# **Database Management Lab file**

**In partial fulfillment of requirement for the degree**

**Of**

**Bachelor of Technology**

**In**

**COMPUTER SCIENCE**

**Submitted by**

**MAYANK BORA**

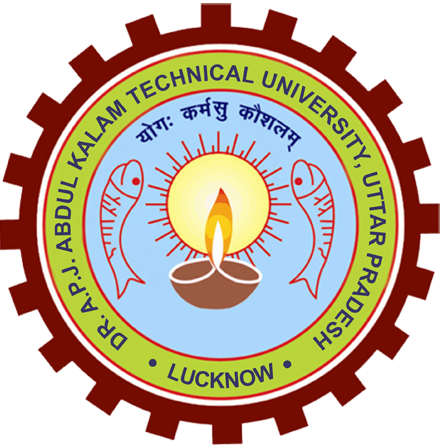
**(1816110110)**

**Under the supervision of**

**Mrs. Pavi Saraswat**

***Krishna Engineering college***

***Ghaziabad***

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##### **DR. A.P.J. ABDUL KALAM TECHNICAL UNIVERSITY, LUCKNOW**

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**Experiment 4**

Objective: -To Implement the restrictions on the table.

Data constraints: Besides the cell name, cell length and cell data type there are other parameters i.e. other data constrains that can be passed to the DBA at check creation time. The constraints can either be placed at column level or at the table level.

Column Level Constraints: If the constraints are defined along with the column definition, it is called a column level constraint.

Table Level Constraints: If the data constraint attached to a specify cell in a table reference the contents of another cell in the table then the user will have to use table level constraints.

Null Value Concepts:- while creating tables if a row locks a data value for particular column that value is said to be null. Column of any data types may contain null values unless the column was defined as not null when the table was created.

Question.1 Create the following tables:

sales\_master

|  |  |  |  |
| --- | --- | --- | --- |
| Column name | Data type | Size | Attributes |
| Salesman\_no | varchar2 | 6 | Primary key/first letter must start with ‘s’ |
| Sal\_name | varchar2 | 20 | Not null |
| Address | varchar2 |  | Not null |
| City | varchar2 | 20 |  |
| State | varchar2 | 20 |  |
| Pincode | Number | 6 |  |
| Sal\_amt | Number | 8 | Not null, cannot be 0 |
| Tgt\_to\_get | Number | 6 | Not null, cannot be 0 |
| Ytd\_sales | Number | 6 | Not null, cannot be 0 |
| Remarks | varchar2 | 30 |  |

QUERY:

create table sales\_master\_081(

Salesman\_no varchar(6) primary key CHECK (Salesman\_noLIKE 's'),

Sal\_name varchar(20) NOT NULL,

Address varchar(20) NOT NULL,

City varchar(20), State varchar(20), Pincode int(6),

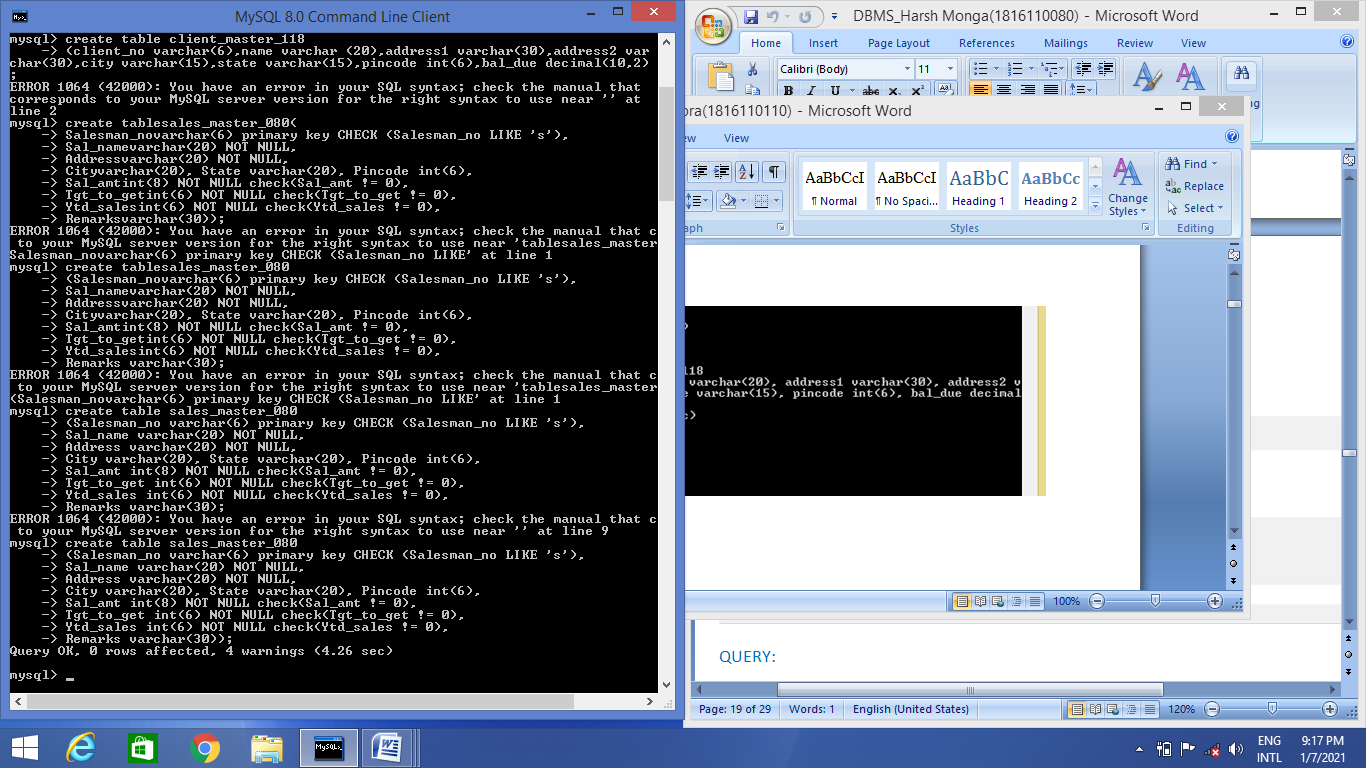
Sal\_amt int(8) NOT NULL check(Sal\_amt != 0),

Tgt\_to\_get int(6) NOT NULL check(Tgt\_to\_get != 0),

Ytd\_sales int(6) NOT NULL check(Ytd\_sales != 0),

Remarks varchar(30));

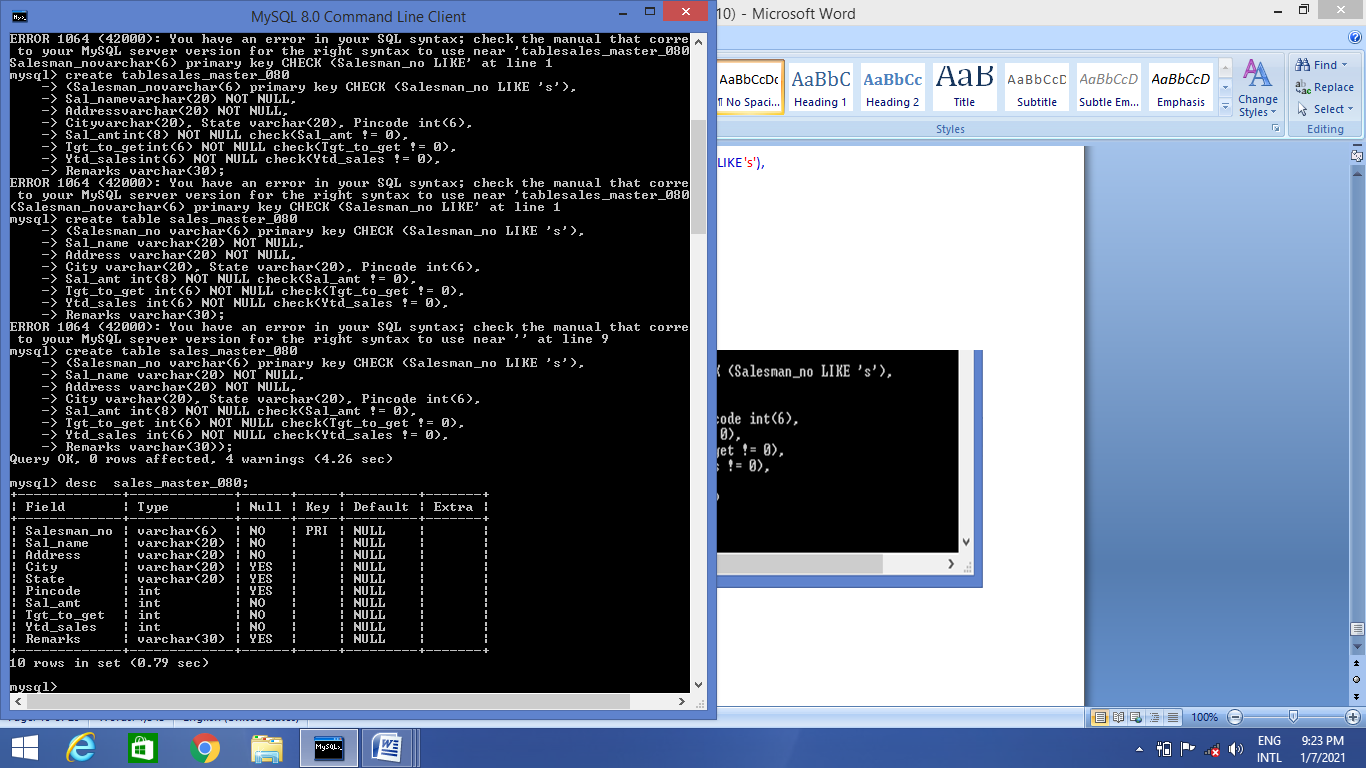
OUTPUT:



