

1.

```
<?xml
version="1.
0"
encoding="U
TF-8"?>
```

```
<projectDescription>
  <name>Administrative-Portal</name>
  <comment></comment>
  <projects>
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  <buildSpec>
    <buildCommand>

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    <name>org.eclipse.wst.common.project.facet.core.builder</n
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    <nature>org.eclipse.jem.workbench.JavaEMFNature</nature>

    <nature>org.eclipse.wst.common.modulecore.ModuleCoreNature
</nature>

    <nature>org.eclipse.wst.common.project.facet.core.nature</
nature>
      <nature>org.eclipse.jdt.core.javanature</nature>
      <nature>org.eclipse.wst.jsdt.core.jsNature</nature>
    </natures>
</projectDescription>
```

2.

```
package  
com.simplilearn.admin;
```

```
import java.sql.Connection;  
import java.sql.ResultSet;  
import java.sql.Statement;  
import java.util.ArrayList;  
import java.util.List;  
  
import javax.sql.DataSource;  
  
import com.simplilearn.models.Student;  
import com.simplilearn.models.Subject;  
import com.simplilearn.models.Teacher;  
import com.simplilearn.models.Class;  
  
public class DbRetrieve {  
  
    private DataSource dataSource;  
  
    public DbRetrieve(DataSource dataSource) {  
        this.dataSource = dataSource;  
    }  
  
    public List<Student> getStudents() {  
  
        List<Student> students = new ArrayList<>();  
  
        Connection myConn = null;  
        Statement myStmt = null;  
        ResultSet myRs = null;  
  
        try {  
  
            // get a connection  
            myConn = dataSource.getConnection();  
  
            // create sql stmt  
            String sql = "SELECT * FROM students";  
            myStmt = myConn.createStatement();  
  
            // execute query  
            myRs = myStmt.executeQuery(sql);  
  
            // process result
```

```

        while (myRs.next()) {

            // retrieve data from result set
row
            int id = myRs.getInt("id");
            String firstName =
myRs.getString("fname");
            String lastName =
myRs.getString("lname");

            int age = myRs.getInt("age");
            int aclass = myRs.getInt("class");

            // create new student object
            Student tempStudent = new
Student(id, firstName, lastName, age, aclass);

            // add it to the list of students
            students.add(tempStudent);

        }

```

```

    } catch (Exception e) {
        // TODO: handle exception
    } finally {
        // close JDBC objects
        close(myConn, myStmt, myRs);
    }
    return students;
}

```

```

public List<Teacher> getTeachers() {

    List<Teacher> teachers = new ArrayList<>();

    Connection myConn = null;
    Statement myStmt = null;
    ResultSet myRs = null;

    try {

        // get a connection
        myConn = dataSource.getConnection();

        // create sql stmt
        String sql = "SELECT * FROM teachers";

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```

        myStmt = myConn.createStatement();

        // execute query
        myRs = myStmt.executeQuery(sql);

        // process result
        while (myRs.next()) {

            // retrieve data from result set
row
            int id = myRs.getInt("id");
            String firstName =
myRs.getString("fname");
            String lastName =
myRs.getString("lname");
            int age = myRs.getInt("age");

            // create new student object
            Teacher temp = new Teacher(id,
firstName, lastName, age);

            // add it to the list of students
            teachers.add(temp);

        }

    } catch (Exception e) {
        // TODO: handle exception
    } finally {
        // close JDBC objects
        close(myConn, myStmt, myRs);
    }
    return teachers;
}

public List<Subject> getSubjects() {

    List<Subject> subjects = new ArrayList<>();

    Connection myConn = null;
    Statement myStmt = null;
    ResultSet myRs = null;

    try {

