

DAY 1 - PRACTICAL TASK (Total 2 Hours)

Part 1: SQL (45–60 minutes)

Part 2: JDBC Basics (45–60 minutes)

Part 3: GitHub Setup (10–15 minutes)

Task Part 1 - SQL

Objective:

Help students understand how to create a simple database, tables, insert data, and write basic SQL queries.

1 Create a New Database

In PostgreSQL (using pgAdmin):

- Create a database named:
internship_day1
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2 Create 5 Simple Tables

Students must create any 5–6 tables (simple structure).

Recommended beginner-friendly tables:

1. **students**
2. **courses**
3. **faculty**
4. **departments**
5. **attendance**
6. **marks** (optional)

Tip: Keep the table structure very simple.

Example fields:

- `students(id, name, email, dept_id)`
 - `courses(id, course_name, faculty_id)`
 - `faculty(id, name, department)`
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3 Insert Sample Data

- Insert **10 records per table**
- Only basic text and numbers (no complex data)

Example:

- 10 students
 - 10 courses
 - 10 faculty
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4 Write Simple SQL Queries

Students must write **basic queries only**, not difficult ones.

✓ SELECT Queries

- Simple SELECT
- SELECT with WHERE
- SELECT with LIKE ('A%')
- SELECT with BETWEEN (marks BETWEEN 40 AND 80)

✓ Sorting

- ORDER BY name

- ORDER BY marks DESC

✓ Grouping

- GROUP BY department
- GROUP BY course_name HAVING COUNT(*) > 2

✓ Simple JOIN Queries

Students only need to write **10 small JOIN queries**, such as:

- INNER JOIN students-departments
- LEFT JOIN courses-faculty
- RIGHT JOIN marks-students

🔥 *No advanced, no subqueries.*

Task Part 2 JDBC Basic Connectivity

Objective:

Learn how to connect Java to PostgreSQL and perform very simple CRUD operations.

1 Create a Simple Java Project in IntelliJ IDEA

- Create a Java project: **JDBCPractice**
 - Add PostgreSQL JDBC driver
 - Create a class: **Main.java**
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2 Steps to Connect Java ->PostgreSQL

Students must:

- Load JDBC driver
- Write connection URL
- Connect
- Print:
"Connected successfully!"

This is enough for beginners.

4 Close All Connections

Students must properly close:

- ResultSet
 - Statement
 - Connection
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Task Part 3 GitHub Setup & Push

Objective:

Teach version control and code publishing.

1 Create a GitHub Account

(if not already created)

2 Create New Repository

Suggested name:

internship-day1-tasks

3 Push the Work

Upload the following:

✓ Java Work

Upload:

- src folder
- JDBC Java file

4 Share Repository Link

Students must share their repo link in the group for review.