DATABASE   SYSTEM
Project Phase2

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DATABASE SYSTEM	V1
SUBMITTED TO	KHAWAJA UABID UR RAHMAN

Project tittle:
School Management system

Phase 1: ERD
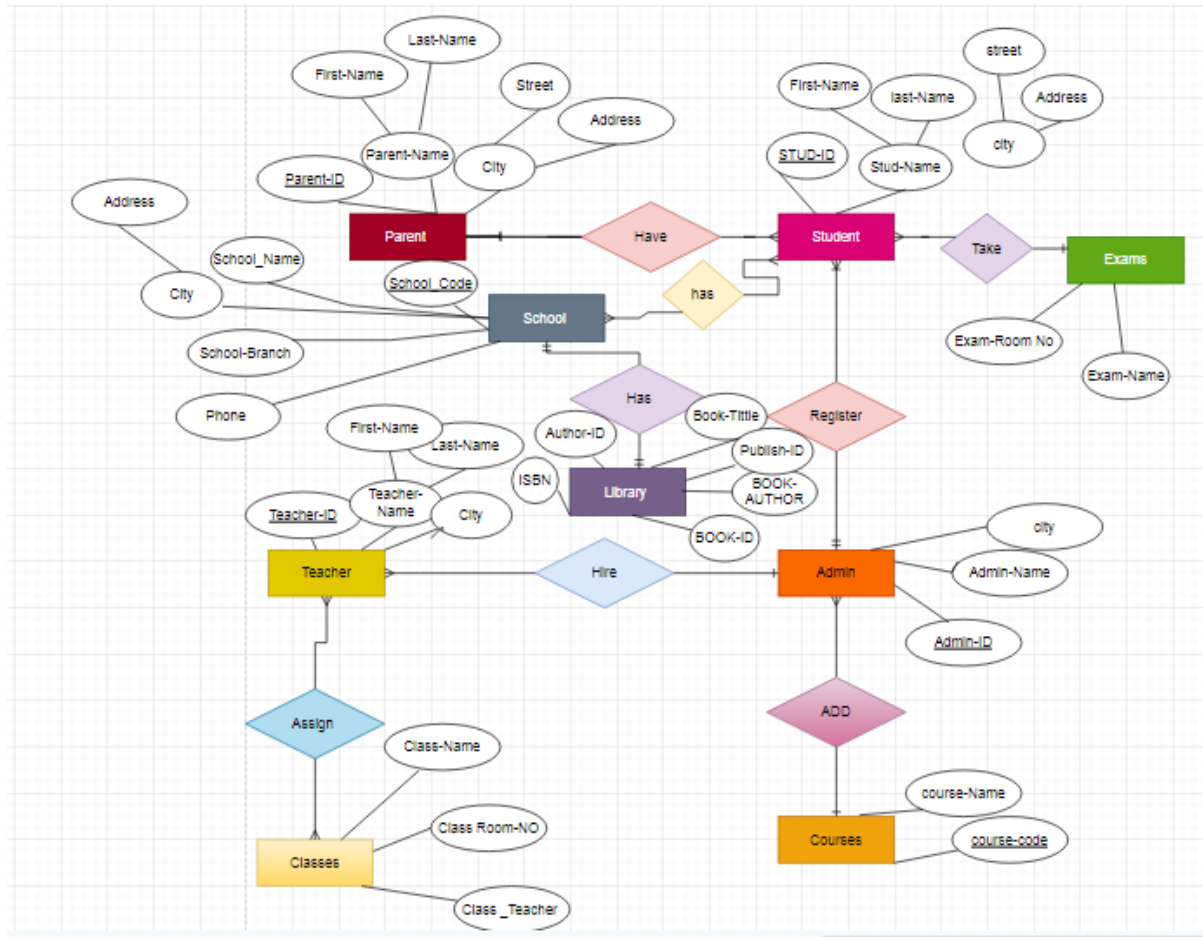
Student Table

Student_ID	Stud First_Name	Stud last_Name	City
1	Aliza	Ahmad	Lahore
2	Maria	Jawad	Karachi
3	Raffia	Asif	Islamabad

