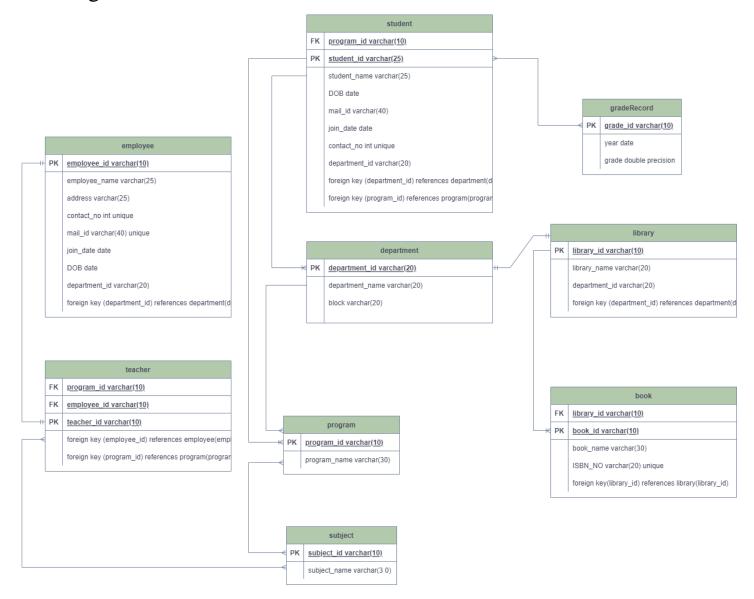
Project Name: College Management System

ER Diagram



Tables:

1. DEPARTMENT:

create table department(department_id varchar(20) primary key, department_name varchar(25), block varchar(20));

insert into department values('D101','Department of Mathematics','Block C');

select * from department;

DEPARTMENT_ID	DEPARTMENT_NAME	BLOCK
D101	Department of Mathematics	Block C

1 rows returned in 0.00 seconds

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2. LIBRARY:

```
create table library(
library_id varchar(10) primary key,
library_name varchar(20),
department_id varchar(20),
foreign key (department_id) references department(department_id)
);
insert into library values('L101','Central Library','D101');
select * from library;
```

LIBRARY_ID	LIBRARY_NAME	DEPARTMENT_ID
L101	Central Library	D101
_		

1 rows returned in 0.00 seconds <u>Download</u>

3. BOOK:

```
create table book(
book_id varchar(10) primary key,
book_name varchar(30),
ISBN_NO varchar(20) unique,
library_id varchar(10),
foreign key(library_id) references library(library_id)
);
insert all into book values('B301','Advanced Calculus','0811847910','L101')
into Book values('B302','Linear Alzebra','0821847910','L101')
into Book values('B303','Inferencial Statistics','0831847910','L101')
into Book values('B304','DS for Business','0841847910','L101')
into Book values('B305','Complex Systems','0851847910','L101')
into Book values('B306','Computerational Networks','0861847910','L101')
into Book values('B307','Digital Logic','0871847910','L101')
select 1 from dual;
select * from book;
```

BOOK_ID	BOOK_NAME	ISBN_NO	LIBRARY_ID
B301	Advanced Calculus	0811847910	L101
B302	Linear Alzebra	0821847910	L101
B303	Inferencial Statistics	0831847910	L101
B304	DS for Business	0841847910	L101
B305	Complex Systems	0851847910	L101
B306	Computerational Networks	0861847910	L101
B307	Digital Logic	0871847910	L101

7 rows returned in 0.01 seconds

Download

4. PROGRAM:

```
create table program(
program_id varchar(10) primary key,
program_name varchar(30)
);
insert all into program values('pr101','Maths')
into program values('pr102','Physics')
into program values('pr103','Data Science')
into program values('pr104','Statistics')
into program values('pr105','Computer Science')
select 1 from dual;
select * from program;
```

PROGRAM_ID	PROGRAM_NAME
pr101	Maths
pr102	Physics
pr103	Data Science
pr104	Statistics
pr105	Computer Science

