DBMS Assignment 1

Online MOOC's year wise student database management system

ABSTRACT

Online MOOC's year wise Student Management System is a database management system which is helpful for students as well as the Mooc's providers. In the current system all the activities are done manually. It is very time consuming and costly. Our online Mooc's Student Management System deals with the various activities related to the students and mooc's provider. In the database can register as a user and user has of two types, student and administrator. Administrator has the power to add new user and can edit and delete a user. A student can register as user and can add edit and delete his profile. The administrator can add edit and delete marks for the student. All the users can see the marks.

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REQUIREMENT ANALYSIS

List of tables :

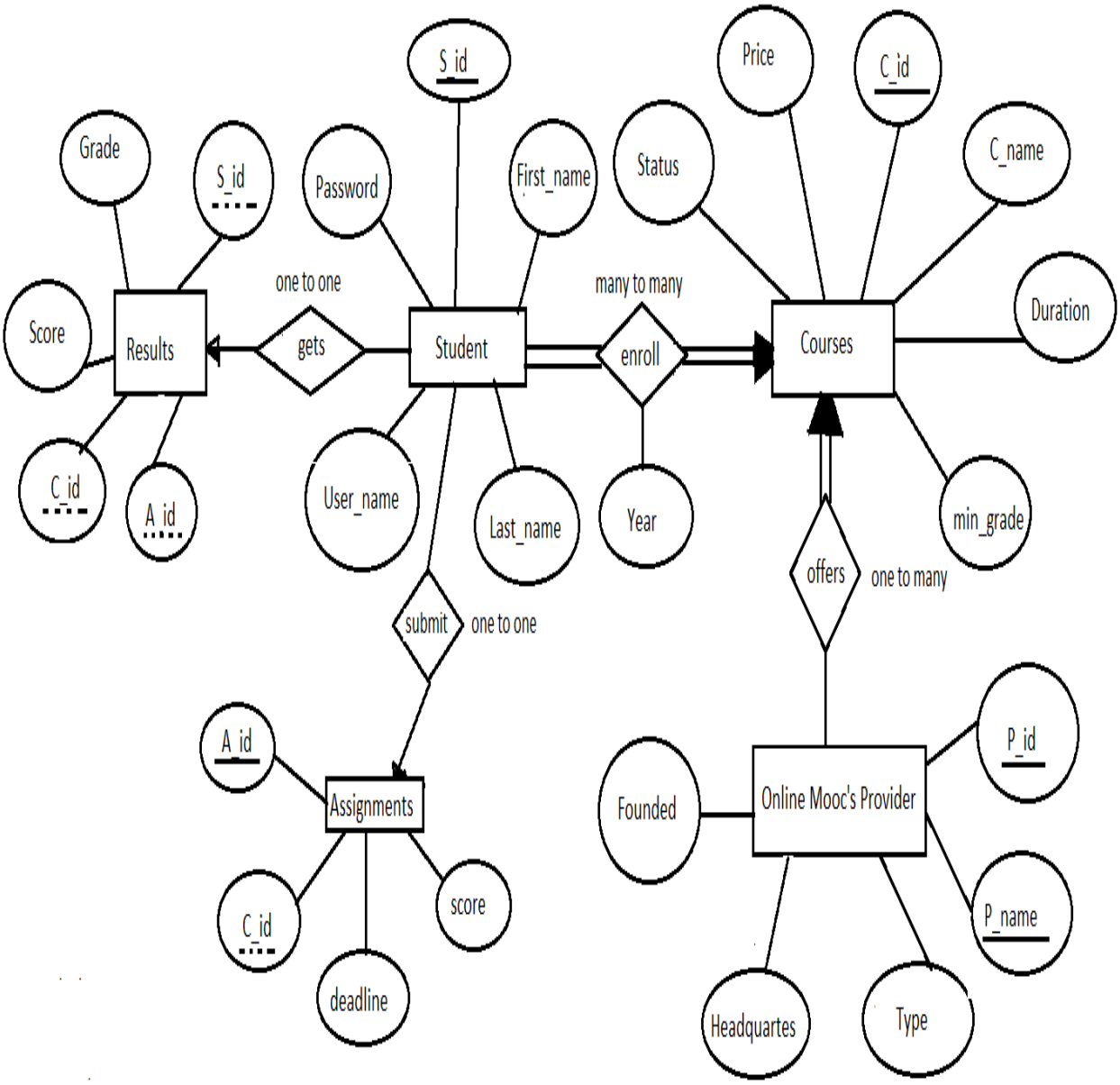
- Online MOOC's provider
- Courses
- Student
- Enrolls
- Assignments
- Results