Table is in Normalize form

a. **Is there any partial dependency that exists in your tables?**
   No
b. **Have you found any transitive dependency in your tables?**
   No
c. **All your tables in 3rd NF?**
   No

Parent Table

Parent _ID	Parent First_Name	Parent last_Name	City
1	Bilal	Ahmad	Lahore
2	Ayesha	Jawad	Karachi
3	Khalid	Asif	Islamabad

Table is in Normalize form

a. **Is there any partial dependency that exists in your tables?**
   No
b. **Have you found any transitive dependency in your tables?**
   No
c. **All your tables in 3rd NF?**
   No

Teacher Table

Teacher_ID	Teacher First_Name	Teacher last_Name	City
1	Ahmad	Asif	Karachi
2	Maha	Jawad	Lahore
3	Ali	Awais	Islamabad

Table is in Normalize form

   a. **Is there any partial dependency that exists in your tables?**
      No
   b. **Have you found any transitive dependency in your tables?**
      No
   c. **All your tables in 3rd NF?**
      No

Admin Table

Admin	Admin First_Name	Admin Last_Name	City
1	Ahmad	Asif	Karachi
2	Maha	Jawad	Lahore
3	Ali	Awais	Islamabad

Table is in Normalize form

a. **Is there any partial dependency that exists in your tables?**
   No
b. **Have you found any transitive dependency in your tables?**
   No
c. **All your tables in 3rd NF?**
   No

Class Table

Class_no	Class_Name	Class Teacher
10	English	Rania
11	Urdu	Waniya
12	Math	Saniya

Table is in 1st and 2nd normal for

Teacher detail

Class_Name	Class Teacher
English	Rania
Urdu	Waniya
Math	Saniya

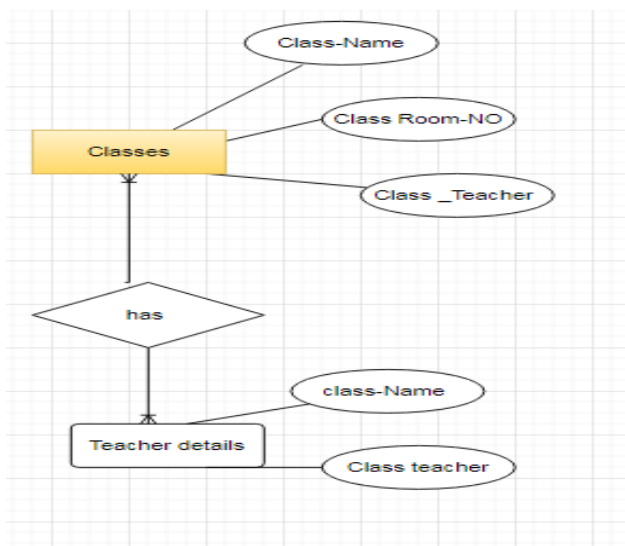a. **Is there any partial dependency that exists in your tables?**
   No
b. **Have you found any transitive dependency in your tables?**
   YES
c. **All your tables in 3rd NF?**

   YES

Course Table:

Course Code	course Name
001	English
009	Urdu
015	Math

Table is in Normalize form

a. **Is there any partial dependency that exists in your tables?**
   No
b. **Have you found any transitive dependency in your tables?**
   No
c. **All your tables in 3rd NF?**
   No

Exam table:

Exam Room No	Exam Name
23	Physics
24	Bio
25	Math

Table is in Normalize form

    a. **Is there any partial dependency that exists in your tables?**
       No
    b. **Have you found any transitive dependency in your tables?**
       No
    c. **All your tables in 3rd NF?**
       No

