

## "MOOCS ONLINE DATA MANAGEMENT"

### ABSTRACT

The current challenges that the students are facing include traditional colleges and universities — including higher tuition, budget cuts, and course shortages which is causing many students to search for alternatives. Online education has clearly become one of the most popular higher education alternatives.

All of this means that students, from working professionals to recent high school graduates, find many reasons to take all or some of their courses online. MOOCS(Massive Open Online Course) is an online course aimed at unlimited participation and open access via the web. In addition to traditional course materials, such as filmed lectures, readings, and problem sets, many MOOCs provide interactive courses with user forums or social media discussions to support community interactions among students, professors, and teaching assistants, as well as immediate feedback to quick quizzes and assignments . MOOCs are a recent and widely researched development in distance education which ensures quality and also been suggested across the world.

# LIST OF REQUIREMENTS

## LIST OF TABLES:

- Applicants
- Moocs\_udemy
- Trainers
- Enrols
- Teaches

List of attributes with their domain type:

### -- Applicants

- name(char)
- userid(varchar) -primary key
- mailid(varchar)
- password(varchar)
- mobilenum(number)

## --Moocs\_udemy

- courseid(varchar) -primary key
- userid(varchar)
- coursename(char)
- duration(varchar)
- exam(char)

## --Trainers

- courseid(varchar)
- trainerid(varchar) -primary key
- tname(char)
- coursetaught(char)
- experience(varchar)

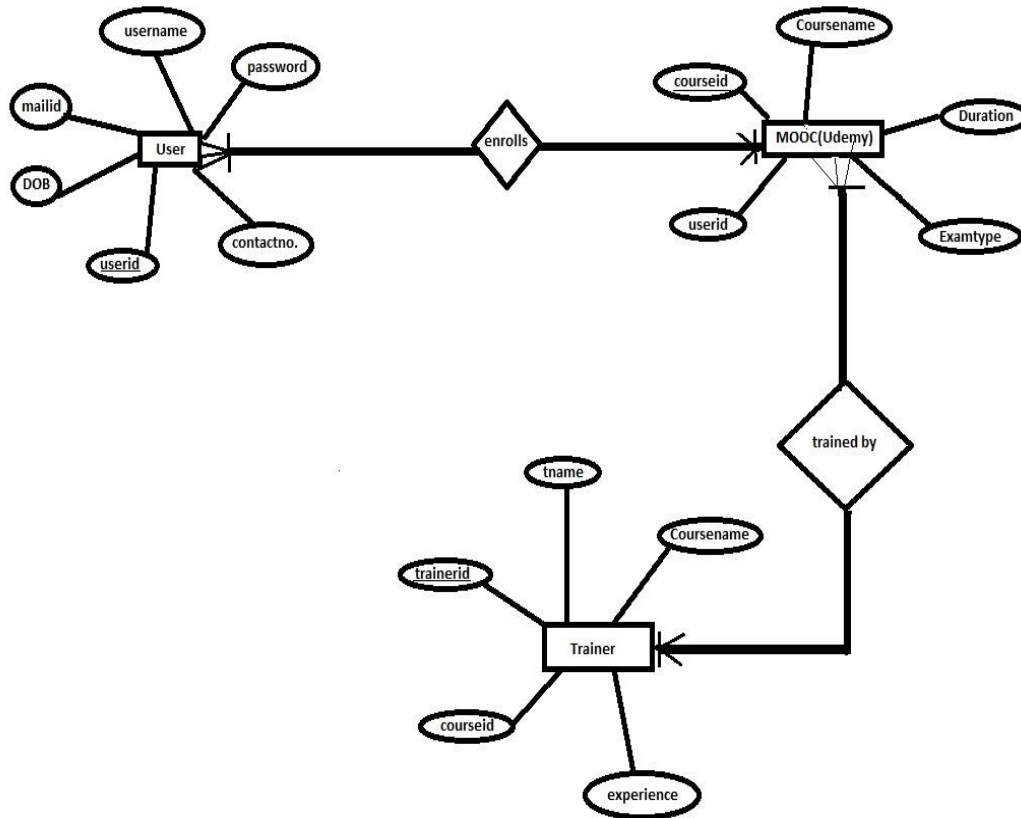
## --Enrolls

- userid(varchar) -foreign key
- courseid(varchar) -foreign key

## --Teaches

- ☐ courseid(varchar) -foreign key
- ☐ trainerid(varchar) -foreign key

## ER DIAGRAM



# MAPPING CARDINALITIES AND PARTICIPATION CONSTRAINTS

- Applicants apply for a course in Udemy.(many to one)
- A course is taught by only one trainer.(one to one)
- Trainer can also teach many courses.(one to many)