List of attributes with their domain types:

ENTITY	ATTRIBUTES	DOMAIN
Online Mooc's provider	1. P_id 2. P_name 3. Type 4. Headquartes 5. Found	Number(5) Varchar2(20) Varchar2(20) Varchar2(20) Number(5)
Courses	1. C_id 2. C_name 3. Duration 4. Min_grade 5. Price 6. Status	Number(5) Varchar2(20) Varchar2(20) Char(5) Number(5) Varchar(10)
Student	1. S_id 2. First_name 3. Last_name 4. User_name 5. Password	Number(5) Varchar(10) Varchar(10) Varchar(10) Varchar(10)
Enrolls	1. S_id 2. C_id 3. Year	Number(5) Number(5) Number(5)
Assignments	1. A_id 2. C_id 3. Deadline 4. Score	Number(5) Number(5) Varchar(10) Number(5)
Results	1. S_id 2. C_id 3. A_id 4. Score	Number(5) Number(5) Number(5) Number(5)

	5. Grade	Char(5)

ENTITY RELATIONSHIP DIAGRAM:



MAPPING CARDINALITIES AND PARTICIPATION CONSTRAINTS:

- Online mooc's provider offers as many courses to the students who want to persue the course so, it is a one to many mapping. As it is not necessary that one provider should offer only one course.
- Student enrols into courses, it is many to many mapping as any number of students can enrol into any number of courses.
- Student submits assignment, it is one to one as one student should submit one assignment as per the provider instructions.
- Student gets results if he/submit the assignments and attend the exam, it is one to one mapping as one student get only one result.

DDL Commands:

Creating all the required tables.

```
SQL> create table courses( C_id number(5),C_name varchar2(20),Duration Varchar(20), min_grade Char(10),Status char(10),price Number(3,2));

Table created.

SQL> desc courses;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 C_ID                                               NUMBER(5)
 C_NAME                                             VARCHAR2(20)
 DURATION                                           VARCHAR2(20)
 MIN_GRADE                                          CHAR(10)
 STATUS                                             CHAR(10)
 PRICE                                              NUMBER(3,2)

SQL> create table student( S_id number(5),First_name varchar2(20),Last_name Varchar2(20), User_name varchar2(10),Password varchar2(10),price Number(3,2));

Table created.

SQL> desc student;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 S_ID                                               NUMBER(5)
 FIRST_NAME                                         VARCHAR2(20)
 LAST_NAME                                          VARCHAR2(20)
 USER_NAME                                          VARCHAR2(10)
 PASSWORD                                           VARCHAR2(10)
 PRICE                                              NUMBER(3,2)

SQL> create table results( S_id number(5),C_id number(5),Score varchar2(20),Grade char(20));

Table created.

SQL> desc results;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 S_ID                                               NUMBER(5)
 C_ID                                               NUMBER(5)
 SCORE                                              VARCHAR2(20)
 GRADE                                              CHAR(20)

SQL>
```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```
SQL> desc assignments;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 A_ID                                               NUMBER(5)
 C_ID                                               NUMBER(5)
 DEADLINE                                           VARCHAR2(20)
 SCORE                                              CHAR(20)

SQL> create table enrolls(S_id Number(5),C_id Number(5),Year Number(5));

Table created.

SQL> desc enrolls;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 S_ID                                               NUMBER(5)
 C_ID                                               NUMBER(5)
 YEAR                                               NUMBER(5)

SQL> alter table Online_Moocs_Provider add primary key(P_id);

Table altered.