School Table

School code	School Name	Branch	Address	City	Phone no
A231	Punjab school	Johor town	1C2	Lahore	+923456773
B234	Punjab school	PIA	2C55	Lahore	+920988753
C456	Punjab school	MODEL Town	FJ block	Lahore	+9203564646
D786	Punjab school	Gulberg	M block	Lahore	04242450259

Table is in Normalize form

    a. **Is there any partial dependency that exists in your tables?**
       No
    b. **Have you found any transitive dependency in your tables?**
       No
    c. **All your tables in 3rd NF?**
       No

Library Table

Book_ID	Book_tittle	Author Id	Book_Author	Publish date	Isbn
23	Smart Money Smart Kids	1	Dave Ramsey	2014-04-29 00:00:00	**124578**
36	Smart Money Smart Kids	3	Rachel Cruz	2020-04-19 00:00:00	**354688**

2nd Normal form

Book Details

Book_ID	Book_tittle
23	Smart Money Smart Kids
36	Smart Money Smart Kids

Author Details

Book_tittle	Book_Author
Smart Money Smart Kids	Dave Ramsey
Smart Money Smart Kids	Rachel Cruz

3rd Normal form

Author details

Book_ID	Author Id	Book_Author
23	1	Dave Ramsey
36	3	Rachel Cruz

a.   Is there any partial dependency that exists in your tables?
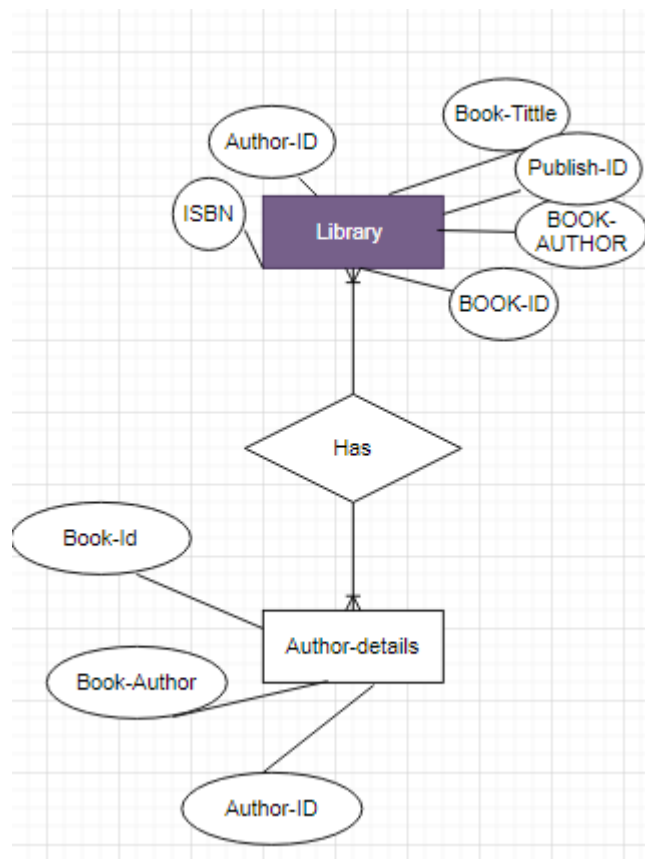   YES

