➢ ***CREATING A DATABASE IN MICROSOFT ACCESS***

- Open Access on your pc from start screen.
- Click BLANK DESKTOP DATABASE from the set of Microsoft Access database templates.
- Type the database name Student_Class_Grade.accdb and then click CREATE.
- The new database appears. Also, a table name Table1 is created since Access has assumed that we will create a table. Close this table.
- Now, click CREATE command tab.
- Command groups are displayed. Click Table Design. A table named Table1 is created.
- The first table we create is STUDENT. So, in the Field Name column we type StudentNumber.
- Press tab key to move to Data type column. Select AutoNumber in Data Type because a StudentNumber is unique to every student. AutoNumber data type gives every student a unique number by itself as it increments the number each time by 1.
- Again, press tab key to move to description column. This column is optional. We type Surrogate key for STUDENT in this column. Press tab key to move to next row.
- The other columns are created using the previous three steps.
- For the data type Short Text we can change the field size in the field size text box. Here for LastName and FirstName we set the field size as 25. For email address we set field size as 100.
- To make a property required click anywhere in data type required property text box to display a drop-down list. Select Yes in the list.
- To set the primary key click the row selector column of the row containing StudentNumber properties.
- Click the primary key button in the tools group of the Design tab.
- Now we are done with building the STUDENT table

- The only step remaining is naming, saving and closing the table.
- Click the Save button in Quick Access toolbar. The Save As dialog box opens. Type the table name as STUDENT and click Ok. The table is named and saved. Close the table now.
- Now with need to build CLASS and GRADE tables the same way as we built STUDENT table. The only difference here is that in GRADE table StudentNumber and ClassNumber both are keys. To set them the keys select both of them and then click the primary key button in tools group of the design tab.

➢ ***INSERTING DATA INTO TABLES***

- We use Datasheet view to add data to the STUDENT table
- In the Navigation Pane click the STUDENT table object.
- The STUDENT table window appears.
- Click the first cell in the StudentNumber column with phrase (New) in it.
- Press Tab key to go to LastName cell. Type the last name of the first student. After you entered that you notice that there is 1 displayed in the StudentNumber. This is done since the data type of StudentNumber is a AutoNumber.
- Press tab and enter the first name of first student.
- Again, press tab to enter the email address of first student.
- Enter the rest of the data values the same way.
- If necessary, adjust the width of columns to display the data clearly.
- After you are done click the close button. A dialog box appears asking if you want to save the changes made. Click YES.
- After you are done you can also modify the data values.
- Now we enter the data of the CLASS table in the same way. Remember we don't enter data in GRADE table at this point.

➢ ***CREATING RELATIONSHIPS BETWEEN TABLES***

- Click database tools and then the Relationships button. The Relationships tabbed document window appears together with the Show Table dialog box.
- In the dialog box click the STUDENT table to select and then click Add to add STUDENT table to Relationships window.
- The same way click the GRADE table and add GRADE table to the window.
- Now click Close to close the dialog box.
- Now, click and hold the column name StudentNumber in the STUDENT table and drag over to StudentNumber column in GRADE table.
- The edit Relationships dialog box appears. Click Enforce Referential Integrity check box. Click the CREATE button. The Relationship between STUDENT and GRADE is created. It is a one to many relationship denoted by 1 on the line near STUDENT table and infinity sign on the line near GRADE table.
- Now we save the Relationship and then close it.
- We follow the same steps to create Relationship between CLASS and GRADE.
- The final step is to enter the data in the GRADE table. After this, we have completed creating and populating the Student_Class_Grade database.