

- Explanation of the Code

1. Package declaration

```
package Task2;
```

- Places the class inside the Task2 package.

2. Import statement

```
import java.sql.*;
```

- Imports JDBC interfaces and classes required for database access.

3. Class definition

```
public class Select_query {
```

- Declares the class Select_query.

4. Main method

```
public static void main(String[] args) {
```

- Entry point of the Java program.

5. Load Oracle JDBC driver

```
Class.forName("oracle.jdbc.OracleDriver");
```

- Loads the Oracle JDBC driver class so JDBC can use it.

6. Database connection details

```
String url = "jdbc:oracle:thin:@localhost:1521:XE";
```

```
String user = "system";
```

```
String pass = "12345";
```

- Specifies the database URL, username, and password.

7. SQL query

```
String selectqry = "select * from student";
```

- SQL statement to fetch all records from the student table.

8. Create database connection

```
Connection con = DriverManager.getConnection(url, user, pass);
```

- Establishes a connection to the Oracle database.

9. Prepare the SQL statement

```
PreparedStatement ps = con.prepareStatement(selectqry);
```

- Creates a PreparedStatement for the SQL query.

10. Execute the query

```
ResultSet rs = ps.executeQuery();
```

- Executes the SELECT query.

- Stores the returned rows in a ResultSet.

11.Read data from ResultSet

```
while (rs.next()) {
    • Moves the cursor to the next row until no rows remain.
    int id = rs.getInt("id");
    String name = rs.getString("name");
    int age = rs.getInt("age");
    String email = rs.getString("email");
    String mobile = rs.getString("mobile");
    • Retrieves column values from the current row using column names.
```

12.Print output

```
System.out.println(id + " | " + name + " | " + age + " | " + email + " | " + mobile);
    • Displays the retrieved student data.
```

13.Close JDBC resources

```
con.close();
    • Closes the Connection.
```

14.Exception handling

```
catch (ClassNotFoundException e) {
    e.printStackTrace();
}
    • Handles the case where the JDBC driver class is not found.
catch (SQLException e) {
    e.printStackTrace();
}
    15. Handles SQL-related errors.
```

Screenshot of Output:

The screenshot shows the IntelliJ IDEA interface with the following details:

- Project Structure:** Shows files Main.java, DB_Connection.java, and Select_query.java.
- Code Editor:** The Select_query.java file is open, containing Java code to connect to an Oracle database and execute a SELECT query.
- Run Tab:** The terminal window shows the command used to run the application and the resulting output.
- Output:** The terminal output displays a list of student records from a database table.

```
package Task2;
import java.sql.*;
public class Select_query {
    public static void main(String[] args){
        try {
            String driver = "oracle.jdbc.OracleDriver";
            Class.forName(driver);
            String url ="jdbc:oracle:thin:@localhost:1521:XE";
            String user = "system";
            String pass = "12345";
            String selectqry="select * from student";
            Connection con = DriverManager.getConnection(url,user,pass);
            PreparedStatement ps = con.prepareStatement(selectqry);
            ResultSet rs = ps.executeQuery();
            while(rs.next()){
                System.out.println(rs.getString("name") + " | " + rs.getInt("age") + " | " + rs.getString("email") + " | " + rs.getLong("phno"));
            }
        } catch (Exception e) {
            e.printStackTrace();
        }
    }
}
```

```
C:\Program Files\Java\jdk-21\bin\java.exe" "-javaagent:E:\IntelliJ\IntelliJ IDEA Community Edition 2025.1.3\lib\idea_rt.jar=64044:/" -Dfile.encoding=UTF-8
1 | Siddhi Phase | 22 | siddhi@gmail.com | 9988776655
2 | Mayuri Gaikwad | 23 | mayuri@gmail.com | 9012345678
3 | Vaishnavi Chaudhari | 22 | vaishu@gmail.com | 9112345678
4 | Mahesh Shingare | 20 | mahesh@gmail.com | 9212345678
5 | Aditi Badhe | 23 | aditi@gmail.com | 8012345678
```