QUERY:

desc sales\_master\_080;

OUTPUT:



2.sales\_order

|  |  |  |  |
| --- | --- | --- | --- |
| Columnname | Datatype | Size | Attributes |
| S\_order\_no | varchar2 | 6 | Primary/first letter must be 0 |
| S\_order\_date | Date | 6 | Primary key reference clientno of client\_master table |
| Client\_no | Varchar2 | 25 |  |
| Dely\_add | Varchar2 | 6 |  |
| Salesman\_no | Varchar2 | 6 | Foreign key references salesman\_no of salesman\_master table |
| Dely\_type | Char | 1 | Delivery part(p)/full(f),default f |
| Billed\_yn | Char | 1 |  |
| Dely\_date | Date |  | Can not be lessthan s\_order\_date |
| Order\_status | Varchar2 | 10 | Values (‘in process’;’fulfilled’;back order’;’canceled |

QUERY:

create table sales\_order\_080(

S\_order\_no varchar(6) PRIMARY KEY CHECK(s\_order\_no LIKE '0%'),

S\_order\_date DATE, Client\_no varchar(25), Dely\_add varchar(6),

Salesman\_no varchar(6) REFERENCES sale\_master(sales\_no),

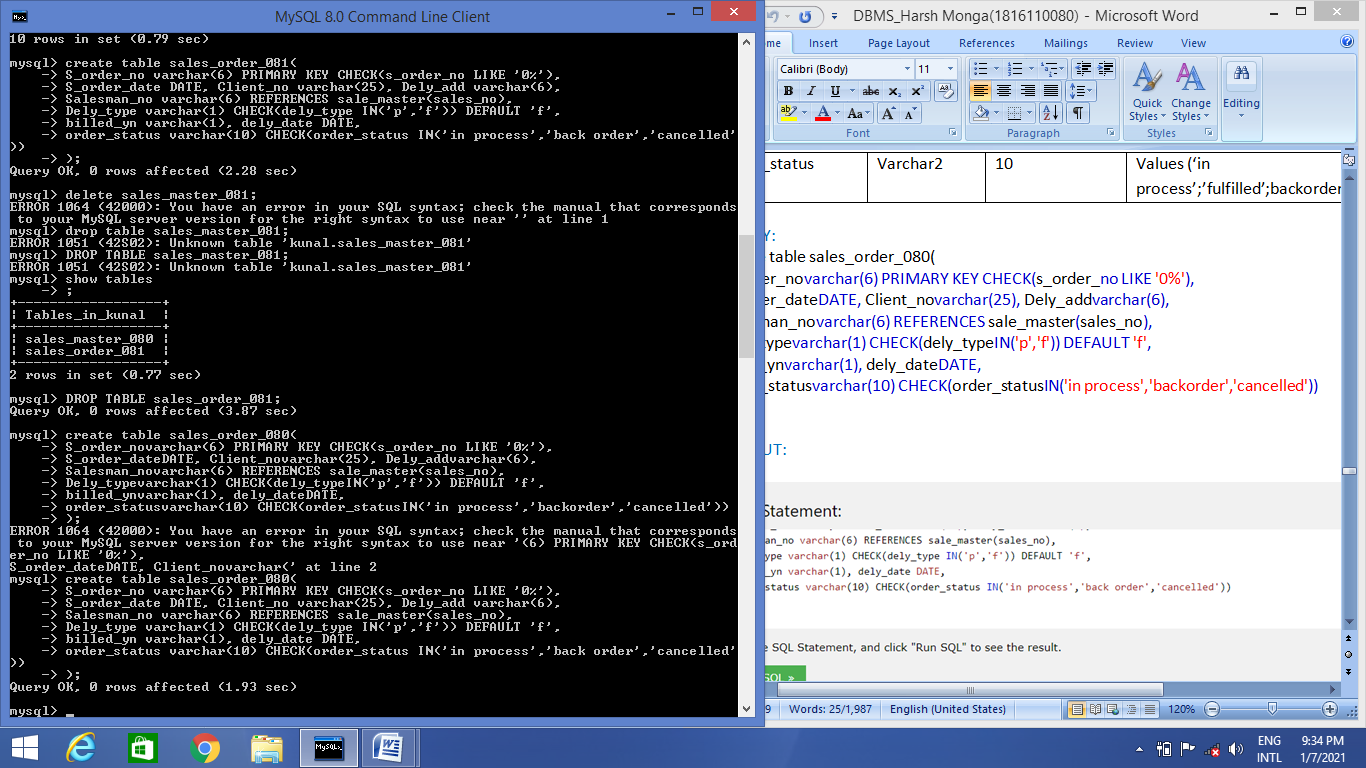
Dely\_type varchar(1) CHECK(dely\_type IN('p','f')) DEFAULT 'f',

billed\_yn varchar(1), dely\_date DATE,

order\_status varchar(10) CHECK(order\_status IN('in process','back order','cancelled'))

);

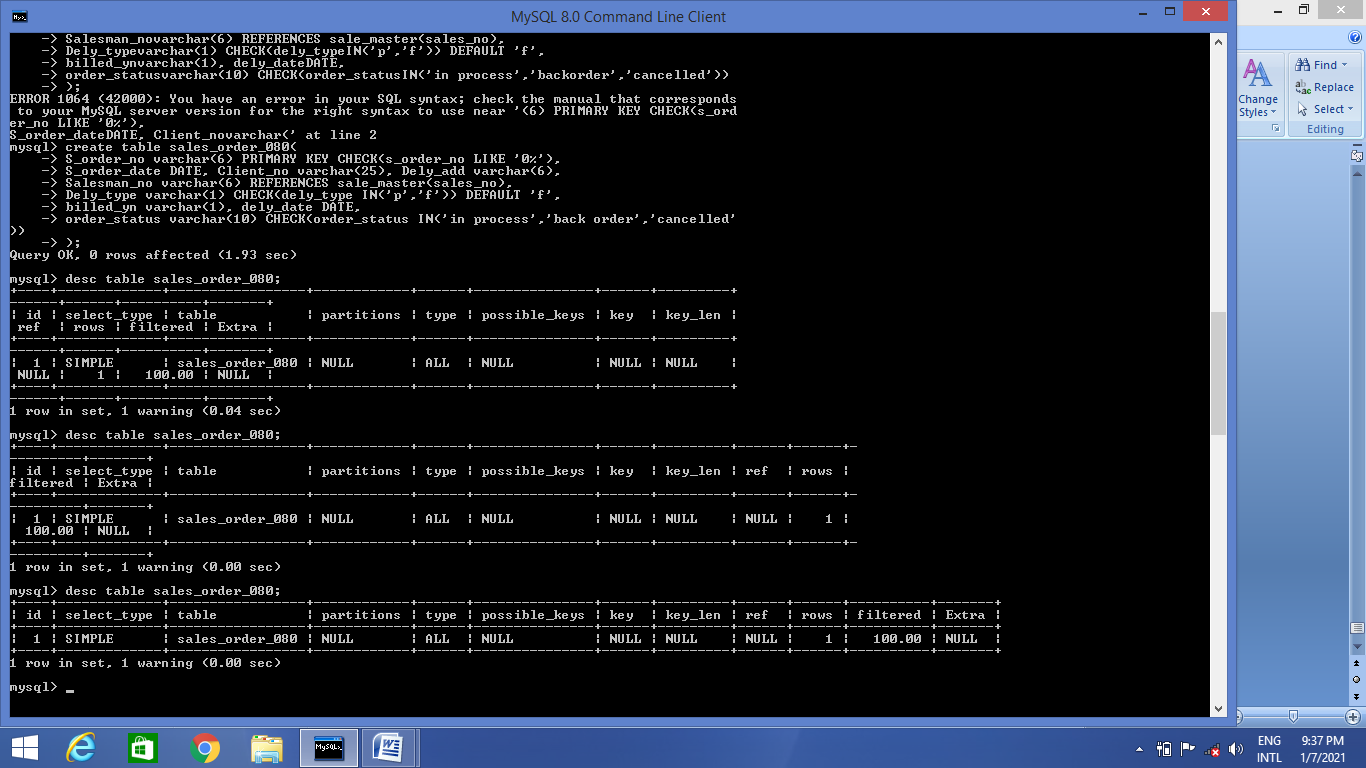
OUTPUT:



QUERY:

Desc table sales\_order\_080;

OUTPUT:



Sales\_order\_details

|  |  |  |  |
| --- | --- | --- | --- |
| Column | Datatype | Size | Attributes |
| S\_order\_no | Varchar2 | 6 | Primary key/foreign key references s\_order\_no of sales\_order |
| Product\_no | Varchar2 | 6 | Primary key/foreign key references product\_no of product\_master |
| Qty\_order | Number | 8 |  |
| Qty\_disp | Number | 8 |  |
| Product\_rate | Number | 10,2 |  |

QUERY:

create table sales\_order\_details\_080

(

s\_order\_novarchar(6) PRIMARY KEY REFERENCES sales\_order(s\_order\_no),

product\_novarchar(6) REFERENCES products(product\_no),

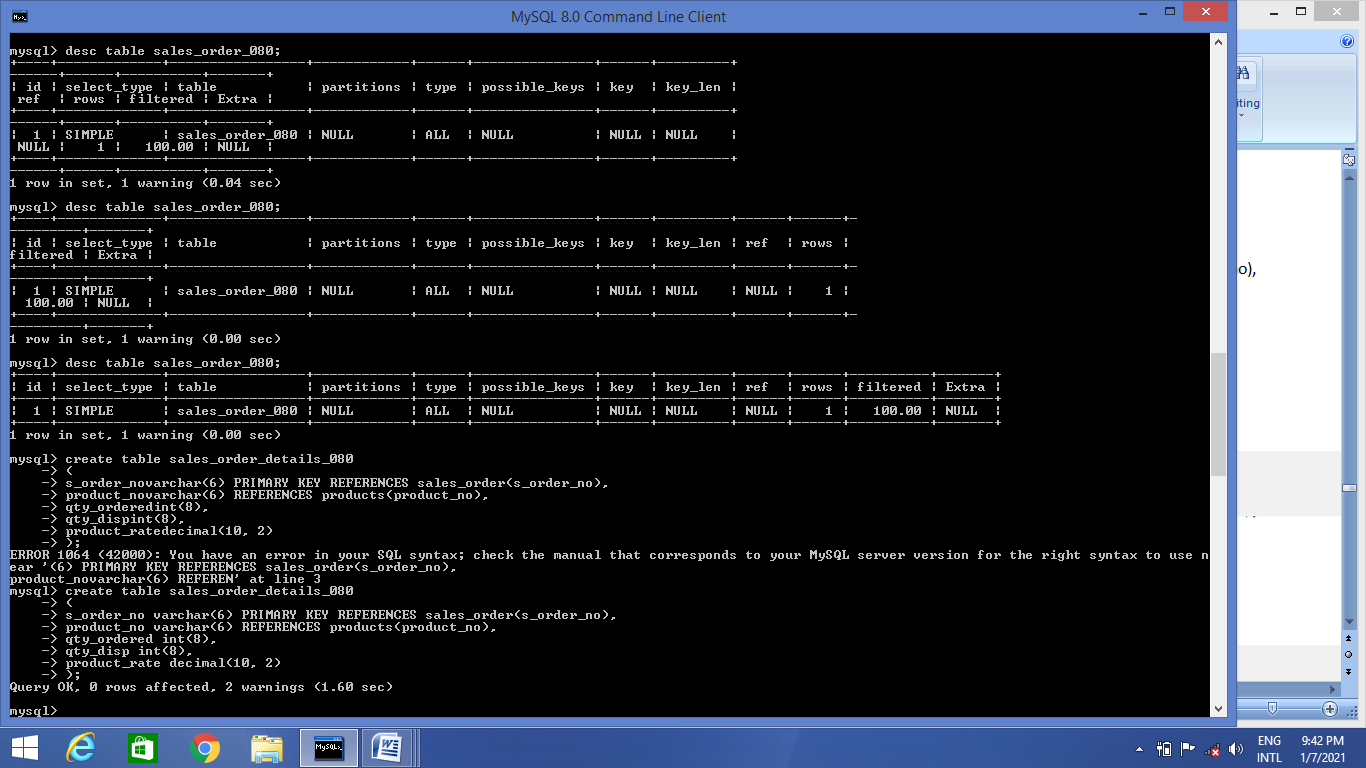
qty\_orderedint(8),

qty\_dispint(8),

product\_ratedecimal(10, 2)

);

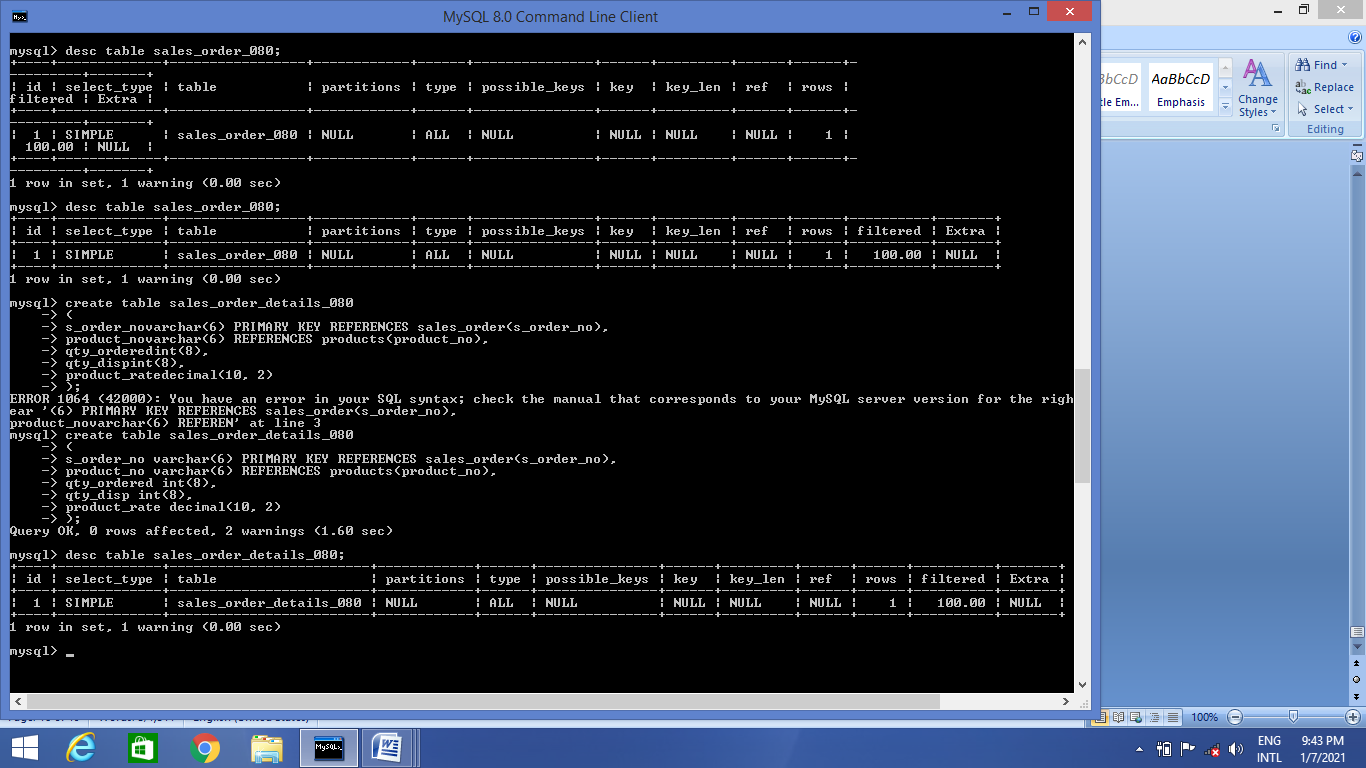
OUTPUT:



QUERY:

desc table sales\_order\_details\_080;

OUTPUT



**Experiment 5**

**Objective** :- To Implement the structure of the table

**Theory: -**

**Modifying the Structure of Tables**- Alter table command is used to changing the structure of a table. Using the alter table clause you cannot perform the following tasks:

1. change the name of table
2. change the name of column
3. drop a column
4. decrease the size of a table if table data exists.

The following tasks you can perform through alter table command.

Adding new columns:

**Syntax :**

ALTER TABLE tablename

ADD (newcolumnnamenewdatatype (size));

Modifying existing table

**Syntax:**

ALTER TABLE tablename

MODIFY (newcolumnnamenewdatatype (size));

**Removing/Deleting Tables**- Following command is used for removing or deleting a table.

**Syntax:**

**DROP** TABLE tabename:

Defining Integrity constraints in the **ALTER** TABLE command-

You can also define integrity constraints using the constraint clause in the **ALTER** TABLE command. The following examples show the definitions of several integrity constraints.

Add PRIMARY KEY-

**Syntax:**

**ALTER** TABLE tablename

**ADD** PRIMARY KEY(columnname);

Add FOREIGN KEY-

**Syntax:**

**ALTER** TABLE tablename

**ADD** CONSTRAINT constraintname FOREIGN KEY(columnname) REFERENCES tablename;

Droping integrity constraints in the ALTER TABLE command:

You can drop integrity constraint if the rule that if enforces is no longer true or if the constraint is no longer needed. Drop the constraint using the **ALTER** TABLE command with the **DROP** clause. The following examples illustrate the droping of integrity constraints.