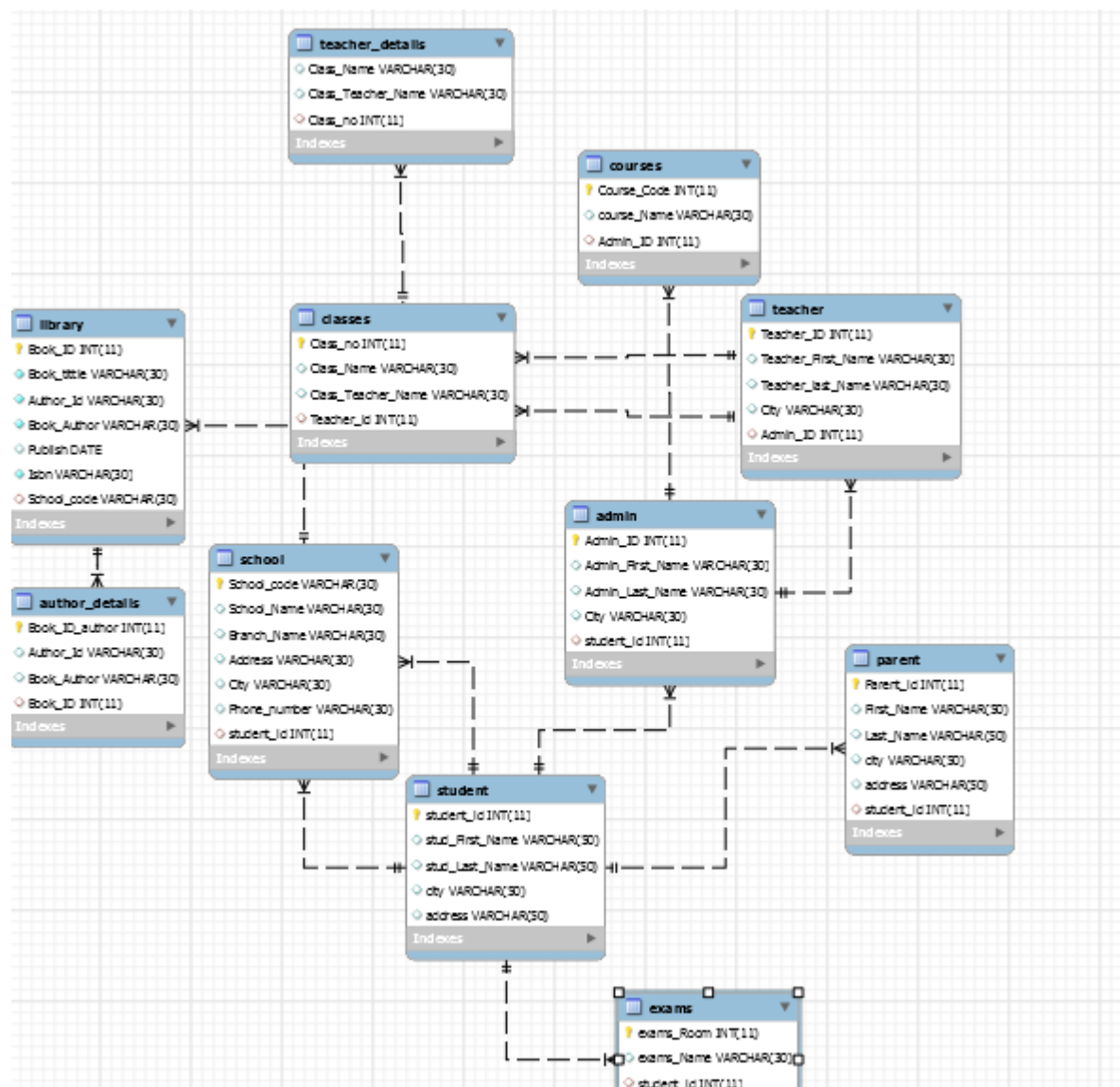B.   Have you found any transitive dependency in your tables?
YES

C.   All your tables in 3rd NF?
 YES

After step-1 create all tables in MYSQL Workbench (Paste screen shot Here of your normalized ER diagram using MySQL Workbench [hint: use reverse engineering in MYSQL Workbench]). Also paste screenshot of all tables.