5 rows returned in 0.00 seconds

Download

5. SUBJECT:

```
create table subject(
subject_id varchar(10) primary key,
subject_name varchar(3 0)
);
insert all into subject values('sub101','Real Analysis')
into subject values('sub102','Algebra')
into subject values('sub103','Differential Calculus')
into subject values('sub104','Integral Calculus')
into subject values('sub105','Geometry')
into subject values('sub106','Quantum')
```

into subject values('sub107','Mechanical')

into subject values('sub108','Electrical')

into subject values('sub109','Nuclear Physics')

into subject values('sub110','Biophysics')

into subject values('sub111','DBMS')

into subject values('sub112','R Programming')

into subject values('sub113','Data Visualization')

into subject values('sub114','Python')

into subject values('sub115','Tableau')

into subject values('sub116','Point Estimation')

into subject values('sub117','Interval Estimation')

into subject values('sub118','Time Series')

into subject values('sub119','Vital Statistics')

into subject values('sub120','Data Structures')

into subject values('sub121','Networking')

into subject values('sub122','Software Engineering')

into subject values('sub123','OOPS Concept')

into subject values('sub124','Operating System')

into subject values('sub125','Programming I')

select 1 from dual;

select * from subject;

sub101 Real Analysis sub102 Algebra sub103 Differential Calculus sub104 Integral Calculus sub105 Geometry sub106 Quantum sub107 Mechanical sub108 Electrical sub109 Nuclear Physics sub110 Biophysics sub111 DBMS sub112 R Programming sub113 Data Visualization sub114 Python sub115 Tableau sub116 Point Estimation sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System sub125 Programming I	SUBJECT_ID	SUBJECT_NAME
sub103 Differential Calculus sub104 Integral Calculus sub105 Geometry sub106 Quantum sub107 Mechanical sub108 Electrical sub109 Nuclear Physics sub110 Biophysics sub111 DBMS sub112 R Programming sub113 Data Visualization sub114 Python sub115 Tableau sub116 Point Estimation sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub101	Real Analysis
sub104 Integral Calculus sub105 Geometry sub106 Quantum sub107 Mechanical sub108 Electrical sub109 Nuclear Physics sub110 Biophysics sub111 DBMS sub112 R Programming sub113 Data Visualization sub114 Python sub115 Tableau sub116 Point Estimation sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub102	Algebra
sub105 Geometry sub106 Quantum sub107 Mechanical sub108 Electrical sub109 Nuclear Physics sub110 Biophysics sub111 DBMS sub112 R Programming sub113 Data Visualization sub114 Python sub115 Tableau sub116 Point Estimation sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub103	Differential Calculus
sub106 Quantum sub107 Mechanical sub108 Electrical sub109 Nuclear Physics sub110 Biophysics sub111 DBMS sub112 R Programming sub113 Data Visualization sub114 Python sub115 Tableau sub116 Point Estimation sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub104	Integral Calculus
sub107 Mechanical sub108 Electrical sub109 Nuclear Physics sub110 Biophysics sub111 DBMS sub112 R Programming sub113 Data Visualization sub114 Python sub115 Tableau sub116 Point Estimation sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub105	Geometry
sub108 Electrical sub109 Nuclear Physics sub110 Biophysics sub111 DBMS sub112 R Programming sub113 Data Visualization sub114 Python sub115 Tableau sub116 Point Estimation sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub106	Quantum
sub109 Nuclear Physics sub110 Biophysics sub111 DBMS sub112 R Programming sub113 Data Visualization sub114 Python sub115 Tableau sub116 Point Estimation sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub107	Mechanical
sub110 Biophysics sub111 DBMS sub112 R Programming sub113 Data Visualization sub114 Python sub115 Tableau sub116 Point Estimation sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub108	Electrical
sub111 DBMS sub112 R Programming sub113 Data Visualization sub114 Python sub115 Tableau sub116 Point Estimation sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub109	Nuclear Physics
sub112 R Programming sub113 Data Visualization sub114 Python sub115 Tableau sub116 Point Estimation sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub110	Biophysics
sub113 Data Visualization sub114 Python sub115 Tableau sub116 Point Estimation sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub111	DBMS
sub114 Python sub115 Tableau sub116 Point Estimation sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub112	R Programming
sub115 Tableau sub116 Point Estimation sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub113	Data Visualization
sub116 Point Estimation sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub114	Python
sub117 Interval Estimation sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub115	Tableau
sub118 Time Series sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub116	Point Estimation
sub119 Vital Statistics sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub117	Interval Estimation
sub120 Data Structures sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub118	Time Series
sub121 Networking sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub119	Vital Statistics
sub122 Software Engineering sub123 OOPS Concept sub124 Operating System	sub120	Data Structures
sub123 OOPS Concept sub124 Operating System	sub121	Networking
sub124 Operating System	sub122	Software Engineering
oub.2. operating bystem	sub123	OOPS Concept
sub125 Programming I	sub124	Operating System
	sub125	Programming I