DROP the PRIMARY KEY-

**Syntax:**

ALTER TABLE tablename

DROP PRIMARY KEY

DROP FOREIGN KEY-

**Syntax:**

ALTER TABLE tablename DROP CONSTRAINT constraintname;

**Question 1. Create the following tables:**

**Challan\_Header**

**Column name data type size Attributes**

Challan\_no varchar2 6 Primary key

s\_order\_no varchar2 6 Foreign key references s\_order\_no of

sales\_order table

challan\_date date not null

billed\_yn char 1 values (‘Y’,’N’). Default ‘N’

**Query:**

create table challan\_header\_080

(

challan\_novarchar(6) PRIMARY KEY,

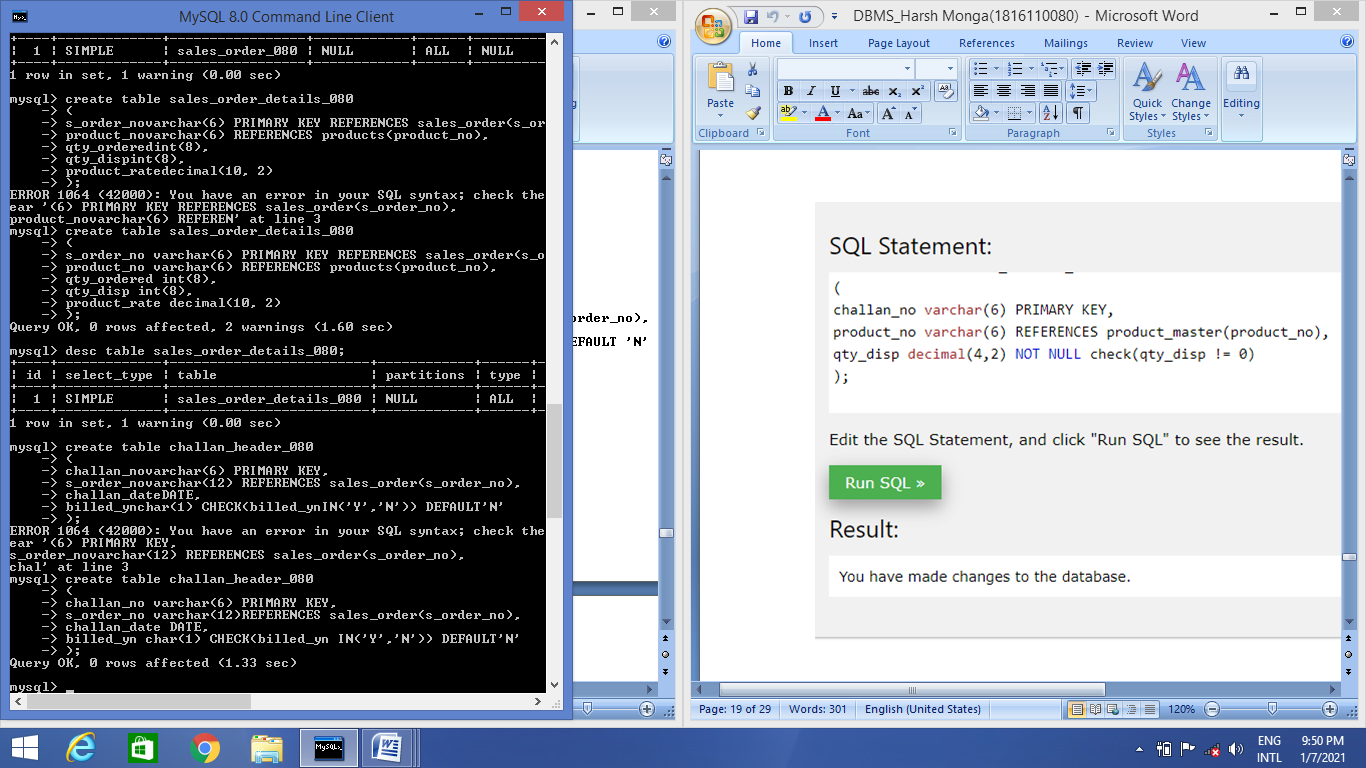
s\_order\_novarchar(12) REFERENCES sales\_order(s\_order\_no),

challan\_dateDATE,

billed\_ynchar(1) CHECK(billed\_ynIN('Y','N')) DEFAULT'N'

);

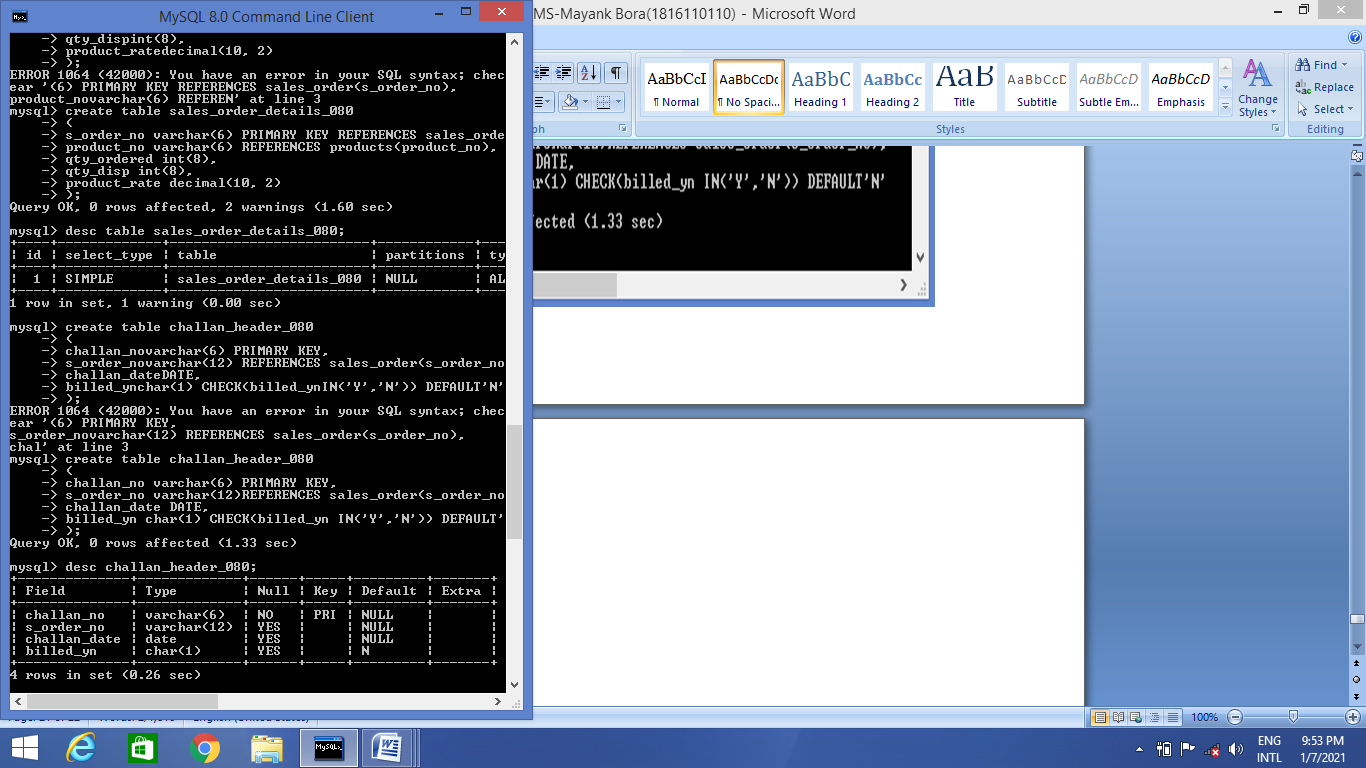
**Output:**



**Query:**

desc challan\_header\_080;

