

# CS313 : DataBases and Information Systems Lab

## Assignment 5

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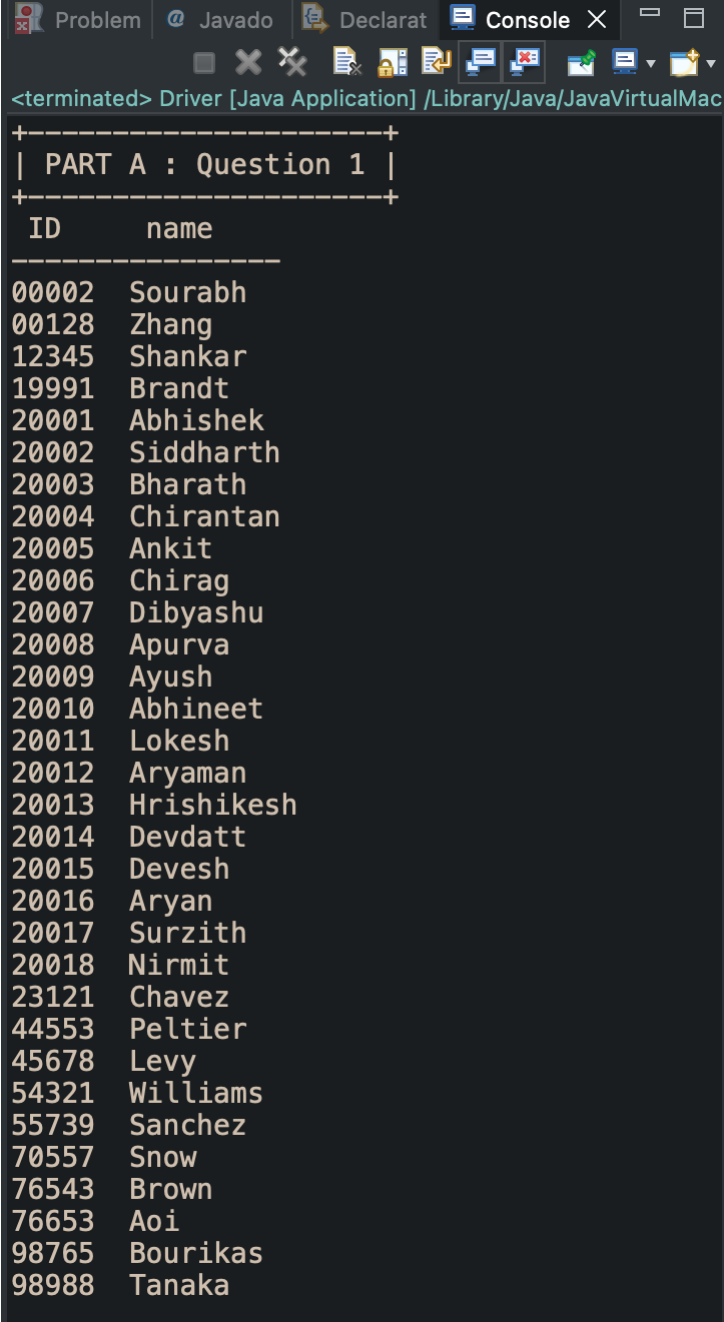
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October 1, 2022

