB2','L',04,402);
insert into lab values('IS LAB1','L',04,408);
insert into lab values('IS LAB2','L',04,409);
insert into lab values('CG LAB1','L',04,429);
insert into lab values('CG LAB2','L',04,430);
```

PL/SQL CODE

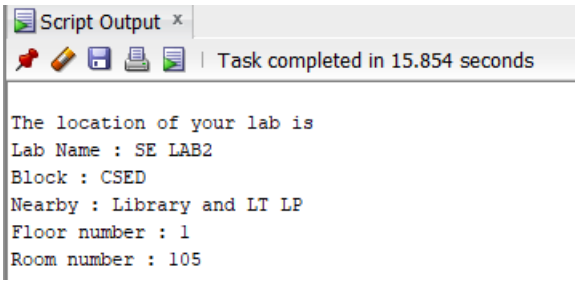
```
SET SERVERTOUTPUT ON;
SET VERIFY OFF;
SET FEEDBACK OFF;
declare
 lab_namee varchar(20);
 b_id varchar(10);
 f_id int;
 r_id int;
 bn varchar(10);
 nb varchar(20);
 fn int;
 rn int;
 cursor find_lab is select block_id, floor_id, room_id  from lab where
lab_name=lab_namee;
begin
 lab_namee:='&lab_namee';
 open find_lab;
 fetch find_lab into b_id,f_id,r_id;
 close find_lab;
 select block_name,nearby into bn,nb from bblock where block_id=b_id;
 select floor_number into fn from floor where floor_id=f_id;
 select room_number into rn from room where room_id=r_id;
 dbms_output.put_line ('The location of your lab is ');
 dbms_output.put_line ('Lab Name : '||lab_namee);
 dbms_output.put_line ('Block : '||bn);
 dbms_output.put_line ('Nearby : ' || nb);
 dbms_output.put_line ('Floor number : '||fn);
 dbms_output.put_line ('Room number : '||rn);
 exception when no_data_found then
  dbms_output.put_line('No such lab available in database');
 when others then
  dbms_output.put_line ('Error');
end;
```

INPUT / OUTPUT

Input Window



Output



Tables

BLOCK_ID	BLOCK_NAME	NEARBY
L	CSED	Library and LT LP

Download CSV

Bblock

FLOOR_ID	FLOOR_NUMBER
0	0
1	1
2	2
3	3
4	4
5	5

Download CSV
6 rows selected.

Floor

ROOM_ID	ROOM_NUMBER
2	2
4	4
5	5
9	9
101	101
102	102
103	103
104	104
105	105
201	201
202	202
206	206
207	207
209	209
307	307
308	308
401	401

Room

LAB_NAME	BLOCK_ID	FLOOR_ID	ROOM_ID
G&A LAB	L	0	2
DSA LAB1	L	0	4
DSA LAB2	L	0	5
ML LAB	L	0	9
ED LAB1	L	1	101
NS LAB1	L	1	102
NS LAB2	L	1	103
SE LAB1	L	1	104
SE LAB2	L	1	105
SS LAB1	L	2	201
SS LAB2	L	2	202
DMS LAB1	L	2	206
DMS LAB2	L	2	207
ED LAB2	L	2	209
AI LAB	L	3	307
DS LAB	L	3	308
ES LAB1	L	4	401
ES LAB2	L	4	402
IS LAB1	L	4	408
IS LAB2	L	4	409

Lab