After step-2 insert at-least 10 records and maximum as you can in all your

Tables. (Paste screenshot of output and query insertions)

```
42        (7,'ALI','khan','Rwalpindi','Cant area','7'),
43        (8,'saif', 'Rahman', 'Lahore', 'C1,township','8'),
44        (9,'Abdul-Rahman','khan' , 'karachi','12c1','9'),
45        (10,'Mansoor','Ali', 'lahore', '1c1 johor town','10');
46 ●   select * from parent;
47
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Parent_id	First_Name	Last_Name	city	address	student_id
1	Ahmad	Ali	Lahore	1c1 johor town	1
2	Raffia	Jawad	Karachi	1c3	2
3	Maria	Asif	Islamabad	E block	3
4	kamran	khan	Lahore	M block	4
5	Mahaab	jutt	Gujrat	c cant area	5
6	Aliza	Farooq	lahore	B_block fasil town	6
7	ALI	khan	Rwalpindi	Cant area	7
8	saif	Rahman	Lahore	C1,township	8
9	Abdul-Rahman	khan	karachi	12c1	9
10	Mansoor	Ali	lahore	1c1 johor town	10
NULL	NULL	NULL	NULL	NULL	NULL

```
Navigator                          project phase ×
SCHEMAS                            Limit to 1000 rows
Filter objects
▶ sales                    48
▼ school                   49 ● ⊟ create table exams(
  ▼ Tables                 50      exams_Room int primary key,
    ▶ courses              51      exams_Name varchar (30),
    ▶ classes              52      student_id int,
    ▶ author_details       53      FOREIGN KEY(student_id) REFERENCES student(student_id)
    ▶ admin                54    └ );
    ▶ exams                55
    ▶ library              56 ●    insert into exams values(101,'Englsih','1'),
    ▶ parent               57      (102,'Urdu','2'),(103,'Math','3'),
    ▶ school               58      (104,'Science','4'),(105,'Islamiyat','5'),
    ▶ student              59      (106,'physics','6'),(107,'Chemistry','7'),
    ▶ teacher              60      (108,'Bio','8'),(109,'Pak_study','9'),
    ▶ teacher_details      61      (110,'Arabics','10');
  Views                    62 ●    select * from exams;
  Stored Procedures        63
  Functions                64
▶ sys                      65
▶ task                     66 ● ⊟ create table school(
▶ test                     67      School_code varchar(30) primary key,
                           68      School_Name varchar(30),
                           69      Branch_Name varchar(30),
                           70      Address varchar(30),
                           71      City varchar(30),
                           72      Phone_number varchar(30),
                           73      student_id int,
                           74      FOREIGN KEY(student_id) REFERENCES student(student_id),
Management  Schemas        75      FOREIGN KEY(student_id) REFERENCES student(student_id)
                           76    └ );
```

```
58        (104,'Science','4'),(105,'Islamiyat','5'),
59        (106,'physics','6'),(107,'Chemistry','7'),
60        (108,'Bio','8'),(109,'Pak_study','9'),
61        (110,'Arabics','10');
62 •  select * from exams;
63
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell

exams_Room	exams_Name	student_id
101	Englsih	1
102	Urdu	2
103	Math	3
104	Science	4
105	Islamiyat	5
106	physics	6
107	Chemistry	7
108	Bio	8
109	Pak_study	9
110	Arabics	10
NULL	NULL	NULL

```
76      ┘);
77
78 •   insert into school values('A111','Punjab school','johor town','1C1','Lahore','+92345678930','1'),
79      ('A112','Punjab school','Johor studentstudentschooltown','1C2','Lahore','+92345677309','2'),
80      ('A113','Punjab school','PIA', '2C55', 'Lahore','+92098875322','3'),
81      ('A114','Punjab school','MODEL Town' ,'FJ block','Lahore','+9203564646','4'),
82      ('A115','Punjab school','Gulberg','M block','Lahore' ,'04242450259','5'),
83      ('A116','Punjab school','Muslim town','C2 block','Lahore','+9234567730','6'),
84      ('A118','Punjab school','PIA', '2j55', 'Lahore','+9200988753','7'),
85      ('A119','Punjab school','MODEL Town', 'F1 block','Lahore', '+92983564646','8'),
86      ('A120','Punjab school','Gulberg','M block', 'Lahore', '04242450259' ,'9'),
87      ('A121','Punjab school','johor town','1M1','Lahore','+92345678930','10');
88
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

School_code	School_Name	Branch_Name	Address	City	Phone_number	student_id
A111	Punjab school	johor town	1C1	Lahore	+92345678930	1
A112	Punjab school	Johor studentstudentschooltown	1C2	Lahore	+92345677309	2
A113	Punjab school	PIA	2C55	Lahore	+92098875322	3
A114	Punjab school	MODEL Town	FJ block	Lahore	+9203564646	4
A115	Punjab school	Gulberg	M block	Lahore	04242450259	5
A116	Punjab school	Muslim town	C2 block	Lahore	+9234567730	6
A118	Punjab school	PIA	2j55	Lahore	+9200988753	7

school 19 ✕

