Modify the data type of PK related with another tables as Fk

Updated Steps to Modify `Hostel` and `Student` Tables:

1. **Find the Foreign Key Constraint Name** (if it exists):
   You can query the database to find the name of the foreign key constraint referencing `HostelID` in the `Student` table.

```sql
SELECT name
FROM sys.foreign_keys
WHERE parent_object_id = OBJECT_ID('Student');
```

This query will return the name of the foreign key constraint on the `Student` table.

2. **Drop the Existing Foreign Key**:
   Once you know the name of the foreign key constraint (e.g., `FK_Student_Hostel`), you can drop it using the following query:

```sql
ALTER TABLE Student
DROP CONSTRAINT FK_Student_Hostel;  -- Replace with the actual constraint name
```

3. **Drop the Existing Primary Key** on `HostelID` in the `Hostel` table:

```sql
ALTER TABLE Hostel
DROP CONSTRAINT PK_Hostel_677EEBC856E5BA4B;  -- Replace with the actual primary
```

4. **Add the `HostelID_New` Column with `IDENTITY(1,1)`** in the `Hostel` table:

```sql
ALTER TABLE Hostel
ADD HostelID_New INT IDENTITY(1,1);
```

5. **Add the Primary Key on `HostelID_New`**:

```
ALTER TABLE Hostel
ADD CONSTRAINT PK_HostelID_New PRIMARY KEY (HostelID_New);
```

6. **Add the Foreign Key Constraint** in the `Student` table, linking it to `HostelID_New`:

```
ALTER TABLE Student
ADD CONSTRAINT FK_Subject_Faculty
FOREIGN KEY (HostelID) REFERENCES Hostel(HostelID_New);
```

Explanation:

- **Step 1**: Finds the name of any existing foreign key constraints that might exist in the `Student` table.
- **Step 2**: Drops the existing foreign key constraint before modifying the table structure.
- **Step 3**: Drops the current primary key constraint on `HostelID` to allow changes.
- **Step 4**: Adds the new column `HostelID_New` with the `IDENTITY(1,1)` property, making it auto-increment.
- **Step 5**: Adds the primary key on the `HostelID_New` column.
- **Step 6**: Re-creates the foreign key constraint between `Student.HostelID` and `Hostel.HostelID_New`.

Why Drop the Foreign Key First:

- You cannot modify a table structure (such as dropping or altering a column) that has foreign key constraints referencing it. Dropping the foreign key ensures that the schema changes can be applied without errors.

Note :

Make sure that the tables are empty before using this way