University of Central Florida
CGS 2545
Database Concepts

ALTER TABLE Command

- The SQL **ALTER TABLE** command is used to add, delete or modify columns in an existing table.

- Use the ALTER TABLE command to add and drop various constraints on an existing table.

ALTER TABLE Command

- Syntax
  - The basic syntax of an ALTER TABLE command to add a **New Column** in an existing table is as follows.

```
ALTER TABLE table_name ADD column_name datatype;
```

  - The basic syntax of an ALTER TABLE command to **DROP COLUMN** in an existing table is as follows.

```
ALTER TABLE table_name DROP COLUMN column_name;
```

ALTER TABLE Command

- Syntax
  - The basic syntax of an ALTER TABLE command to change the **DATA TYPE** of a column in a table is as follows.

    ```
    ALTER TABLE table_name MODIFY COLUMN column_name datatype;
    ```

  - The basic syntax of an ALTER TABLE command to add a **NOT NULL** constraint to a column in a table is as follows.

    ```
    ALTER TABLE table_name MODIFY column_name datatype NOT NULL;
    ```

ALTER TABLE Command

- Syntax
  - The basic syntax of ALTER TABLE to **ADD UNIQUE CONSTRAINT** to a table is as follows.

```
ALTER TABLE table_name

ADD CONSTRAINT MyUniqueConstraint UNIQUE(column1, column2...);
```

  - The basic syntax of an ALTER TABLE command to **ADD CHECK CONSTRAINT** to a table is as follows.

```
ALTER TABLE table_name

ADD CONSTRAINT MyUniqueConstraint CHECK (CONDITION);
```

ALTER TABLE Command

- Syntax
  - The basic syntax of an ALTER TABLE command to **ADD PRIMARY KEY**constraint to a table is as follows..

```
ALTER TABLE table_name

ADD CONSTRAINT MyPrimaryKey PRIMARY KEY (column1, column2...);
```

  - The basic syntax of an ALTER TABLE command to **DROP CONSTRAINT** from a table is as follows.

```
ALTER TABLE table_name

DROP CONSTRAINT MyUniqueConstraint;
```

ALTER TABLE Command

- Syntax
  - If you're using MySQL, the code is as follows

```
ALTER TABLE table_name
DROP INDEX MyUniqueConstraint;
```

  - The basic syntax of an ALTER TABLE command to **DROP PRIMARY KEY**constraint from a table is as follows.

```
ALTER TABLE table_name
DROP CONSTRAINT MyPrimaryKey;
```

ALTER TABLE Command

- Syntax
  - If you're using MySQL, the code is as follows

```
ALTER TABLE table_name
DROP PRIMARY KEY;
```

ALTER TABLE Command

- Example
  - Consider the CUSTOMERS table having the following records

```
+----+----------+-----+-----------+----------+
| ID | NAME     | AGE | ADDRESS   | SALARY   |
+----+----------+-----+-----------+----------+
|  1 | Ramesh   |  32 | Ahmedabad |  2000.00 |
|  2 | Khilan   |  25 | Delhi     |  1500.00 |
|  3 | kaushik  |  23 | Kota      |  2000.00 |
|  4 | Chaitali |  25 | Mumbai    |  6500.00 |
|  5 | Hardik   |  27 | Bhopal    |  8500.00 |
|  6 | Komal    |  22 | MP        |  4500.00 |
|  7 | Muffy    |  24 | Indore    | 10000.00 |
+----+----------+-----+-----------+----------+
```

ALTER TABLE Command

- Example
  - Following is the example to ADD a **New Column** to an existing table

```
ALTER TABLE CUSTOMERS ADD SEX char(1);
```

  - Now, the CUSTOMERS table is changed and following would be output from the SELECT statement

```
+----+----------+-----+------------+----------+------+
| ID | NAME     | AGE | ADDRESS    | SALARY   | SEX  |
+----+----------+-----+------------+----------+------+
|  1 | Ramesh   |  32 | Ahmedabad  |  2000.00 | NULL |
|  2 | Ramesh   |  25 | Delhi      |  1500.00 | NULL |
|  3 | kaushik  |  23 | Kota       |  2000.00 | NULL |
|  4 | kaushik  |  25 | Mumbai     |  6500.00 | NULL |
|  5 | Hardik   |  27 | Bhopal     |  8500.00 | NULL |
|  6 | Komal    |  22 | MP         |  4500.00 | NULL |
|  7 | Muffy    |  24 | Indore     | 10000.00 | NULL |
+----+----------+-----+------------+----------+------+
```

ALTER TABLE Command

- Example
  - Following is the example to DROP sex column from the existing table

```
ALTER TABLE CUSTOMERS DROP SEX;
```

  - Now, the CUSTOMERS table is changed and following would be output from the SELECT statement

```
+----+----------+-----+-----------+----------+
| ID | NAME     | AGE | ADDRESS   | SALARY   |
+----+----------+-----+-----------+----------+
|  1 | Ramesh   |  32 | Ahmedabad |  2000.00 |
|  2 | Khilan   |  25 | Delhi     |  1500.00 |
|  3 | kaushik  |  23 | Kota      |  2000.00 |
|  4 | Chaitali |  25 | Mumbai    |  6500.00 |
|  5 | Hardik   |  27 | Bhopal    |  8500.00 |
|  6 | Komal    |  22 | MP        |  4500.00 |
|  7 | Muffy    |  24 | Indore    | 10000.00 |
+----+----------+-----+-----------+----------+
```