SQL> desc Online_Moocs_Provider;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 P_ID                                      NOT NULL NUMBER(5)
 P_NAME                                             VARCHAR2(20)
 TYPE                                               VARCHAR2(20)
 HEADQUARTERS                                       VARCHAR2(20)
 FOUNDED                                            NUMBER(5)

SQL> alter table courses add primary key(C_id);

Table altered.

SQL> alter table Student add primary key (S_id);

Table altered.

SQL> alter table Results add foreign key (S_id,C_id) references _
```

Enforcing constraints to primary, forein key constraints:

```
SQL> desc Online_Moocs_Provider;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 P_ID                                      NOT NULL NUMBER(5)
 P_NAME                                             VARCHAR2(20)
 TYPE                                               VARCHAR2(20)
 HEADQUARTERS                                       VARCHAR2(20)
 FOUNDED                                            NUMBER(5)

SQL> alter table courses add primary key(C_id);

Table altered.

SQL> alter table Student add primary key (S_id);

Table altered.

SQL> alter table Results add foreign key (S_id,C_id) references student,courses;
alter table Results add foreign key (S_id,C_id) references student,courses
                                                           *
ERROR at line 1:
ORA-01735: invalid ALTER TABLE option


SQL> alter table Results add foreign key (S_id) references student;

Table altered.

SQL> alter table Results add foreign key (C_id) references courses;

Table altered.

SQL> alter table enrolls add foreign key (C_id) references courses;

Table altered.

SQL> alter table enrolls add foreign key (S_id) references student;

Table altered.

SQL> alter table Assignments add foreign key (C_id) references courses;

Table altered.
```


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DML commands:

Inserting values into the tables.

```
SQL> Insert into Online_Moocs_Provider values(&P_id,'&P_name','&Type','&headquartes','&founded');
Enter value for p_id: 101
Enter value for p_name: SWAYAM
Enter value for type: Non-profit
Enter value for headquartes: India
Enter value for founded: 2017
old   1: Insert into Online_Moocs_Provider values(&P_id,'&P_name','&Type','&headquartes','&founded')
new   1: Insert into Online_Moocs_Provider values(101,'SWAYAM','Non-profit','India','2017')

1 row created.

SQL> /
Enter value for p_id: 102
Enter value for p_name: Udemy
Enter value for type: Commercial
Enter value for headquartes: USA
Enter value for founded: 2010
old   1: Insert into Online_Moocs_Provider values(&P_id,'&P_name','&Type','&headquartes','&founded')
new   1: Insert into Online_Moocs_Provider values(102,'Udemy','Commercial','USA','2010')

1 row created.

SQL> /
Enter value for p_id: 103
Enter value for p_name: Khanacadamy
Enter value for type: Non-profit
Enter value for headquartes: USA
Enter value for founded: 2006
old   1: Insert into Online_Moocs_Provider values(&P_id,'&P_name','&Type','&headquartes','&founded')
new   1: Insert into Online_Moocs_Provider values(103,'Khanacadamy','Non-profit','USA','2006')

1 row created.

SQL> /
Enter value for p_id: 104
Enter value for p_name: Coursera
Enter value for type: Commercial
Enter value for headquartes: USA
Enter value for founded: 2012
old   1: Insert into Online_Moocs_Provider values(&P_id,'&P_name','&Type','&headquartes','&founded')
new   1: Insert into Online_Moocs_Provider values(104,'Coursera','Commercial','USA','2012')

1 row created.
```

```
SQL> /
Enter value for p_id: 105
Enter value for p_name: Udacity
Enter value for type: Commercial
Enter value for headquartes: USA
Enter value for founded: 2012
old   1: Insert into Online_Moocs_Provider values(&P_id,'&P_name','&Type','&headquartes','&founded')
new   1: Insert into Online_Moocs_Provider values(105,'Udacity','Commercial','USA','2012')