25 rows returned in 0.01 seconds

Download

6. PROGRAM VS SUBJECT

```
create table programVsSubject(
program_id varchar(10),
subject_id varchar(10),
foreign key (program_id) references program(program_id),
foreign key (subject_id) references subject(subject_id)
);
insert all into programVsSubject values('pr101','sub101')
into programVsSubject values('pr101','sub102')
into programVsSubject values('pr101','sub103')
into programVsSubject values('pr101','sub104')
into programVsSubject values('pr101','sub105')
```

into programVsSubject values('pr102','sub106') into programVsSubject values('pr102','sub107') into programVsSubject values('pr102','sub108') into programVsSubject values('pr102','sub109')

into programVsSubject values('pr102','sub110')

into programVsSubject values('pr103','sub111') into programVsSubject values('pr103','sub112') into programVsSubject values('pr103','sub113') into programVsSubject values('pr103','sub114') into programVsSubject values('pr103','sub115')

into programVsSubject values('pr104','sub116') into programVsSubject values('pr104','sub117') into programVsSubject values('pr104','sub118') into programVsSubject values('pr104','sub119') into programVsSubject values('pr104','sub120')

into programVsSubject values('pr105','sub121') into programVsSubject values('pr105','sub122') into programVsSubject values('pr105','sub123') into programVsSubject values('pr105','sub124') into programVsSubject values('pr105','sub125') select 1 from dual; select * from subject;

PROGRAM_ID	SUBJECT_ID
pr101	sub101
pr101	sub102
pr101	sub103
pr101	sub104
pr101	sub105
pr102	sub106
pr102	sub107
pr102	sub108
pr102	sub109
pr102	sub110
pr103	sub111
pr103	sub112
pr103	sub113
pr103	sub114
pr103	sub115
pr104	sub116
pr104	sub117
pr104	sub118
pr104	sub119
pr104	sub120
pr105	sub121
pr105	sub122
pr105	sub123
pr105	sub124
pr105	sub125

25 rows returned in 0.02 seconds

Download

7. EMPLOYEE:

```
create table employee(
employee_id varchar(10) primary key,
employee_name varchar(25),
address varchar(25),
contact_no int unique,
mail_id varchar(40) unique,
join_date date,
DOB date,
department_id varchar(20),
foreign key (department_id) references department(department_id)
);
insert all into employee values('E101', 'Shreya', 'Lucknow',9876763434, 'shreya026@gmail.com',
to_date('2013/11/05','YYYY/MM/DD'), to_date('2000/01/02','YYYY/MM/DD'),'D101')
```

into employee values ('E102', 'Sandesh', 'Kathmandu', 7236735290, 'sandesh2827@gmail.com',

to_date('2013/02/03','YYYY/MM/DD'), to_date('1999/01/23','YYYY/MM/DD'),'D101')

into employee values('E103', 'Reetu', 'Chandigarh', 7529640289, 'reetu027@gmail.com', to date('2016/10/17','YYYY/MM/DD'), to date('1999/09/21','YYYY/MM/DD'),'D101')

into employee values('E104', 'Ruksana', 'Mohali', 7271930827, 'ruksana0246@gmail.com', to_date('2015/04/15','YYYY/MM/DD'), to_date('1999/12/04','YYYY/MM/DD'),'D101')

into employee values('E105', 'Ashmita', 'Sonipat', 7259273589, 'ashmita075@gmail.com', to_date('2017/03/30','YYYY/MM/DD'), to_date('2000/04/20','YYYY/MM/DD'),'D101')

into employee values('E106', 'Pushti', 'Gurgaon', 9035793589, 'pushti3729@gmail.com', to_date('2018/01/31','YYYY/MM/DD'), to_date('1998/03/28','YYYY/MM/DD'),'D101')

into employee values ('E107', 'Neeru', 'Jaipur', 9659389589, 'neeru980@gmail.com', to_date ('2016/02/27','YYYY/MM/DD'), to_date ('2000/02/17','YYYY/MM/DD'),'D101') select 1 from dual;

select * from employee;