```
 91 ● ⊟ create table library (
 92        Book_ID int primary key,
 93        Book_tittle varchar(30) not NULL,
 94        Author_Id varchar(30) NOT NULL,
 95        Book_Author varchar(30) NOT NULL,
 96        Publish date,
 97        Isbn varchar(30) NOT NULL,
 98        School_code varchar(30),
 99        FOREIGN KEY(School_code) REFERENCES School(School_code)
100     └ );
101 ●    insert into library values (23,'Smart Money Smart Kids', '1','Dave Ramsey','014-04-29 00:00:00','124578','A111');
102 ●    insert into library values(36,'Smart Money Kids',    '2','Rachel Cruz','2020-04-19 00:00:00','354688','A112');
103 ●    insert into library values(37,'Smart Kids', '3','Cruz','2010-04-19 00:00:00','314688','A113');
104 ●    insert into library values(38,'Smart life', '4','Rachel Charless','2018-03-9 00:00:00','354288','A114');
105 ●    insert into library values(39,'Smart Girl', '5','Racal Cruz','2011-01-29 00:00:00','354682','A115');
106 ●    insert into library values(40,'Kids life',  '6','Manan','2017-04-9 00:00:00','354688','A116');
107 ●    insert into library values(42,'Cloud',      '8','Yayat','2014-10-17 00:00:00','1344688','A118');
108 ●    insert into library values(43,'Kids life',  '9','Rachel Cruz','2020-04-19 00:00:00','354688','A119');
109 ●    insert into library values(44,'SAFE life',  '10','Cruz','2016-12-3 00:00:00','354658','A120');
110 ●    insert into library values(45,'mountain life',  '11','Cruz','2017-12-13 00:00:00','354658','A121');
111 ●    select *from library;
112
113 ● ⊟ Create table Author_details(
114        Book_ID_author  int primary key,
115        Author_Id varchar(30),
116        Book_Author varchar(30),
117        Book_ID int,
118        foreign key (Book_id) references  library(book_id)
119     └ );
```