1 row created.
```


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```
SQL> select * from Online_MOOcs_provider;

      P_ID P_NAME               TYPE                HEADQUARTERS
---------- -------------------- ------------------- --------------------
   FOUNDED
----------
       101 SWAYAM               Non-profit          India
      2017

       102 Udemy                Commercial          USA
      2010

       103 Khanacadamy          Non-profit          USA
      2006


      P_ID P_NAME               TYPE                HEADQUARTERS
---------- -------------------- ------------------- --------------------
   FOUNDED
----------
       104 Coursera             Commercial          USA
      2012

       105 Udacity              Commercial          USA
      2012
```

SQL Plus

```
SQL> desc assignments;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 A_ID                                               NUMBER(5)
 C_ID                                               NUMBER(5)
 DEADLINE                                           VARCHAR2(20)
 SCORE                                              CHAR(20)

SQL> alter table assignments add primary key(A_id);

Table altered.

SQL> desc assignments;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 A_ID                                      NOT NULL NUMBER(5)
 C_ID                                               NUMBER(5)
 DEADLINE                                           VARCHAR2(20)
 SCORE                                              CHAR(20)

SQL> alter table results add foreign key(A_id) references assignments;
alter table results add foreign key(A_id) references assignments
                                    *
ERROR at line 1:
ORA-00904: "A_ID": invalid identifier


SQL> alter table results add (A_id Number(5)) ;

Table altered.

SQL> alter table results add foreign key(A_id) references assignments;

Table altered.

SQL> desc results;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 S_ID                                               NUMBER(5)
 C_ID                                               NUMBER(5)
 SCORE                                              VARCHAR2(20)
 GRADE                                              CHAR(20)
 A_ID                                               NUMBER(5)

SQL> desc student;
 Name                                      Null?    Type
 ----------------------------------------- -------- ----------------------------
 S_ID                                      NOT NULL NUMBER(5)
 FIRST_NAME                                         VARCHAR2(20)
 LAST_NAME                                          VARCHAR2(20)
 USER_NAME                                          VARCHAR2(10)
 PASSWORD                                           VARCHAR2(10)
 PRICE                                              NUMBER(3,2)

SQL> alter table students drop column price;
alter table students drop column price
*
ERROR at line 1:
```

```
SQL> insert into courses values(&c_id,'&c_name','&duration','&min_grade','&status',&price);
Enter value for c_id: 2
Enter value for c_name: DAA
Enter value for duration: 8weeks
Enter value for min_grade: D
Enter value for status: yes
Enter value for price: 1000
old   1: insert into courses values(&c_id,'&c_name','&duration','&min_grade','&status',&price)
new   1: insert into courses values(2,'DAA','8weeks','D','yes',1000)

1 row created.

SQL> /
Enter value for c_id: 3
Enter value for c_name: SocialNetworking
Enter value for duration: 10weeks
Enter value for min_grade: C
Enter value for status: No
Enter value for price: 1500
old   1: insert into courses values(&c_id,'&c_name','&duration','&min_grade','&status',&price)
new   1: insert into courses values(3,'SocialNetworking','10weeks','C','No',1500)

1 row created.

SQL> /
Enter value for c_id: 4
Enter value for c_name: AI
Enter value for duration: 20weeks
Enter value for min_grade: D
Enter value for status: yes
Enter value for price: 3500
old   1: insert into courses values(&c_id,'&c_name','&duration','&min_grade','&status',&price)
new   1: insert into courses values(4,'AI','20weeks','D','yes',3500)

1 row created.

SQL> /
Enter value for c_id: 5
Enter value for c_name: C_programmimg
Enter value for duration: 8weeks
Enter value for min_grade: E
Enter value for status: yes
Enter value for price: free
old   1: insert into courses values(&c_id,'&c_name','&duration','&min_grade','&status',&price)
new   1: insert into courses values(5,'C_programmimg','8weeks','E','yes',free)
insert into courses values(5,'C_programmimg','8weeks','E','yes',free)
                                                               *
ERROR at line 1:
ORA-00984: column not allowed here


SQL> /
Enter value for c_id: 5
Enter value for c_name: C_programming
```

```
SQL> /
Enter value for c_id: 5
Enter value for c_name: C_programming
Enter value for duration: 8weeks
Enter value for min_grade: E
Enter value for status: yes
Enter value for price: 0
old   1: insert into courses values(&c_id,'&c_name','&duration','&min_grade','&status',&price)
new   1: insert into courses values(5,'C_programming','8weeks','E','yes',0)

1 row created.

SQL> select *from courses;

     C_ID C_NAME               DURATION            MIN_GRADE  STATUS
--------- -------------------- ------------------- ---------- ----------
    PRICE
----------
        2 DAA                  8weeks              D          yes
     1000

        3 SocialNetworking     10weeks             C          No
     1500

        4 AI                   20weeks             D          yes
     3500


     C_ID C_NAME               DURATION            MIN_GRADE  STATUS
--------- -------------------- ------------------- ---------- ----------
    PRICE
----------
        5 C_programming        8weeks              E          yes
        0

        1 DBMS                 12weeks             D          YES
     1200
```