**Output:**

****

#### Table Name: Challan\_Details

**Column name data type size Attributes**

challan\_no varchar2 6 Primary key

product\_no varchar2 6 Primary key/Foreign key references

product\_no of product\_master

qty\_disp number 4,2 not null

**Query:**

create table challan\_details\_080

(

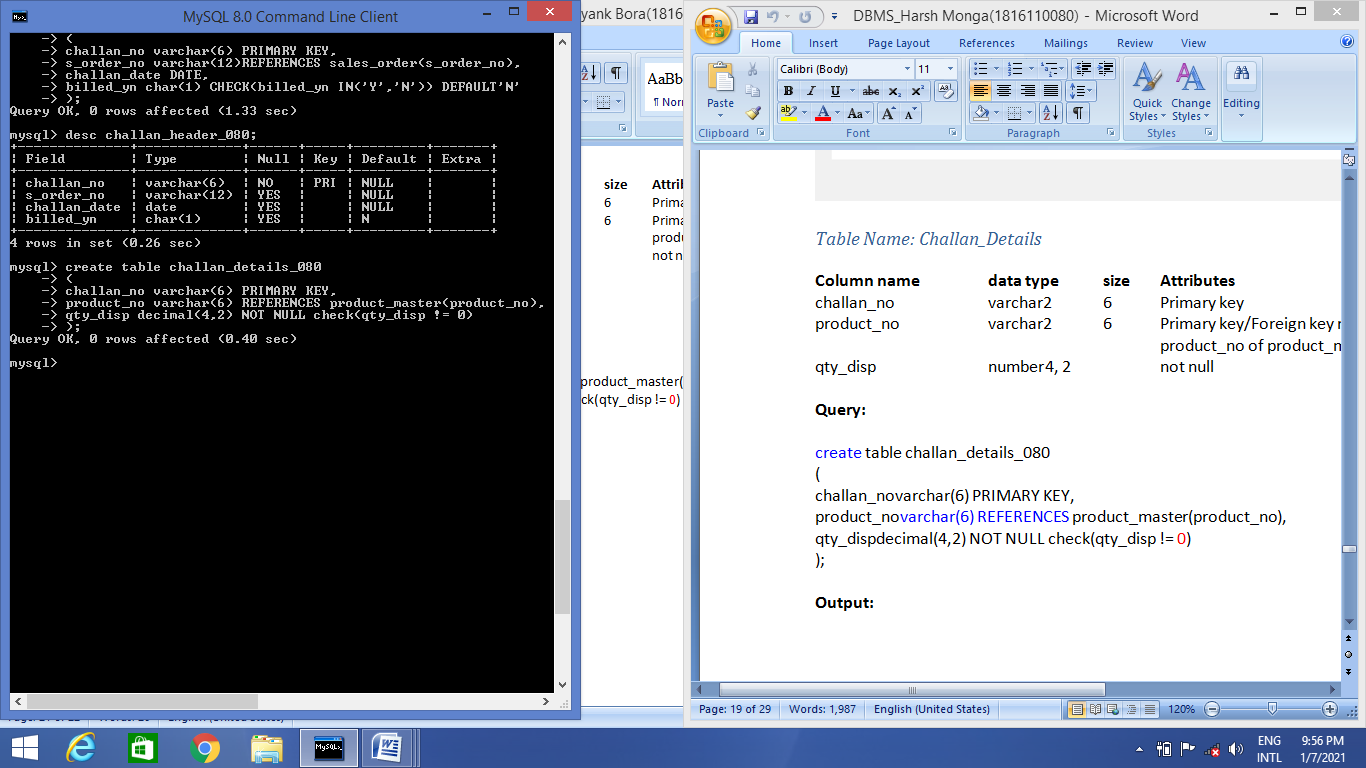
challan\_no varchar(6) PRIMARY KEY,

product\_no varchar(6) REFERENCES product\_master(product\_no),

qty\_disp decimal(4,2) NOT NULL check(qty\_disp != 0)

);

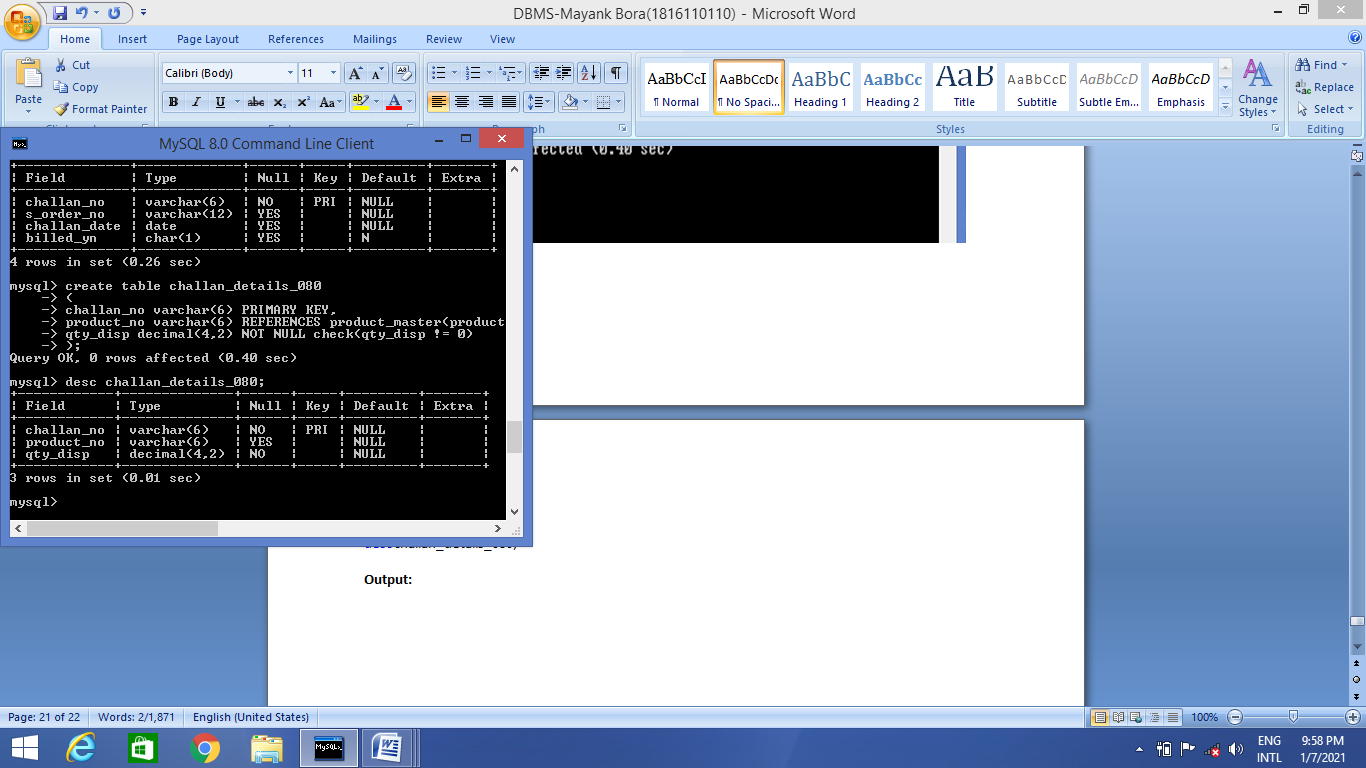
**Output:**



**Query:**

desc challan\_details\_080;

**Output:**



**Q2. Insert the following values into the challan header and challan\_details tables:**

(i) **Challan No S\_order No Challan Date Billed**

CH900 1019001 12-DEC-95 Y

CH865 046865 12-NOV-95 Y

CH396 5010008 12-OCT-95 Y

**Query:**

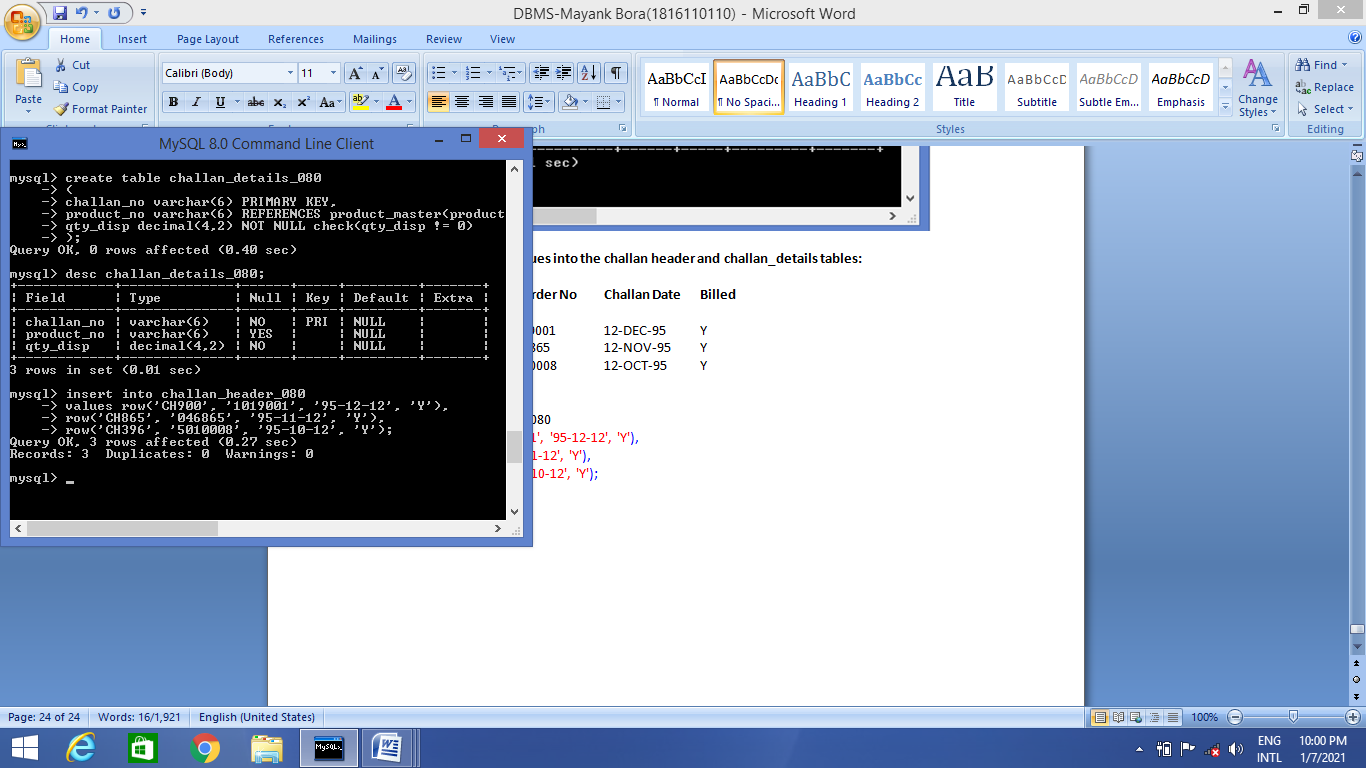
insert into challan\_header\_080

values row('CH900', '1019001', '95-12-12', 'Y'),

row('CH865', '046865', '95-11-12', 'Y'),

row('CH396', '5010008', '95-10-12', 'Y');