EMPLOYEE_ID	EMPLOYEE_NAME	ADDRESS	CONTACT_NO	MAIL_ID	JOIN_DATE	DOB	DEPARTMENT_ID
E103	Reetu	Chandigarh	7529640289	reetu027@gmail.com	10/17/2016	09/21/1999	D101
E104	Ruksana	Mohali	7271930827	ruksana0246@gmail.com	04/15/2015	12/04/1999	D101
E101	Shreya	Lucknow	9876763434	shreya026@gmail.com	11/05/2013	01/02/2000	D101
E102	Sandesh	Kathmandu	7236735290	sandesh2827@gmail.com	02/03/2013	01/23/1999	D101
E105	Ashmita	Sonipat	7259273589	ashmita075@gmail.com	03/30/2017	04/20/2000	D101
E106	Pushti	Gurgaon	9035793589	pushti3729@gmail.com	01/31/2018	03/28/1998	D101
E107	Neeru	Jaipur	9659389589	neeru980@gmail.com	02/27/2016	02/17/2000	D101

7 rows returned in 0.05 seconds <u>Download</u>

8. STUDENT:

```
create table student(
student id varchar(25) primary key,
student name varchar(25),
DOB date,
mail_id varchar(40),
join_date date,
contact_no int unique,
department_id varchar(20),
program id varchar(10),
foreign key (department_id) references department(department_id),
foreign key (program_id) references program(program_id)
insert all into student values('st101','Nick Rimando', to_date('2000/07/27',
'YYYY/MM/DD'), 'nick@gmail.com', to_date('2022/01/01', 'YYYY/MM/DD'), 9927354011, 'D101', 'pr102'
into student values ('st102', 'Graham Zusi', to date ('2000/01/13',
'YYYY/MM/DD'), 'graham@gmail.com', to_date('2021/10/09', 'YYYY/MM/DD'), 9191045798, 'D101', 'pr
102')
into student values('st103','Brad Davis', to_date('1999/09/18',
'YYYY/MM/DD'), 'brad@gmail.com', to_date('2021/09/14', 'YYYY/MM/DD'), 8384858687, 'D101', 'pr102'
)
```

into student values('st104', 'Fabian Johnson', to_date('2001/08/20',

'YYYY/MM/DD'),'fabian@gmail.com',to_date('2021/12/10','YYYY/MM/DD'),6567897701,'D101','pr103')

into student values('st105','Geoff Cameron', to_date('2000/06/21',

'YYYY/MM/DD'),'geoff@gmail.com',to_date('2022/01/01','YYYY/MM/DD'),8899345713,'D101','pr10 3')

into student values('st106','Jozy Altidor', to_date('1999/03/01',

'YYYY/MM/DD'),'jozy@gmail.com',to_date('2021/10/09','YYYY/MM/DD'),7970767445,'D101','pr103')

into student values('st107','Aliya A', to_date('2001/05/06',

'YYYY/MM/DD'), 'aliya@gmail.com',to_date('2021/10/09', 'YYYY/MM/DD'),9234567851, 'D101', 'pr101')

into student values('st108','Abishek Mishra', to_date('2000/07/18',

'YYYY/MM/DD'), 'abishek@gmail.com', to_date('2022/01/10', 'YYYY/MM/DD'), 9967842170, 'D101', 'pr 101')

into student values('st109', 'Julain Green', to_date('1999/04/21',

'YYYY/MM/DD'),'julian@gmail.com',to_date('2022/01/01','YYYY/MM/DD'),8456732193,'D101','pr10 1')

into student values('st110','Noah K', to_date('2001/07/18',

 $"YYYY/MM/DD"), "noah@gmail.com", to_date("2022/01/01", "YYYY/MM/DD"), 7766554433, "D101", "pr104")" "In the content of the c$

select 1 from dual;

select * from student;

STUDENT_ID	STUDENT_NAME	DOB	MAIL_ID	JOIN_DATE	CONTACT_NO	DEPARTMENT_ID	PROGRAM_ID	CITY
st101	Nick Rimando	07/27/2000	nick@gmail.com	01/01/2022	9927354011	D101	pr102	-
st102	Graham Zusi	01/13/2000	graham@gmail.com	10/09/2021	9191045798	D101	pr102	-
st103	Brad Davis	09/18/1999	brad@gmail.com	09/14/2021	8384858687	D101	pr102	-
st104	Fabian Johnson	08/20/2001	fabian@gmail.com	12/10/2021	6567897701	D101	pr103	-
st105	Geoff Cameron	06/21/2000	geoff@gmail.com	01/01/2022	8899345713	D101	pr103	New York
st106	Jozy Altidor	03/01/1999	jozy@gmail.com	10/09/2021	7970767445	D101	pr103	New York
st107	Aliya A	05/06/2001	aliya@gmail.com	10/09/2021	9234567851	D101	pr101	New York
st108	Abishek Mishra	07/18/2000	abishek@gmail.com	01/10/2022	9967842170	D101	pr101	New York
st109	Julain Green	04/21/1999	julian@gmail.com	01/01/2022	8456732193	D101	pr101	New York
st110	Noah K	07/18/2001	noah@gmail.com	01/01/2022	7766554433	D101	pr104	-
10 rows returned	d in 0.02 seconds	Download						