SQL Plus

```
---------- -------------------- -------------------- ---------- ----------
        61 Abhiraj              dusari               dusariabhi @bhir@j

SQL> insert into student values (&s_id,'&first_name','&last_name','&user_name','&password');
Enter value for s_id: 72
Enter value for first_name: Hemanth
Enter value for last_name: Sherla
Enter value for user_name: sherla001
Enter value for password: hem@nth
old   1: insert into student values (&s_id,'&first_name','&last_name','&user_name','&password')
new   1: insert into student values (72,'Hemanth','Sherla','sherla001','hem@nth')

1 row created.

SQL> /
Enter value for s_id: 83
Enter value for first_name: mohammad
Enter value for last_name: razzaq
Enter value for user_name: mrazzaq
Enter value for password: r@zz@q
old   1: insert into student values (&s_id,'&first_name','&last_name','&user_name','&password')
new   1: insert into student values (83,'mohammad','razzaq','mrazzaq','r@zz@q')

1 row created.

SQL> /
Enter value for s_id: 94
Enter value for first_name: mallik
Enter value for last_name: reddy
Enter value for user_name: saimallik
Enter value for password: s@im@llik
old   1: insert into student values (&s_id,'&first_name','&last_name','&user_name','&password')
new   1: insert into student values (94,'mallik','reddy','saimallik','s@im@llik')

1 row created.

SQL> /
Enter value for s_id: 105
Enter value for first_name: sujitha
Enter value for last_name: tadi
Enter value for user_name: sujithatadi
Enter value for password: sujith@
old   1: insert into student values (&s_id,'&first_name','&last_name','&user_name','&password')
new   1: insert into student values (105,'sujitha','tadi','sujithatadi','sujith@')
insert into student values (105,'sujitha','tadi','sujithatadi','sujith@')
                                                 *
ERROR at line 1:
ORA-12899: value too large for column "HEMANTH"."STUDENT"."USER_NAME" (actual:
11, maximum: 10)


SQL> /
Enter value for s_id: 105
Enter value for first_name: sujitha
Enter value for last_name: tadi
Enter value for user_name: tsujitha
Enter value for password: sujith@
old   1: insert into student values (&s_id,'&first_name','&last_name','&user_name','&password')
```

```
SQL> /
Enter value for s_id: 105
Enter value for first_name: sujitha
Enter value for last_name: tadi
Enter value for user_name: tsujitha
Enter value for password: sujith@
old   1: insert into student values (&s_id,'&first_name','&last_name','&user_name','&password')
new   1: insert into student values (105,'sujitha','tadi','tsujitha','sujith@')

1 row created.

SQL> select *from student;

      S_ID FIRST_NAME          LAST_NAME           USER_NAME  PASSWORD
---------- ------------------- ------------------- ---------- ----------
        61 Abhiraj             dusari              dusariabhi @bhir@j
        72 Hemanth             Sherla              sherla001  hem@nth
        83 mohammad            razzaq              mrazzaq    r@zz@q
        94 mallik              reddy               saimallik  s@im@llik
       105 sujitha             tadi                tsujitha   sujith@

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

```
 YEAR                                              NUMBER(5)

SQL> insert into enrolls values(&s_id,&c_id,&year);
Enter value for s_id: 72
Enter value for c_id: 4
Enter value for year: 2018
old   1: insert into enrolls values(&s_id,&c_id,&year)
new   1: insert into enrolls values(72,4,2018)

1 row created.