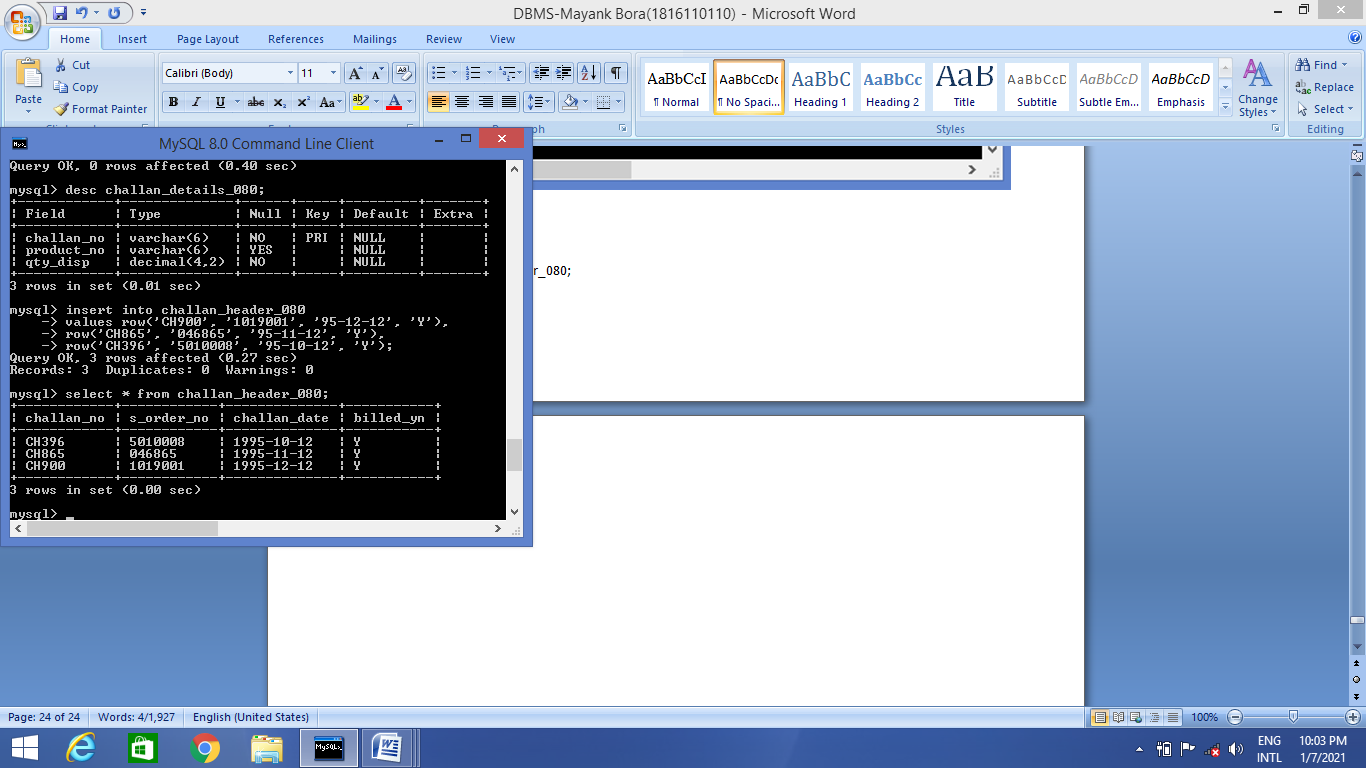
**Output:**

****

**Query:**

select \* from challan\_header\_080;

**Output:**

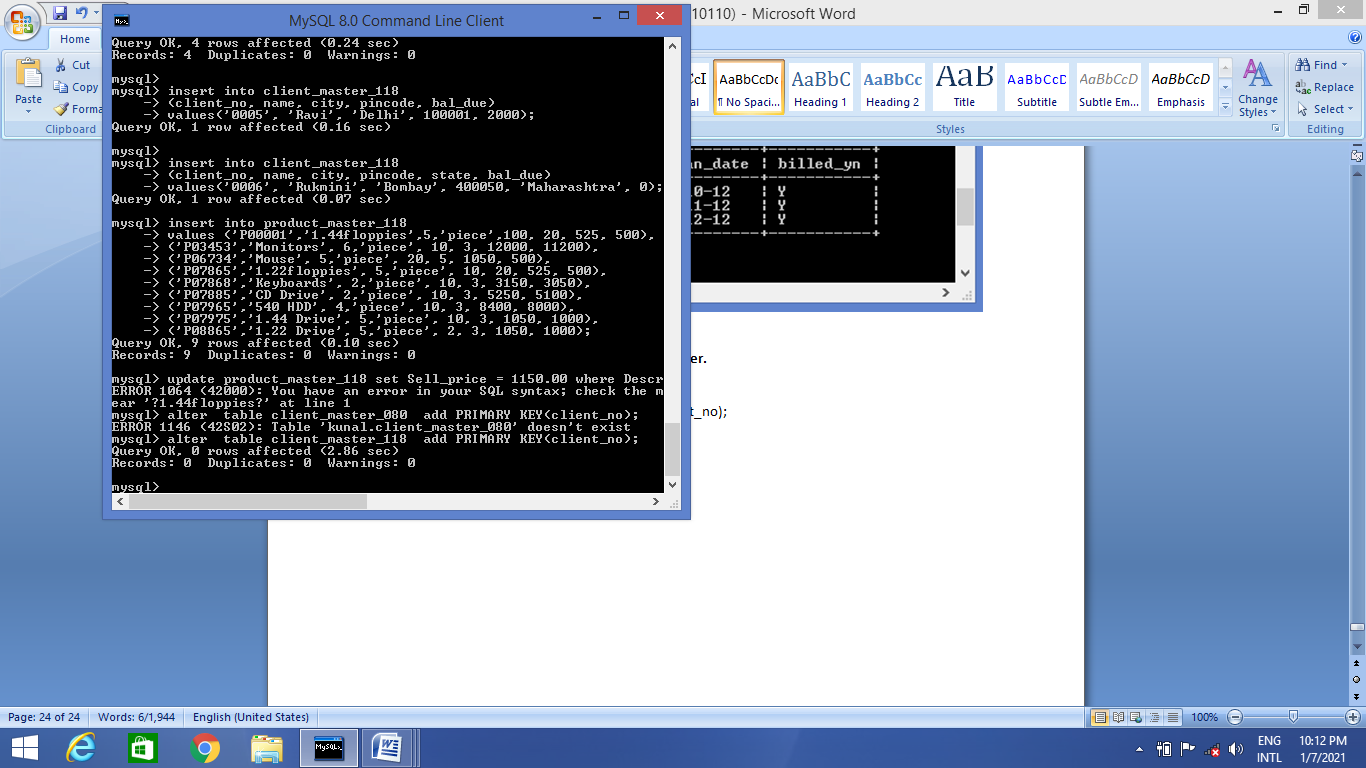
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**Q3. Make the primary key to client\_no in client\_master.**

**Query:**

alter table client\_master\_118 add PRIMARY KEY(client\_no);