9. GRADE RECORD:

create table gradeRecord(
grade_id varchar(10) primary key,
year date,
grade double precision
);

Insert all into gradeRecord values('G101', to_date('2023/01/21','YYYY/MM/DD'), 93.24)

into gradeRecord values('G102', to_date('2022/07/13','YYYY/MM/DD'), 90.07)

into gradeRecord values('G103', to_date('2022/09/17','YYYY/MM/DD'), 83.03)

into gradeRecord values('G104', to_date('2024/03/05','YYYY/MM/DD'), 85.24)

into gradeRecord values('G105', to_date('2022/02/11','YYYY/MM/DD'), 73.24)

into gradeRecord values('G106', to_date('2024/11/08','YYYY/MM/DD'), 70.27)

into gradeRecord values('G107', to_date('2025/04/18','YYYY/MM/DD'), 80.24)

into gradeRecord values('G108', to_date('2024/07/16','YYYY/MM/DD'), 53.75)

into gradeRecord values('G109', to_date('2024/09/27','YYYY/MM/DD'), 30.24) into gradeRecord values('G110', to_date('2025/06/14','YYYY/MM/DD'), 43.24) select 1 from dual;

select * from gradeRecord;

GRADE_ID	YEAR	GRADE
G101	01/21/2023	93.24
G102	07/13/2022	90.07
G103	09/17/2022	83.03
G104	03/05/2024	85.24
G105	02/11/2022	73.24
G106	11/08/2024	70.27
G107	04/18/2025	80.24
G108	07/16/2024	53.75
G109	09/27/2024	30.24
G110	06/14/2025	43.24

10 rows returned in 0.00 seconds

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10. STUDENT VS GRADE

create table studentVsGrade(
grade_id varchar(10),
student_id varchar(10),
foreign key (grade_id) references gradeRecord(grade_id),
foreign key (student_id) references student(student_id)
);
insert all into studentVsGrade values('G101','st101')
into studentVsGrade values('G102','st102')
into studentVsGrade values('G103','st103')
into studentVsGrade values('G104','st104')
into studentVsGrade values('G105','st105')
into studentVsGrade values('G106','st106')
select 1 from dual;
select * from studentVsGrade;

GRADE_ID	STUDENT_ID
G101	st101
G102	st102
G103	st103
G104	st104
G105	st105
G106	st106

6 rows returned in 0.00 seconds

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11. TEACHER:

```
create table teacher(
teacher_id varchar(10) primary key,
employee_id varchar(10),
program_id varchar(10),
foreign key (employee_id) references employee(employee_id),
foreign key (program_id) references program(program_id)
);
insert all into teacher values ('tc101','E101','pr101')
into teacher values ('tc102','E102','pr102')
into teacher values ('tc103','E103','pr103')
into teacher values ('tc104','E104','pr104')
into teacher values ('tc105','E105','pr105')
select 1 from dual;
select * from teacher;
```

TEACHER_ID	EMPLOYEE_ID	PROGRAM_ID
tc101	E101	pr101
tc102	E102	pr102
tc103	E103	pr103
tc104	E104	pr104
tc105	E105	pr105

5 rows returned in 0.00 seconds <u>Download</u>

12. SUBJECT VS TEACHER:

```
create table subjectVsTeacher(
teacher_id varchar(10),
subject_id varchar(10),
foreign key (teacher_id) references teacher(teacher_id),
foreign key (subject_id) references subject(subject_id)
);
insert all into subjectVsTeacher values('tc101','sub101')
into subjectVsTeacher values('tc102','sub106')
```

into subjectVsTeacher values('tc103','sub111') into subjectVsTeacher values('tc104','sub116') into subjectVsTeacher values('tc105','sub121') into subjectVsTeacher values('tc101','sub103') into subjectVsTeacher values('tc102','sub108') into subjectVsTeacher values('tc103','sub113') into subjectVsTeacher values('tc104','sub118') into subjectVsTeacher values('tc105','sub123') into subjectVsTeacher values('tc101','sub104') into subjectVsTeacher values('tc102','sub109') select 1 from dual;

select * from subjectVsTeacher;