SQL> /
Enter value for s_id: 94
Enter value for c_id: 5
Enter value for year: 2020
old   1: insert into enrolls values(&s_id,&c_id,&year)
new   1: insert into enrolls values(94,5,2020)

1 row created.

SQL> /
Enter value for s_id: 105
Enter value for c_id: 3
Enter value for year: 2019
old   1: insert into enrolls values(&s_id,&c_id,&year)
new   1: insert into enrolls values(105,3,2019)

1 row created.

SQL> /
Enter value for s_id: 61
Enter value for c_id: 1
Enter value for year: 2019
old   1: insert into enrolls values(&s_id,&c_id,&year)
new   1: insert into enrolls values(61,1,2019)

1 row created.

SQL> /
Enter value for s_id: 83
Enter value for c_id: 2
Enter value for year: 2019
old   1: insert into enrolls values(&s_id,&c_id,&year)
new   1: insert into enrolls values(83,2,2019)

1 row created.

SQL> select * from enrolls;

      S_ID       C_ID       YEAR
---------- ---------- ----------
        72          4       2018
        94          5       2020
       105          3       2019
        61          1       2019
        83          2       2019
```

```
SQL> insert into assgnments values(&a_id,&c_id,'&deadline','&score');
Enter value for a_id: 101
Enter value for c_id: 4
Enter value for deadline: 12-2-2018
Enter value for score: 100
old   1: insert into assgnments values(&a_id,&c_id,'&deadline','&score')
new   1: insert into assgnments values(101,4,'12-2-2018','100')
insert into assgnments values(101,4,'12-2-2018','100')
            *
ERROR at line 1:
ORA-00942: table or view does not exist


SQL> insert into assignments values(&a_id,&c_id,'&deadline','&score');
Enter value for a_id: 101
Enter value for c_id: 4
Enter value for deadline: 12-02-2018
Enter value for score: 100
old   1: insert into assignments values(&a_id,&c_id,'&deadline','&score')
new   1: insert into assignments values(101,4,'12-02-2018','100')

1 row created.

SQL> /
Enter value for a_id: 102
Enter value for c_id: 5
Enter value for deadline: 11-02-2020
Enter value for score: 100
old   1: insert into assignments values(&a_id,&c_id,'&deadline','&score')
new   1: insert into assignments values(102,5,'11-02-2020','100')

1 row created.

SQL> /
Enter value for a_id: 105
Enter value for c_id: 3
Enter value for deadline:
Enter value for score:
old   1: insert into assignments values(&a_id,&c_id,'&deadline','&score')
new   1: insert into assignments values(105,3,'','')

1 row created.

SQL> /
Enter value for a_id: 61
Enter value for c_id: 1
Enter value for deadline: 15-02-2019
Enter value for score: 80
old   1: insert into assignments values(&a_id,&c_id,'&deadline','&score')
new   1: insert into assignments values(61,1,'15-02-2019','80')

1 row created.
```

```
SQL> update assignments SET '&deadline' where a_id=105 and c_id=3;
Enter value for deadline: 12-02-2019
old   1: update assignments SET '&deadline' where a_id=105 and c_id=3
new   1: update assignments SET '12-02-2019' where a_id=105 and c_id=3
update assignments SET '12-02-2019' where a_id=105 and c_id=3
                       *
ERROR at line 1:
ORA-01747: invalid user.table.column, table.column, or column specification


SQL> update assignments SET deadline ='&deadline' where a_id=105 and c_id=3;
Enter value for deadline: 12-08-2019
old   1: update assignments SET deadline ='&deadline' where a_id=105 and c_id=3
new   1: update assignments SET deadline ='12-08-2019' where a_id=105 and c_id=3

1 row updated.

SQL> update assignments SET score =&score where a_id=105 and c_id=3;
Enter value for score: 100
old   1: update assignments SET score =&score where a_id=105 and c_id=3
new   1: update assignments SET score =100 where a_id=105 and c_id=3

1 row updated.