```
 99     └ FOREIGN KEY(School_code) REFERENCES School(School_code)
100     └ );
101 ●    insert into library values (23,'Smart Money Smart Kids', '1','Dave Ramsey','014-04-29 00:00:00','124578','A11
102 ●    insert into library values(36,'Smart Money Kids',   '2','Rachel Cruz','2020-04-19 00:00:00','354688','A112')
103 ●    insert into library values(37,'Smart Kids', '3','Cruz','2010-04-19 00:00:00','314688','A113');
104 ●    insert into library values(38,'Smart life', '4','Rachel Charless','2018-03-9 00:00:00','354288','A114');
105 ●    insert into library values(39,'Smart Girl', '5','Racal Cruz','2011-01-29 00:00:00','354682','A115');
106 ●    insert into library values(40,'Kids life',  '6','Manan','2017-04-9 00:00:00','354688','A116');
107 ●    insert into library values(42,'Cloud',      '8','Yayat','2014-10-17 00:00:00','1344688','A118');
108 ●    insert into library values(43,'Kids life',  '9','Rachel Cruz','2020-04-19 00:00:00','354688','A119');
109 ●    insert into library values(44,'SAFE life',  '10','Cruz','2016-12-3 00:00:00','354658','A120');
110 ●    insert into library values(45,'mountain life',  '11','Cruz','2017-12-13 00:00:00','354658','A121');
111 ●    select *from library;
```

Book_ID	Book_tittle	Author_Id	Book_Author	Publish	Isbn	School_code
23	Smart Money Smart Kids	1	Dave Ramsey	0014-04-29	124578	A111
36	Smart Money Kids	2	Rachel Cruz	2020-04-19	354688	A112
37	Smart Kids	3	Cruz	2010-04-19	314688	A113
38	Smart life	4	Rachel Charless	2018-03-09	354288	A114
39	Smart Girl	5	Racal Cruz	2011-01-29	354682	A115
40	Kids life	6	Manan	2017-04-09	354688	A116
42	Cloud	8	Yayan	2014-10-17	1344688	A118

```
116        Book_Author varchar(30),
117        Book_ID int,
118        foreign key (Book_id) references  library(book_id)
119     └ );
120
121 ●    insert into Author_details values (20    ,'1','Dave Ramsey' , '23'),(21,'2','Rachel Cruz','36'),
122        (22,'3','Cruz','37'),(23,'4','Rachel Charless','38'),(24,'5','Racal Cruz','39');
123 ●    insert into Author_details values(25,'6','Manan','40');
124 ●    insert into Author_details values(26,'8','Yayat','40');
125 ●    insert into Author_details values(28,'10','Cruz','42');
126 ●    insert into Author_details values(29,'11','Cruz','43');
127 ●    insert into Author_details values(30,'9','Rachel Cruz','44');
128 ●    select *from Author_details;
```

Book_ID_author	Author_Id	Book_Author	Book_ID
20	1	Dave Ramsey	23
21	2	Rachel Cruz	36
22	3	Cruz	37
23	4	Rachel Charless	38
24	5	Racal Cruz	39
25	6	Manan	40
26	8	Yayat	40

```
131  ●  ⊟ create table Admin(
132         Admin_ID int primary key,
133         Admin_First_Name varchar (30),
134         Admin_Last_Name varchar(30),
135         City varchar(30),
136         student_id int,
137         FOREIGN KEY(student_id) REFERENCES student(student_id)
138       └ );
139
140  ●     insert into Admin values (1 ,'Ahmad','Asif','Karachi','1'),
141         (2,'Maha','Jawad','Lahore','2'),
142         (3,'Ali','Awais','Islamabad','3'),
143         (4,'sajid','Ali','Lahore','4'),
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Admin_ID	Admin_First_Name	Admin_Last_Name	City	student_id
1	Ahmad	Asif	Karachi	1
2	Maha	Jawad	Lahore	2
3	Ali	Awais	Islamabad	3
4	sajid	Ali	Lahore	4
5	sidra	Mansoor	Gujrat	5
6	Ashraf	khan	islamabad	6
7	bilal	butt	Lahore	7

Admin 22 ×   Apply

```
152          |
153  ●  ⊟ Create table Teacher(
154         Teacher_ID int primary key,
155         Teacher_First_Name varchar(30),
156         Teacher_last_Name varchar(30),
157         City varchar(30),
158         Admin_ID int,
159         FOREIGN KEY(Admin_ID) REFERENCES Admin(Admin_ID)
160       └ );
161
162  ●     Insert into Teacher values(11,'Asif','Ahmad','Karachi','1'),
163         (12,'Jawad','Maha','Lahore','2'),
164         (13,'Ali','Awais','Islamabad','3'),
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content:

Teacher_ID	Teacher_First_Name	Teacher_last_Name	City	Admin_ID
11	Asif	Ahmad	Karachi	1
12	Jawad	Maha	Lahore	2
13	Ali	Awais	Islamabad	3
14	sajid	Ali	Lahore	4
15	sidra	Ali	Gujrat	5
16	zara	khan	islamabad	6
17	bilal	Abbas	Lahore	7

teacher 23 ×   Apply