TEACHER_ID	SUBJECT_ID
tc101	sub101
tc102	sub106
tc103	sub111
tc104	sub116
tc105	sub121
tc101	sub103
tc102	sub108
tc103	sub113
tc104	sub118
tc105	sub123
tc101	sub104
tc102	sub109

12 rows returned in 0.01 seconds

Download

13. DEPARTMENT VS PROGRAM:

create table departmentVsProgram(
department_id varchar(20),
program_id varchar(10),
foreign key (department_id) references department(department_id),
foreign key (program_id) references program(program_id)
);
insert all into departmentVsProgram values('D101','pr101')
into departmentVsProgram values('D101','pr102')
into departmentVsProgram values('D101','pr103')
into departmentVsProgram values('D101','pr104')
into departmentVsProgram values('D101','pr105')
select 1 from dual;
select * from departmentVsProgram;

DEPARTMENT_ID	PROGRAM_ID
D101	pr101
D101	pr102
D101	pr103
D101	pr104
D101	pr105

5 rows returned in 0.00 seconds

Download

14. STUDENT VS BOOK:

create table StudentVsBook(
student_id varchar(10),
book_id varchar(10) unique,
foreign key (student_id) references student(student_id),
foreign key (book_id) references book(book_id)
);
insert all into studentVsBook values('st101','B301')
into studentVsBook values('st102','B302')
into studentVsBook values('st103','B303')
into studentVsBook values('st104','B304')
into studentVsBook values('st105','B305')
into studentVsBook values('st104','B306')
into studentVsBook values('st104','B306')

select * from studentVsBook;

select 1 from dual;

STUDENT_ID	BOOK_ID
st101	B301
st102	B302
st103	B303
st104	B304
st105	B305
st104	B306
st103	B307

7 rows returned in 0.01 seconds

Download

15. STUDENT VS PROGRAM:

create table studentVsProgram(student_id varchar(10), program_id varchar(10), foreign key (student_id) references student(student_id), foreign key (program_id) references program(program_id));

insert all into studentVsProgram values('st101', 'pr103') into studentVsprogram values('st102', 'pr101') into studentVsProgram values('st103', 'pr105') into studentVsProgram values('st104', 'pr102') into studentVsProgram values('st105', 'pr104') into studentVsProgram values('st106', 'pr104') into studentVsProgram values('st107', 'pr103') into studentVsProgram values('st108', 'pr103') into studentVsProgram values('st110', 'pr101') into studentVsProgram values('st109', 'pr101') select 1 from dual;

select * from studentVsProgram;

STUDENT_ID	PROGRAM_ID
st101	pr103
st102	pr101
st103	pr105
st104	pr102
st105	pr104
st106	pr104
st107	pr103
st108	pr103
st110	pr101
st109	pr102

10 rows returned in 0.00 seconds

Download

Queries:

1. select s.student_id, s.student_name, g.year, g.grade from student s inner join studentVsGrade svg on s.student_id = svg.student_id inner join gradeRecord g on svg.grade_id = g.grade_id where grade > 79;

STUDENT_ID	STUDENT_NAME	YEAR	GRADE
st101	Nick Rimando	01/21/2023	93.24
st102	Graham Zusi	07/13/2022	90.07
st103	Brad Davis	09/17/2022	83.03
st104	Fabian Johnson	03/05/2024	85.24

4 rows returned in 0.04 seconds

Download

2. select s.student_id, s.student_name,b.book_id, b.book_name from student s left join studentVsBook sb on s.student_id = sb.student_id left join book b on sb.book_id = b.book_id;

STUDENT_ID	STUDENT_NAME	BOOK_ID	BOOK_NAME
st101	Nick Rimando	B301	Advanced Calculus
st102	Graham Zusi	B302	Linear Alzebra
st103	Brad Davis	B303	Inferencial Statistics
st104	Fabian Johnson	B304	DS for Business
st105	Geoff Cameron	B305	Complex Systems
st104	Fabian Johnson	B306	Computerational Networks
st103	Brad Davis	B307	Digital Logic
st110	Noah K	-	-
st109	Julain Green	-	-
st108	Abishek Mishra	-	-
st107	Aliya A	-	-
st106	Jozy Altidor	-	-