SQL> delete from assignments where a_id=23;

1 row deleted.

SQL> select * from assignments;

      A_ID       C_ID DEADLINE            SCORE
---------- ---------- -------------------- --------------------
       101          4 12-02-2018           100
       102          5 11-02-2020           100
       105          3 12-08-2019           100
        61          1 15-02-2019           80
        83          2 20-02-2019           75

SQL> _
```


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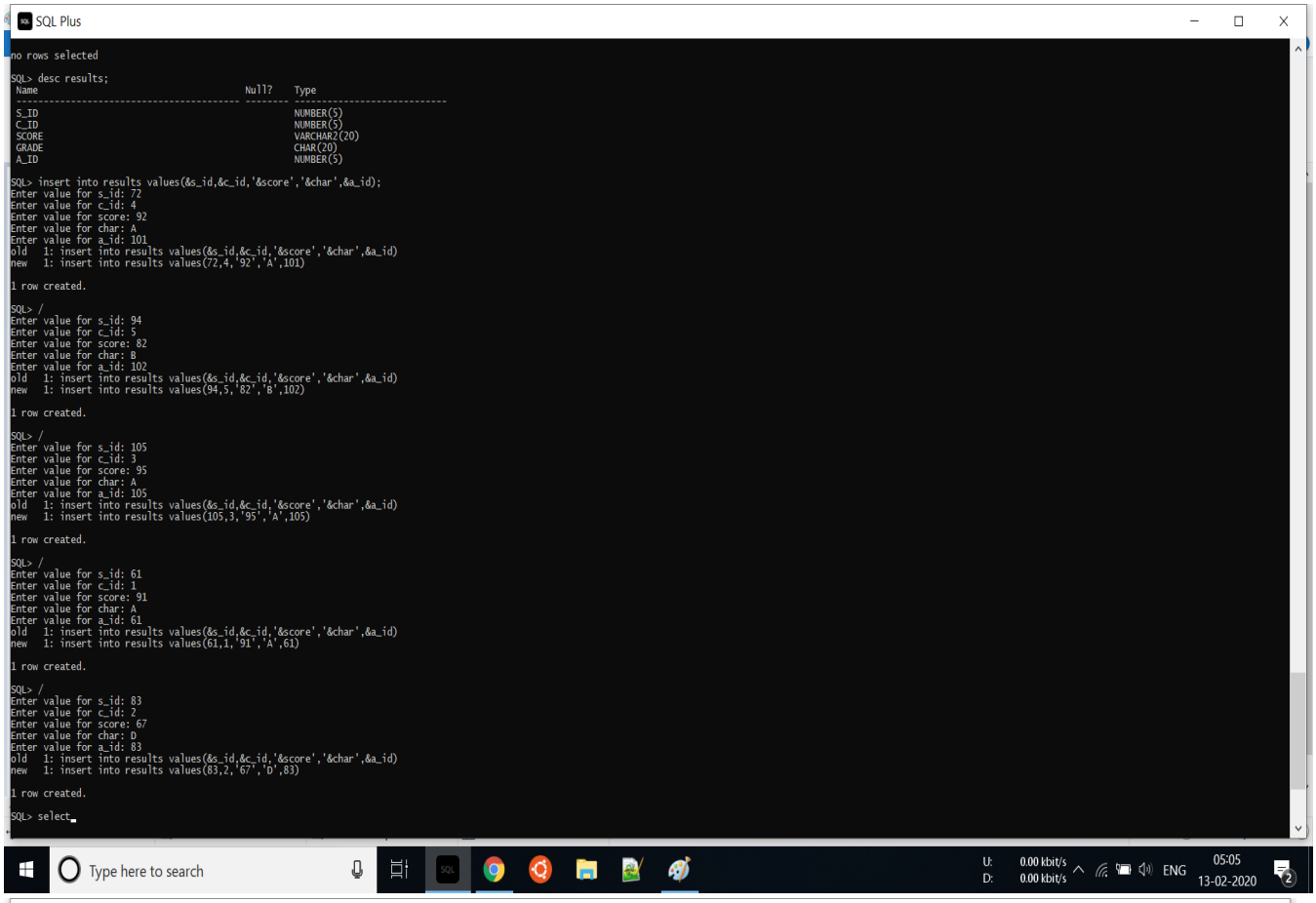
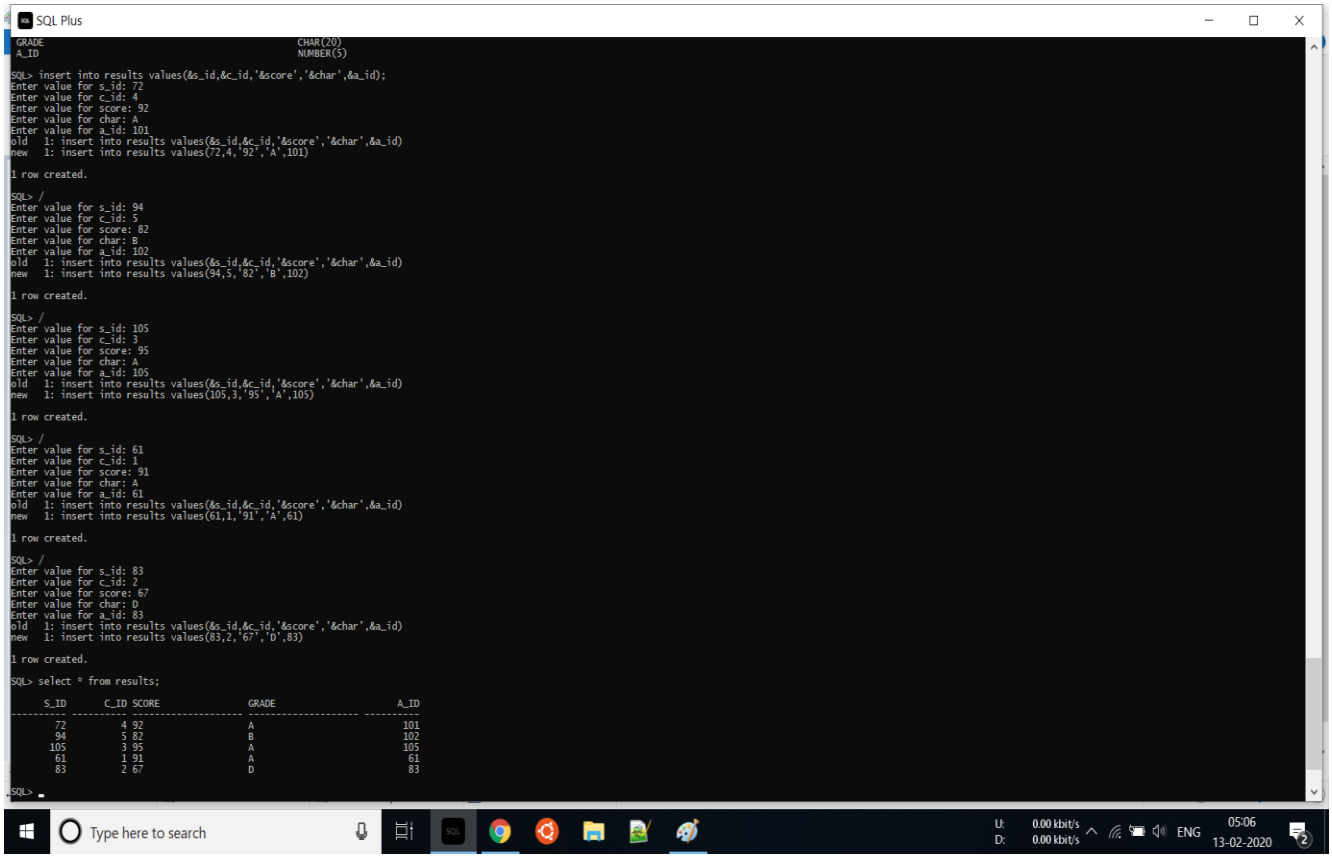
Online MOOC's year wise student database management system

DBMS ASSIGNMENT 1





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