```sql
174   Create table courses(
175   Course_Code int primary key,
176   course_Name varchar(30),
177   Admin_ID int,
178   FOREIGN KEY(Admin_ID) REFERENCES Admin(Admin_ID)
179   );
180
181   insert into courses values(101,'Math','1'),
182   (102,'English',2),(103,'urdu','3'),(104,'science','4'),
183   (105,'computer','5'),(106,'Bio','6'),(107,'physics','7'),(108,'chemistry','8'),
184   (109,'Arabic','9'),(110,'Islamiyat','10');
185   select * from courses;
186
```

Course_Code	course_Name	Admin_ID
101	Math	1
102	English	2
103	urdu	3
104	science	4
105	computer	5
106	Bio	6
107	physics	7

```sql
188   create table Classes(
189   Class_no int primary key,
190   Class_Name varchar(30),
191   Class_Teacher_Name varchar(30),
192   Teacher_id int,
193   FOREIGN KEY(Teacher_id) REFERENCES Teacher(Teacher_id),
194   FOREIGN KEY(Teacher_id) REFERENCES Teacher(Teacher_id)
195   );
196   insert into classes values (1,'sst','Asif','11');
197   insert into classes values(2,'SSH','Jawad','12'),
198   (3,'SSH','Ali','13'),
199   (4,'SBH','sajid','14'),
200   (5,'SL','Ali','15'),
201   (6,'SS','zara','16'),
202   (7,'SST','bilal','17'),
203   (8,'SHS','Tayyaba','18'),
204   (9,'SMS','Abdulllah','19'),
205   (20,'SST','Mahreen','20');
206
207   Select * from classes;
208
209
210   create table Teacher_Details(
211   Class_Name varchar (30),
212   Class_Teacher_Name varchar(30),
213   Class_no int,
214   FOREIGN KEY(Class_no) REFERENCES  classes(Class_no)
215   );
216
```

```
195   └);
196 ●   insert into classes values (1,'sst','Asif','11');
197 ●   insert into classes values(2,'SSH','Jawad','12'),
198     (3,'SSH','Ali','13'),
199     (4,'SBH','sajid','14'),
200     (5,'SL','Ali','15'),
201     (6,'SS','zara','16'),
```

Result Grid | Filter Rows: | Edit: | Export/Import: | Wrap Cell Content: 𝐈𝐀

Class_no	Class_Name	Class_Teacher_Name	Teacher_id
1	SML	sajid	11
2	SSH	Jawad	12
3	SSH	Ali	13
4	SBH	sajid	14
5	SL	Ali	15
6	SS	zara	16
7	SST	bilal	17
8	SHS	Tayyaba	18
9	SMS	Abdulllah	19
20	SST	Mahreen	20

```
216
217 ●   insert into Teacher_Details values ('sst','Asif','1'),('SSH','Jawad','2');
218 ●   insert into Teacher_Details values ('SSH','Ali','3'),
219     ('SBH','sajid','4');
220 ●   insert into Teacher_Details values ('SL','Ali','5'),
221     ('SS','zara','6');
222 ●   insert into Teacher_Details values ('SST','bilal','7'),
```

Result Grid | Filter Rows: | Export: | Wrap Cell Content: 𝐈𝐀

Class_Name	Class_Teacher_Name	Class_no
sst	Asif	1
SSH	Jawad	2
SSH	Ali	3
SBH	sajid	4
SL	Ali	5
SS	zara	6
SST	bilal	7
SHS	Tayyaba	8
SMS	Abdulllah	9
SB	Saad	20

Teacher_Details 26