## DDL COMMANDS:

```
Run SQL Command Line
SQL> create table Applicants(Name char(20),UserId varchar(20) primary key,Mailid varchar(20) unique,password varchar(20),MobileNum number(10));
Table created.

SQL> desc applicants;
-----
Name                Null?    Type
-----
NAME                CHAR(20)
USERID              NOT NULL VARCHAR2(20)
MAILID              VARCHAR2(20)
PASSWORD            VARCHAR2(20)
MOBILENUM           NUMBER(10)

SQL> create table Moocs_Udemy(CourseId varchar(20) primary key,UserId varchar(20),CourseName char(40),duration varchar(20),exam char(20));
Table created.

SQL> desc moocs_udemy
-----
Name                Null?    Type
-----
COURSEID            NOT NULL VARCHAR2(20)
USERID              VARCHAR2(20)
COURSENAME          CHAR(40)
DURATION            VARCHAR2(20)
EXAM                CHAR(20)

SQL> create table trainer(CourseId varchar(20),TrainerId varchar(20) primary key,TName char(30),CourseTaught char(30),Experience varchar(20));
create table trainer(CourseId varchar(20),TrainerId varchar(20) primary key,TName char(30),CourseTaught char(30),Experience varchar(20))
ERROR at line 1:
ORA-00955: name is already used by an existing object

SQL> create table trainers(CourseId varchar(20),TrainerId varchar(20) primary key,TName char(30),CourseTaught char(30),Experience varchar(20));
Table created.

SQL> desc trainers
-----
Name                Null?    Type
-----
COURSEID            VARCHAR2(20)
TRAINERID          NOT NULL VARCHAR2(20)
TNAME               CHAR(30)
COURSETAUGHT        CHAR(30)
```

# DBMS ASSIGNMENT -1

## MOOCS ONLINE DATA MANAGEMENT

```
Run SQL Command Line
Table created.

SQL> desc trainers;
-----
Name                               Null?    Type
-----
COURSEID                           VARCHAR2(20)
TRAINERID                          NOT NULL VARCHAR2(20)
TNAME                              CHAR(30)
COURSESETAUGHT                     CHAR(30)
EXPERIENCE                         VARCHAR2(20)

SQL> create table teaches(courseid varchar(20) references moocs_udemy,trainerid varchar(20) references trainers);
create table teaches(courseid varchar(20) references moocs_udemy,trainerid varchar(20) references trainers)
*
ERROR at line 1:
ORA-00955: name is already used by an existing object

SQL> desc teaches;
-----
Name                               Null?    Type
-----
COURSEID                           VARCHAR2(20)
TRAINERID                          VARCHAR2(20)

SQL>
SQL> alter table teaches add foreign key(courseid) references moocs_udemy;
alter table teaches add foreign key(courseid) references moocs_udemy
*
ERROR at line 1:
ORA-02275: such a referential constraint already exists in the table

SQL> desc teaches;
-----
Name                               Null?    Type
-----
COURSEID                           VARCHAR2(20)
TRAINERID                          VARCHAR2(20)

SQL> desc enrolls;
-----
Name                               Null?    Type
-----
USERID                             VARCHAR2(20)
COURSEID                           VARCHAR2(20)

SQL>
```

```
Run SQL Command Line
SQL> drop table enrolls;
Table dropped.

SQL> create table enrolls(courseid varchar(20) references applicants,userid varchar(20) references moocs_udemy);
Table created.

SQL> desc enrolls;
-----
Name                               Null?    Type
-----
COURSEID                           VARCHAR2(20)
USERID                             VARCHAR2(20)

SQL> drop table enrolls;
Table dropped.

SQL> create table enrolls(userid varchar(20) references applicants,courseid varchar(20) references moocs_udemy);
Table created.

SQL> desc enrolls;
-----
Name                               Null?    Type
-----
USERID                             VARCHAR2(20)
COURSEID                           VARCHAR2(20)

SQL> desc enrolls;
-----
Name                               Null?    Type
-----
USERID                             VARCHAR2(20)
COURSEID                           VARCHAR2(20)

SQL> desc enrolls;
-----
Name                               Null?    Type
-----
USERID                             VARCHAR2(20)
COURSEID                           VARCHAR2(20)

SQL> create table teaches(courseid varchar(20) references moocs_udemy,trainerid varchar(20) references trainer);
create table teaches(courseid varchar(20) references moocs_udemy,trainerid varchar(20) references trainer)
*
ERROR at line 1:
ORA-02268: referenced table does not have a primary key
```