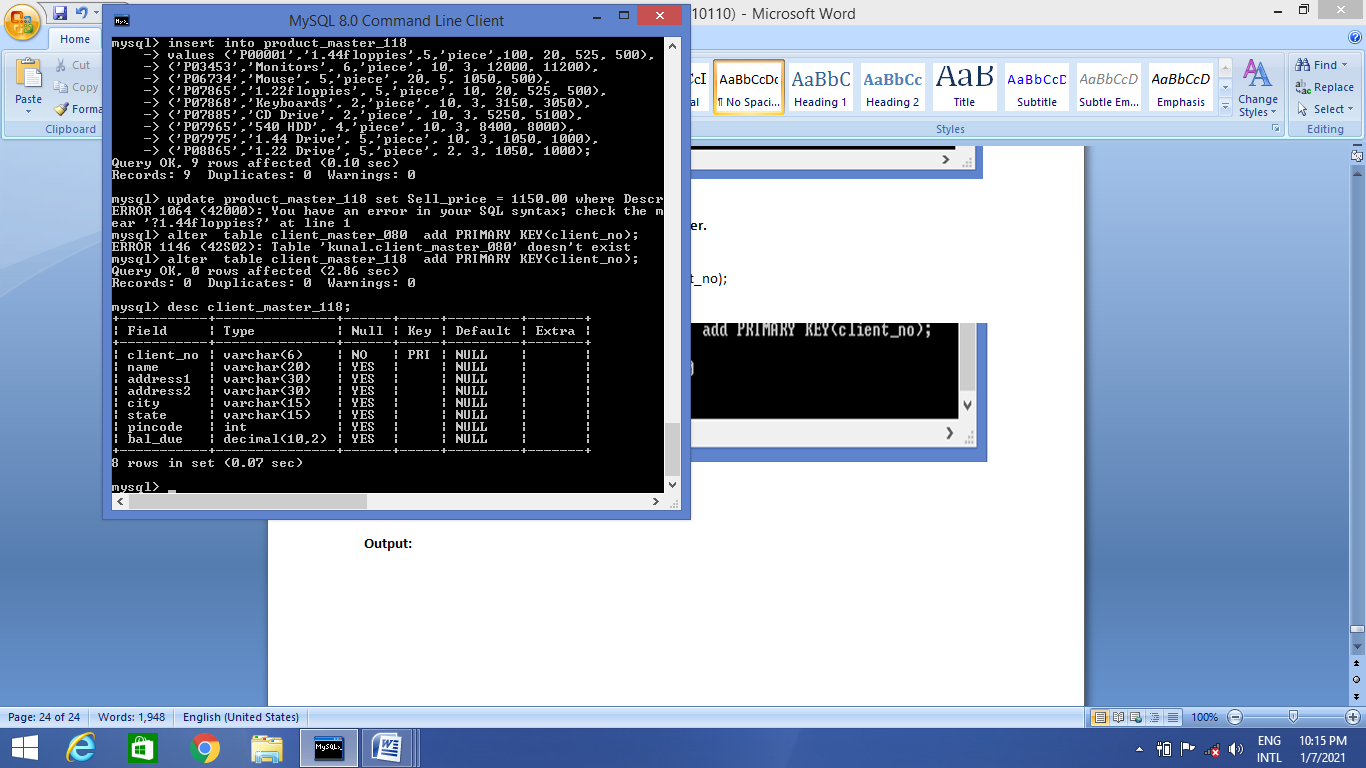
**Output:**

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**Query:**

desc client\_master\_118;

**Output:**

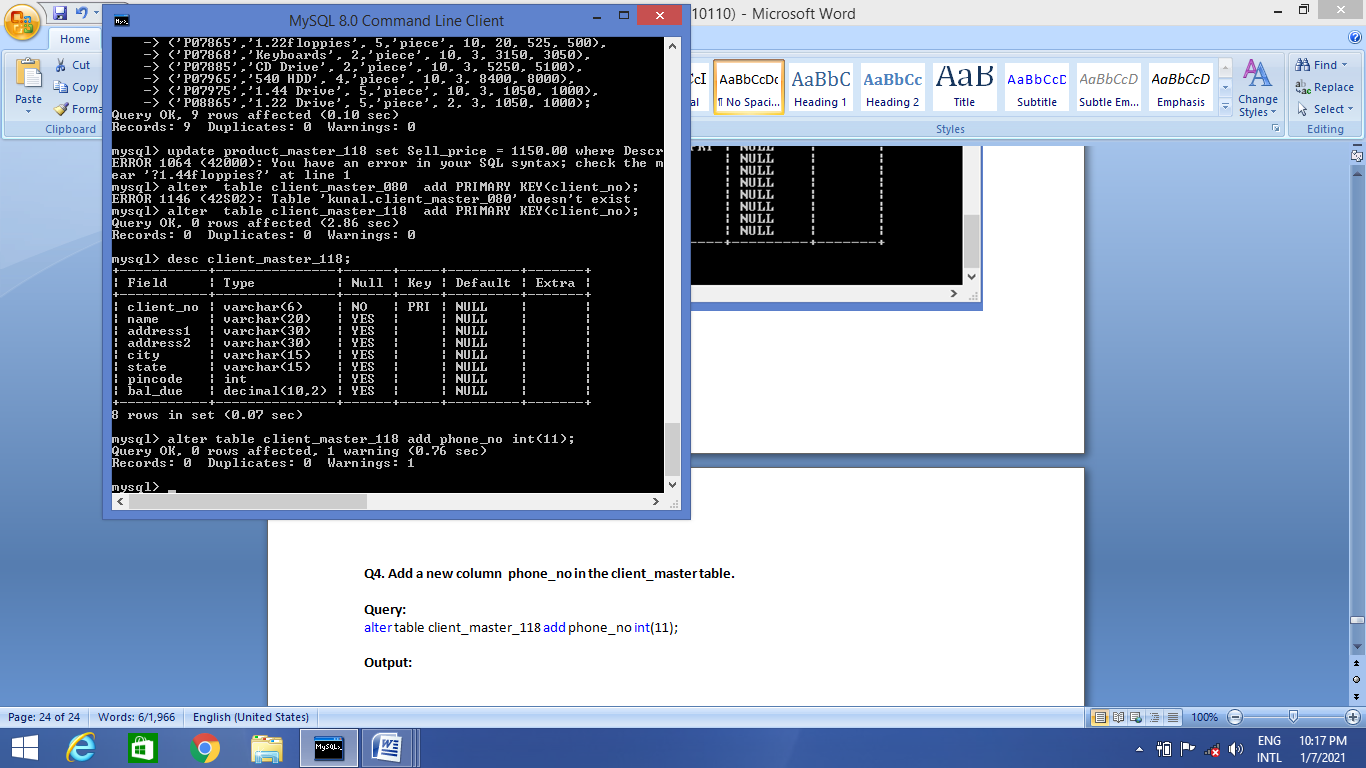
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**Q4. Add a new column phone\_no in the client\_master table.**

**Query:**

alter table client\_master\_118 add phone\_no int(11);

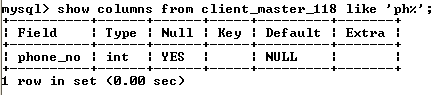
**Output:**

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**Query:**

show columns from client\_master\_118 like ‘ph%’;

**Output:**

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**Q5. Add the not null constraint in the product\_master table with the columns description, profit percent, and sell price and cost price.**

**Query:**

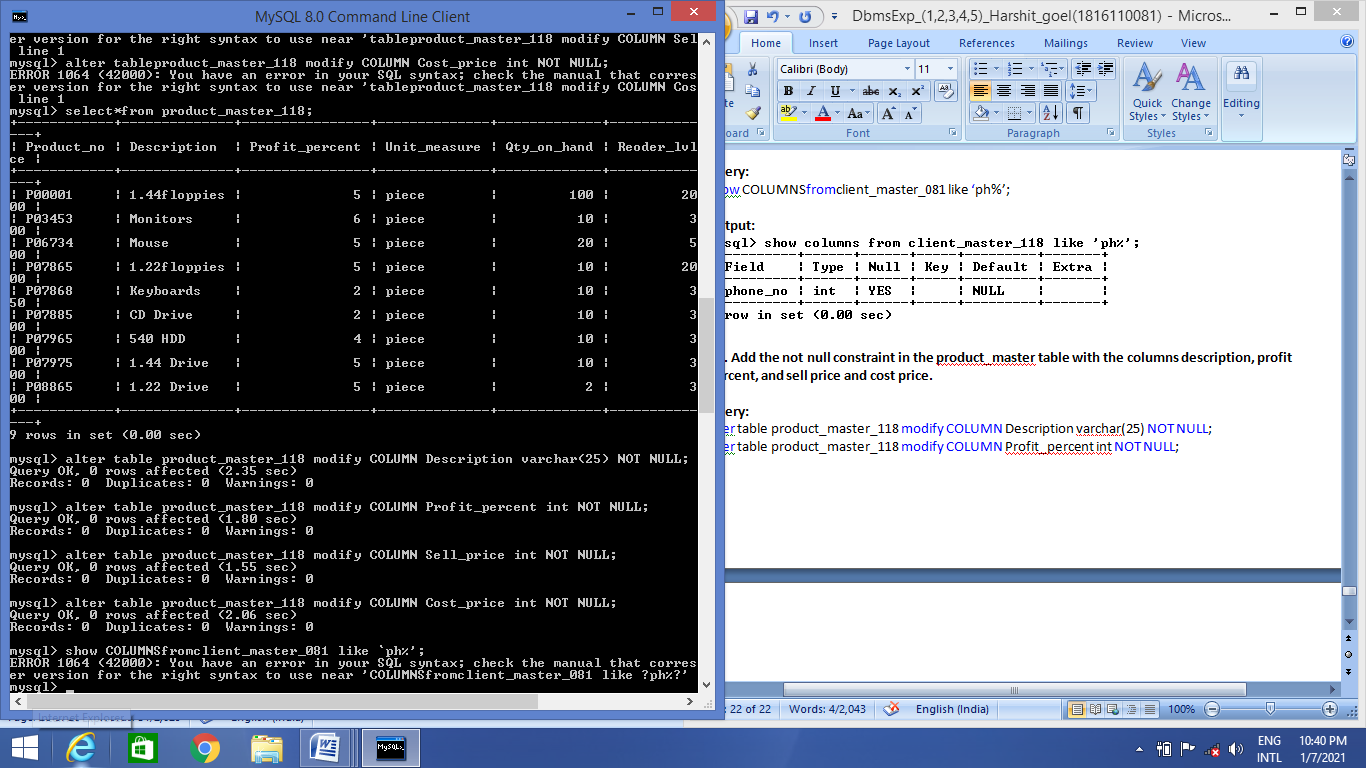
alter table product\_master\_118 modify COLUMN Description varchar(25) NOT NULL;

alter table product\_master\_118modify COLUMN Profit\_percent int NOT NULL;

alter table product\_master\_118 modify COLUMN Sell\_price int NOT NULL;

alter table product\_master\_118 modify COLUMN Cost\_price int NOT NULL;

