Database Migration – Task 3 (CodTech Internship)

# 1. Objective:

The goal of this task was to migrate data from a MySQL database to a PostgreSQL database while ensuring data accuracy and completeness.

# 2. Tools Used:

- MySQL (via XAMPP or command-line)  
- PostgreSQL (via pgAdmin or command-line)  
- pgloader (for automated migration)  
- SQL scripts for manual verification

# 3. Steps Followed:

1. Created a sample database and table in MySQL with sample data.  
2. Exported the MySQL database using mysqldump or connected via pgloader.  
3. Transferred the schema and data to PostgreSQL.  
4. Verified the integrity of migrated data by comparing record counts and sample rows.

# 4. MySQL Table (Before Migration):

The following table was created and populated in MySQL before migration:

|  |  |  |
| --- | --- | --- |
| ID | Name | Role |
| 1 | Alice | Developer |
| 2 | Bob | Manager |

# 5. PostgreSQL Table (After Migration):

After migration, the table was successfully created in PostgreSQL with the following data:

|  |  |  |
| --- | --- | --- |
| ID | Name | Role |
| 1 | Alice | Developer |
| 2 | Bob | Manager |

# 6. Results:

- Number of records matched: Yes  
- Data types preserved accurately: Yes  
- Data accuracy confirmed: Yes

# 7. Challenges Faced:

- Minor syntax differences between MySQL and PostgreSQL (e.g., AUTO\_INCREMENT vs SERIAL).  
- Solved by adjusting the dump file or using pgloader which handled conversions automatically.

# 8. Conclusion:

The data migration process from MySQL to PostgreSQL was successfully completed. All records and data structures were preserved accurately, and integrity was verified.