## DBMS ASSIGNMENT -1

### MOOCS ONLINE DATA MANAGEMENT

```
Run SQL Command Line
Name Null? Type
-----
USERID VARCHAR2(20)
COURSEID VARCHAR2(20)

SQL> desc enrolls;
Name Null? Type
-----
USERID VARCHAR2(20)
COURSEID VARCHAR2(20)

SQL> desc enrolls;
Name Null? Type
-----
USERID VARCHAR2(20)
COURSEID VARCHAR2(20)

SQL> create table teaches(courseid varchar(20) references moocs_udemy,trainerid varchar(20) references trainer);
create table teaches(courseid varchar(20) references moocs_udemy,trainerid varchar(20) references trainer)
ERROR at line 1:
ORA-02268: referenced table does not have a primary key

SQL> create table teaches(courseid varchar(20) references moocs_udemy,trainerid varchar(20) references trainers);
Table created.

SQL>
SQL> desc trainers;
Name Null? Type
-----
COURSEID VARCHAR2(20)
TRAINERID NOT NULL VARCHAR2(20)
TNAME CHAR(30)
COURSETAUGHT CHAR(30)
EXPERIENCE VARCHAR2(20)

SQL> create table teaches(courseid varchar(20) references moocs_udemy,trainerid varchar(20) references trainers);
create table teaches(courseid varchar(20) references moocs_udemy,trainerid varchar(20) references trainers)
ERROR at line 1:
ORA-00955: name is already used by an existing object

SQL> desc teaches;
Name Null? Type
-----
```

```
Select Run SQL Command Line
SQL> conn system
Enter password:
Connected.
SQL> desc applicants;
Name Null? Type
-----
NAME CHAR(20)
USERID NOT NULL VARCHAR2(20)
MAILID VARCHAR2(20)
PASSWORD VARCHAR2(20)
MOBILENUM NUMBER(10)

SQL> desc moocs_udemy;
Name Null? Type
-----
COURSEID NOT NULL VARCHAR2(20)
USERID VARCHAR2(20)
COURSENAME CHAR(40)
DURATION VARCHAR2(20)
EXAM CHAR(20)

SQL> desc trainers;
Name Null? Type
-----
COURSEID VARCHAR2(20)
TRAINERID NOT NULL VARCHAR2(20)
TNAME CHAR(30)
COURSETAUGHT CHAR(30)
EXPERIENCE VARCHAR2(20)

SQL> desc teaches;
Name Null? Type
-----
COURSEID VARCHAR2(20)
TRAINERID VARCHAR2(20)

SQL> desc enrolls;
Name Null? Type
-----
USERID VARCHAR2(20)
COURSEID VARCHAR2(20)

SQL>
```