12 rows returned in 0.04 seconds <u>Download</u>

3. select e.employee_name,tc.teacher_id, e.employee_name,s.subject_name from employee e inner join teacher tc on e.employee_id=tc.employee_id inner join subjectVsTeacher t on tc.teacher_id=t.teacher_id inner join subject s on t.subject_id=s.subject_id;

EMPLOYEE_NAME	TEACHER_ID	EMPLOYEE_NAME	SUBJECT_NAME
Shreya	tc101	Shreya	Real Analysis
Shreya	tc101	Shreya	Differential Calculus
Shreya	tc101	Shreya	Integral Calculus
Sandesh	tc102	Sandesh	Quantum
Sandesh	tc102	Sandesh	Electrical
Sandesh	tc102	Sandesh	Nuclear Physics
Reetu	tc103	Reetu	DBMS
Reetu	tc103	Reetu	Data Visualization
Ruksana	tc104	Ruksana	Point Estimation
Ruksana	tc104	Ruksana	Time Series
Ashmita	tc105	Ashmita	Networking
Ashmita	tc105	Ashmita	OOPS Concept

12 rows returned in 0.03 seconds <u>Download</u>

4. select e.employee_id,e.employee_name as Teacher from employee e inner join teacher t on e.employee_id=t.employee_id;

EMPLOYEE_ID	TEACHER
E101	Shreya
E102	Sandesh
E103	Reetu
E104	Ruksana
E105	Ashmita

5 rows returned in 0.00 seconds

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5. alter table student add city varchar(25);

STUDENT_ID	CITY
st101	-
st102	-
st103	-
st104	-
st105	New York
st106	New York
st107	New York
st108	New York
st109	New York
st110	-

10 rows returned in 0.00 seconds

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6. update student set city = 'New York' where student_id between 'st105' and 'st109';

STUDENT_ID	STUDENT_NAME	DOB	MAIL_ID	JOIN_DATE	CONTACT_NO	DEPARTMENT_ID	PROGRAM_ID	CITY
st101	Nick Rimando	07/27/2000	nick@gmail.com	01/01/2022	9927354011	D101	pr102	-
st102	Graham Zusi	01/13/2000	graham@gmail.com	10/09/2021	9191045798	D101	pr102	-
st103	Brad Davis	09/18/1999	brad@gmail.com	09/14/2021	8384858687	D101	pr102	-
st104	Fabian Johnson	08/20/2001	fabian@gmail.com	12/10/2021	6567897701	D101	pr103	-
st105	Geoff Cameron	06/21/2000	geoff@gmail.com	01/01/2022	8899345713	D101	pr103	New York
st106	Jozy Altidor	03/01/1999	jozy@gmail.com	10/09/2021	7970767445	D101	pr103	New York
st107	Aliya A	05/06/2001	aliya@gmail.com	10/09/2021	9234567851	D101	pr101	New York
st108	Abishek Mishra	07/18/2000	abishek@gmail.com	01/10/2022	9967842170	D101	pr101	New York
st109	Julain Green	04/21/1999	julian@gmail.com	01/01/2022	8456732193	D101	pr101	New York
st110	Noah K	07/18/2001	noah@gmail.com	01/01/2022	7766554433	D101	pr104	-
10 rows returned	d in 0.03 seconds	Download						

7. create view studentWithgradeRecord as select s.student_id, s.student_name, g.year, g.grade from student s inner join studentVsGrade svg on s.student_id = svg.student_id inner join gradeRecord g on svg.grade_id = g.grade_id where grade > 79;

STUDENT_ID	STUDENT_NAME	YEAR	GRADE
st101	Nick Rimando	01/21/2023	93.24
st102	Graham Zusi	07/13/2022	90.07
st103	Brad Davis	09/17/2022	83.03
st104	Fabian Johnson	03/05/2024	85.24

4 rows returned in 0.00 seconds <u>Download</u>

8. select student_id, (gradeRecord.grade) as highestGrade from gradeRecord inner join studentVsgrade on studentVsgrade.grade_id = gradeRecord.grade_id where gradeRecord.grade=(select MAX(gradeRecord.grade) from gradeRecord);

STUDENT_ID	HIGHESTGRADE
st101	93.24

1 rows returned in 0.01 seconds Do

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