```

```

        // get a connection
        myConn = dataSource.getConnection();

        // create sql stmt
        String sql = "SELECT * FROM subjects";
        myStmt = myConn.createStatement();

        // execute query
        myRs = myStmt.executeQuery(sql);

        // process result
        while (myRs.next()) {

            // retrieve data from result set
row
            int id = myRs.getInt("id");
            String name =
myRs.getString("name");
            String shortcut =
myRs.getString("shortcut");

            // create new student object
            Subject temp = new Subject(id,
name, shortcut);

            // add it to the list of students
            subjects.add(temp);

        }

    } catch (Exception e) {
        // TODO: handle exception
    } finally {
        // close JDBC objects
        close(myConn, myStmt, myRs);
    }
    return subjects;
}

public List<Class> getClasses() {

    List<Class> classes = new ArrayList<>();

    Connection myConn = null;
    Statement myStmt = null;

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        ResultSet myRs = null;

        try {

            // get a connection
            myConn = dataSource.getConnection();

            // create sql stmt
            String sql = "SELECT * FROM classes";
            myStmt = myConn.createStatement();

            // execute query
            myRs = myStmt.executeQuery(sql);

            // process result
            while (myRs.next()) {

                // retrieve data from result set
                row

                int id = myRs.getInt("id");
                int section =
myRs.getInt("section");
                int subject =
myRs.getInt("subject");
                int teacher =
myRs.getInt("teacher");
                String time =
myRs.getString("time");

                Teacher tempTeacher =
loadTeacher(teacher);
                Subject tempSubject =
loadSubject(subject);

                String teacher_name =
tempTeacher.getFname() + " " + tempTeacher.getLname();

                // create new student object
                Class temp = new Class(id,
section, teacher_name, tempSubject.getName(), time);

                // add it to the list of students
                classes.add(temp);

            }

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        } catch (Exception e) {
            // TODO: handle exception
        } finally {
            // close JDBC objects
            close(myConn, myStmt, myRs);
        }
        return classes;
    }

    public Teacher loadTeacher(int teacherId) {

        Teacher theTeacher = null;

        Connection myConn = null;
        Statement myStmt = null;
        ResultSet myRs = null;

        try {

            // get a connection
            myConn = dataSource.getConnection();

            // create sql stmt
            String sql = "SELECT * FROM teachers
WHERE id = " + teacherId;
            myStmt = myConn.createStatement();

            // execute query
            myRs = myStmt.executeQuery(sql);

            // process result
            while (myRs.next()) {

                // retrieve data from result set
                row

                int id = myRs.getInt("id");
                String fname =
myRs.getString("fname");
                String lname =
myRs.getString("lname");
                int age = myRs.getInt("age");
                theTeacher = new Teacher(id,
fname, lname, age);

            }

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        } catch (Exception e) {
            // TODO: handle exception
        } finally {
            // close JDBC objects
            close(myConn, myStmt, myRs);
        }
        return theTeacher;
    }

    public Subject loadSubject(int subjectId) {

        Subject theSubject = null;

        Connection myConn = null;
        Statement myStmt = null;
        ResultSet myRs = null;

        try {

            // get a connection
            myConn = dataSource.getConnection();

            // create sql stmt
            String sql = "SELECT * FROM subjects
WHERE id = " + subjectId;
            myStmt = myConn.createStatement();

            // execute query
            myRs = myStmt.executeQuery(sql);

            // process result
            while (myRs.next()) {

                // retrieve data from result set
                row

                int id = myRs.getInt("id");
                String name =
myRs.getString("name");
                String shortcut =
myRs.getString("shortcut");

                theSubject = new Subject(id,
name, shortcut);
            }
        }
    }

```



```

        }

        } catch (Exception e) {
            // TODO: handle exception
        } finally {
            // close JDBC objects
            close(myConn, myStmt, myRs);
        }
        return theSubject;
    }

    public Class loadClass(int classId) {

        Class theClass = null;

        Connection myConn = null;
        Statement myStmt = null;
        ResultSet myRs = null;

        try {

            // get a connection
            myConn = dataSource.getConnection();

            // create sql stmt
            String sql = "SELECT * FROM classes WHERE
id = " + classId;

            myStmt = myConn.createStatement();

            // execute query
            myRs = myStmt.executeQuery(sql);

            // process result
            while (myRs.next()) {

                // retrieve data from result set
                row

                int id = myRs.getInt("id");
                int section =
myRs.getInt("section");
                int subject =
myRs.getInt("subject");
                int teacher =
myRs.getInt("teacher");

```

```

        String time =
myRs.getString("time");

        Teacher tempTeacher =
loadTeacher(teacher);

        Subject tempSubject =
loadSubject(subject);

        String teacher_name =
tempTeacher.getFname() + " " + tempTeacher.getLname();

    }

    } catch (Exception e) {
        // TODO: handle exception
    } finally {
        // close JDBC objects
        close(myConn, myStmt, myRs);
    }
    return theClass;
}

public List<Student> loadClassStudents(int classId) {

    List<Student> students = new ArrayList<>();

    Connection myConn = null;
    Statement myStmt = null;
    ResultSet myRs = null;

    try {

        // get a connection
        myConn = dataSource.getConnection();

        // create sql stmt
        String sql = "SELECT * FROM students
WHERE class = " + classId;
        myStmt = myConn.createStatement();

        // execute query
        myRs = myStmt.executeQuery(sql);

        // process result
        while (myRs.next()) {

```

```

// retrieve data from result set
row
    int id = myRs.getInt("id");
    String firstName =
myRs.getString("fname");
    String lastName =
myRs.getString("lname");
    int age = myRs.getInt("age");
    int aclass = myRs.getInt("class");

    // create new student object
    Student tempStudent = new
Student(id, firstName, lastName, age, aclass);
    students.add(tempStudent);

}

} catch (Exception e) {
    // TODO: handle exception
} finally {
    // close JDBC objects
    close(myConn, myStmt, myRs);
}
return students;

}

private void close(Connection myConn, Statement myStmt,
ResultSet myRs) {

    try {
        if (myRs != null) {
            myRs.close();
        }
        if (myStmt != null) {
            myStmt.close();
        }
        if (myConn != null) {
            myConn.close();
        }
    }

    } catch (Exception e) {
        e.printStackTrace();
    }
}

```