## DML COMMANDS:



# DBMS ASSIGNMENT -1

## MOOCS ONLINE DATA MANAGEMENT

```
Run SQL Command Line

SQL> insert into applicants values('&name','&userid','&mailid','&password','&mobilenum');
Enter value for name: Harini jeevitha
Enter value for userid: AAA111
Enter value for mailid: abc@gmail.com
Enter value for password: 111111
Enter value for mobilenum: 9999988880
old 1: insert into applicants values('&name','&userid','&mailid','&password','&mobilenum')
new 1: insert into applicants values('Harini jeevitha','AAA111','abc@gmail.com','111111','9999988880')

1 row created.

SQL> /
Enter value for name: Uma murali krishna
Enter value for userid: BBB111
Enter value for mailid: def@gmail.com
Enter value for password: 222222
Enter value for mobilenum: 8989898989
old 1: insert into applicants values('&name','&userid','&mailid','&password','&mobilenum')
new 1: insert into applicants values('Uma murali krishna','BBB111','def@gmail.com','222222','8989898989')

1 row created.

SQL> /
Enter value for name: Ashwini nambiar
Enter value for userid: CCC111
Enter value for mailid: ghi@gmail.com
Enter value for password: 333333
Enter value for mobilenum: 9898989890
old 1: insert into applicants values('&name','&userid','&mailid','&password','&mobilenum')
new 1: insert into applicants values('Ashwini nambiar','CCC111','ghi@gmail.com','333333','9898989890')

1 row created.

SQL> /
Enter value for name: Sandhya Raju
Enter value for userid: DDD111
Enter value for mailid: jkl@gmail.com
Enter value for password: 444444
Enter value for mobilenum: 7897897890
old 1: insert into applicants values('&name','&userid','&mailid','&password','&mobilenum')
new 1: insert into applicants values('Sandhya Raju','DDD111','jkl@gmail.com','444444','7897897890')

1 row created.

SQL> /
Enter value for name: Rama vaidhyanathan
Enter value for userid: EEE111
Enter value for mailid: mno@gmail.com
Enter value for password: 555555
Enter value for mobilenum: 5678956789
old 1: insert into applicants values('&name','&userid','&mailid','&password','&mobilenum')
new 1: insert into applicants values('Rama vaidhyanathan','EEE111','mno@gmail.com','555555','5678956789')

1 row created.

SQL> select * from applicants;

NAME                USERID            MAILID
-----
PASSWORD            MOBILENUM
-----
Harini jeevitha     AAA111            abc@gmail.com
111111             9999988880
Uma murali krishna  BBB111            def@gmail.com
222222             8989898989
Ashwini nambiar     CCC111            ghi@gmail.com
333333             9898989890
Sandhya Raju        DDD111            jkl@gmail.com
444444             7897897890
Rama vaidhyanathan  EEE111            mno@gmail.com
555555             5678956789

SQL>
```

# DBMS ASSIGNMENT -1

## MOOCS ONLINE DATA MANAGEMENT

```
Run SQL Command Line
SQL> insert into trainers values('&courseid','&trainerid','&tname','&coursetaught','&experience');
Enter value for courseid: AAA
Enter value for trainerid: 111
Enter value for tname: Advitha
Enter value for coursetaught: Python
Enter value for experience: 5 years
old 1: insert into trainers values('&courseid','&trainerid','&tname','&coursetaught','&experience')
new 1: insert into trainers values('AAA','111','Advitha','Python','5 years')

1 row created.

SQL> /
Enter value for courseid: BBB
Enter value for trainerid: 222
Enter value for tname: Sathwika
Enter value for coursetaught: Java
Enter value for experience: 6 years
old 1: insert into trainers values('&courseid','&trainerid','&tname','&coursetaught','&experience')
new 1: insert into trainers values('BBB','222','Sathwika','Java','6 years')

1 row created.

SQL> /
Enter value for courseid: CCC
Enter value for trainerid: 333
Enter value for tname: Sahithi
Enter value for coursetaught: IOT
Enter value for experience: 7 years
old 1: insert into trainers values('&courseid','&trainerid','&tname','&coursetaught','&experience')
new 1: insert into trainers values('CCC','333','Sahithi','IOT','7 years')

1 row created.

SQL> /
Enter value for courseid: DDD
Enter value for trainerid: 444
Enter value for tname: Prawin
Enter value for coursetaught: Artificial Intelligence
Enter value for experience: 8 years
old 1: insert into trainers values('&courseid','&trainerid','&tname','&coursetaught','&experience')
new 1: insert into trainers values('DDD','444','Prawin','Artificial Intelligence','8 years')

1 row created.

SQL> /
Enter value for courseid: EEE
old 1: insert into trainers values('&courseid','&trainerid','&tname','&coursetaught','&experience')
new 1: insert into trainers values('DDD','444','Prawin','Artificial Intelligence','8 years')

1 row created.

SQL> select * from trainers;

COURSEID      TRAINERID      TNAME
-----
COURSETAUGHT  EXPERIENCE
-----
AAA           111            Advitha
Python        5 years
BBB           222            Sathwika
Java          6 years
CCC           333            Sahithi
IOT           7 years
DDD           444            Prawin
Artificial Intelligence 8 years
EEE           555            Venkat
Data mining   9 years

SQL>
```