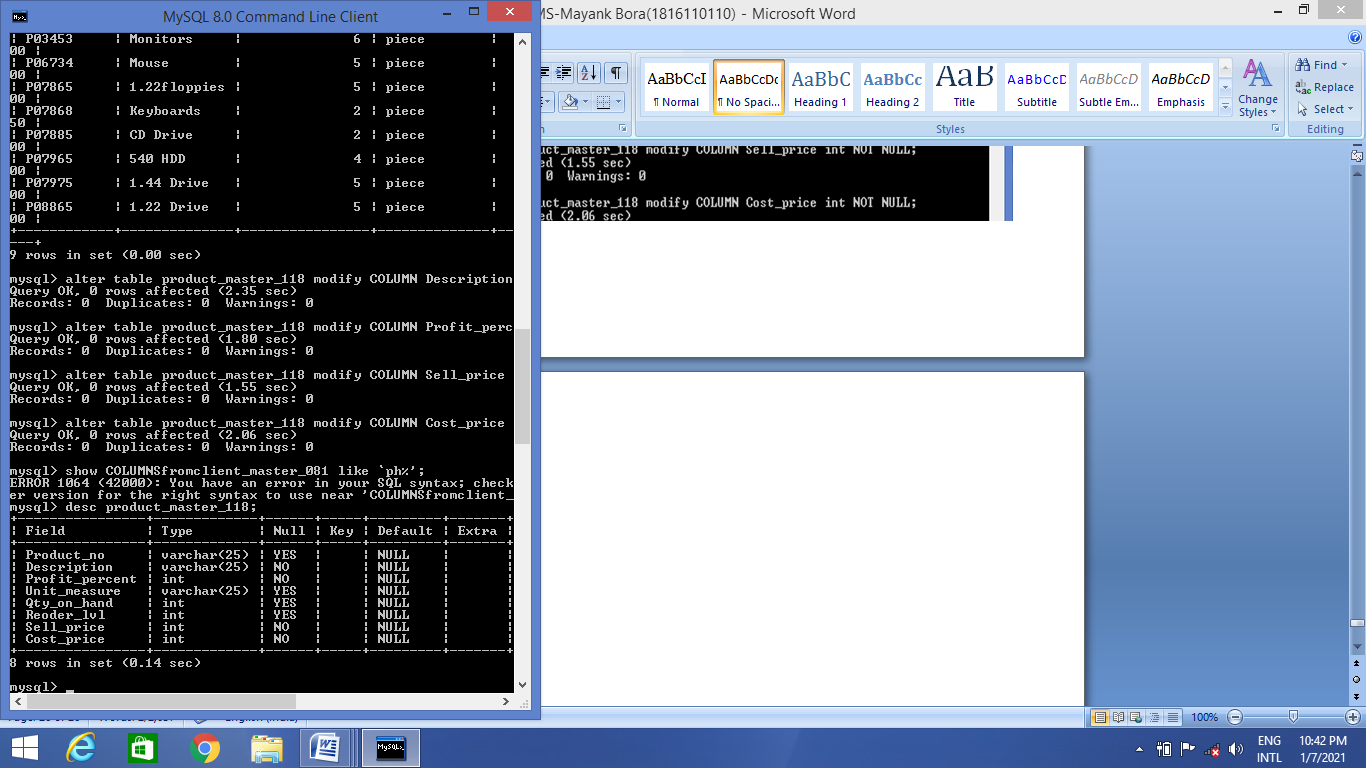
**Output:**

****

Query:

desc product\_master\_118;

Output:

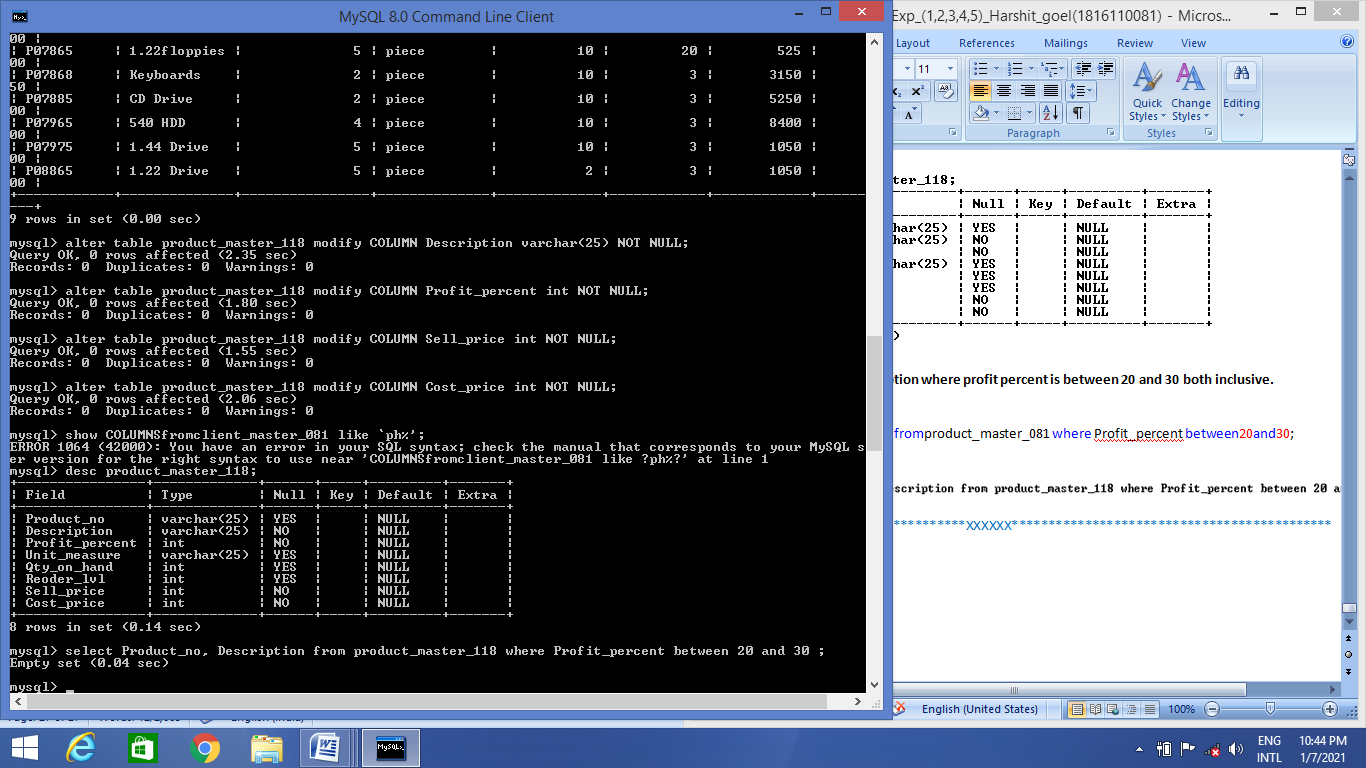


**Q6. Select product\_no, description where profit percent is between 20 and 30 both inclusive.**

**Query:**

select Product\_no, Description from product\_master\_118 where Profit\_percent between 20 and 30 ;

Output:



# **Complier Design Lab file**

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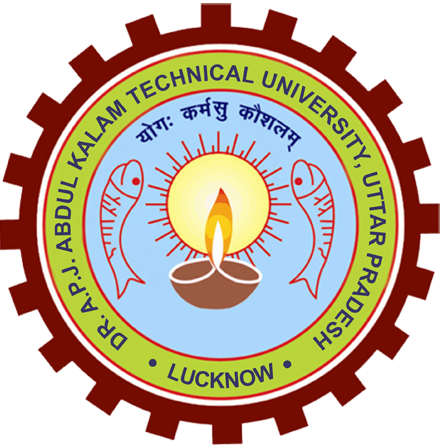
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