# DBMS ASSIGNMENT -1

## MOOCS ONLINE DATA MANAGEMENT

```
Run SQL Command Line

SQL> insert into moocs_udemy values('&courseid','&userid','&coursename','&duration','&exam');
Enter value for courseid: AAA
Enter value for userid: AAA111
Enter value for coursename: Python
Enter value for duration: 8 weeks
Enter value for exam: online
old 1: insert into moocs_udemy values('&courseid','&userid','&coursename','&duration','&exam')
new 1: insert into moocs_udemy values('AAA','AAA111','Python','8 weeks','online')

1 row created.

SQL> /
Enter value for courseid: BBB
Enter value for userid: BBB111
Enter value for coursename: Java
Enter value for duration: 12 weeks
Enter value for exam: online
old 1: insert into moocs_udemy values('&courseid','&userid','&coursename','&duration','&exam')
new 1: insert into moocs_udemy values('BBB','BBB111','Java','12 weeks','online')

1 row created.

SQL> /
Enter value for courseid: CCC
Enter value for userid: CCC111
Enter value for coursename: IOT
Enter value for duration: 8 weeks
Enter value for exam: offline
old 1: insert into moocs_udemy values('&courseid','&userid','&coursename','&duration','&exam')
new 1: insert into moocs_udemy values('CCC','CCC111','IOT','8 weeks','offline')

1 row created.

SQL> /
Enter value for courseid: DDD
Enter value for userid: DDD111
Enter value for coursename: Artificial Intelligence
Enter value for duration: 8 weeks
Enter value for exam: offline
old 1: insert into moocs_udemy values('&courseid','&userid','&coursename','&duration','&exam')
new 1: insert into moocs_udemy values('DDD','DDD111','Artificial Intelligence','8 weeks','offline')

1 row created.

SQL> /
Enter value for courseid: EEE
Type here to search
O I e
ENG 15:38
IN 09-02-2020

Run SQL Command Line

SQL> /
Enter value for courseid: EEE
Enter value for userid: EEE111
Enter value for coursename: Data mining
Enter value for duration: 12 weeks
Enter value for exam: online
old 1: insert into moocs_udemy values('&courseid','&userid','&coursename','&duration','&exam')
new 1: insert into moocs_udemy values('EEE','EEE111','Data mining','12 weeks','online')

1 row created.

SQL> select * from moocs_udemy
2 ;

COURSEID      USERID
-----
COURSENAME
-----
DURATION
-----
EXAM
-----
AAA           AAA111
Python
online
8 weeks

BBB           BBB111
Java
online
12 weeks

COURSEID      USERID
-----
COURSENAME
-----
DURATION
-----
EXAM
-----
CCC           CCC111
IOT
offline
8 weeks

DDD           DDD111
Artificial Intelligence
8 weeks

COURSEID      USERID
-----
COURSENAME
-----
DURATION
-----
```

## DBMS ASSIGNMENT -1

### MOOCS ONLINE DATA MANAGEMENT

```
Run SQL Command Line
BBB      BBB111      12 weeks
Java
online

COURSEID      USERID
-----
COURSENAME      DURATION
-----
EXAM
-----

CCC      CCC111      8 weeks
IOT
offline

DDD      DDD111      8 weeks
Artificial Intelligence

COURSEID      USERID
-----
COURSENAME      DURATION
-----
EXAM
-----
offline

EEE      EEE111      12 weeks
Data mining
online

SQL>
```