# 1 Part A

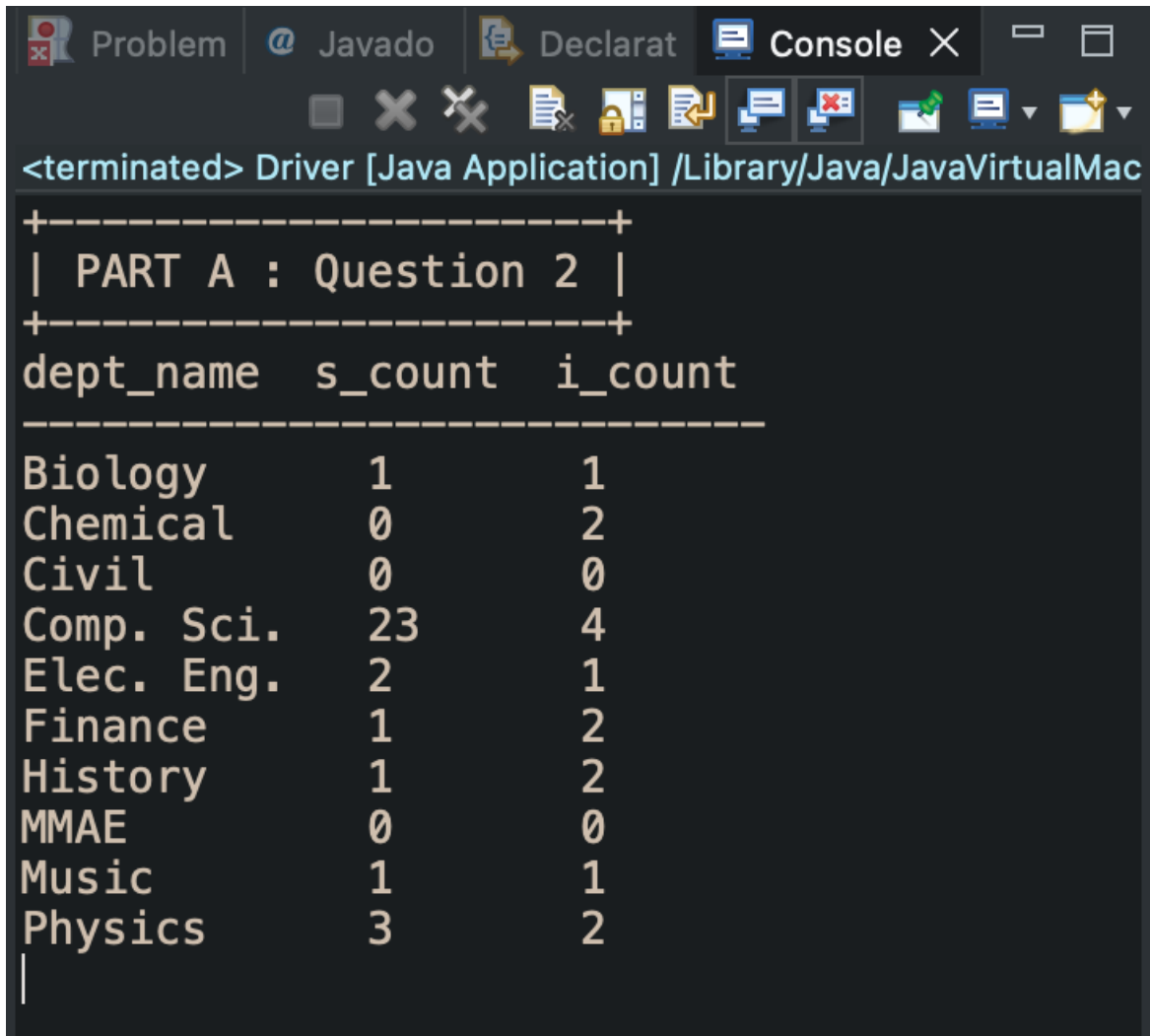
All the program related to part A is inside the **Driver.java** file.

## 1.1 Trying out the java + JDBC code.



```
<terminated> Driver [Java Application] /Library/Java/JavaVirtualMac
+-----+
| PART A : Question 1 |
+-----+
ID      name
-----
00002   Sourabh
00128   Zhang
12345   Shankar
19991   Brandt
20001   Abhishek
20002   Siddharth
20003   Bharath
20004   Chirantan
20005   Ankit
20006   Chirag
20007   Dibyashu
20008   Apurva
20009   Ayush
20010   Abhineet
20011   Lokesh
20012   Aryaman
20013   Hrishikesh
20014   Devdatt
20015   Devesh
20016   Aryan
20017   Surzith
20018   Nirmitt
23121   Chavez
44553   Peltier
45678   Levy
54321   Williams
55739   Sanchez
70557   Snow
76543   Brown
76653   Aoi
98765   Bourikas
98988   Tanaka
```

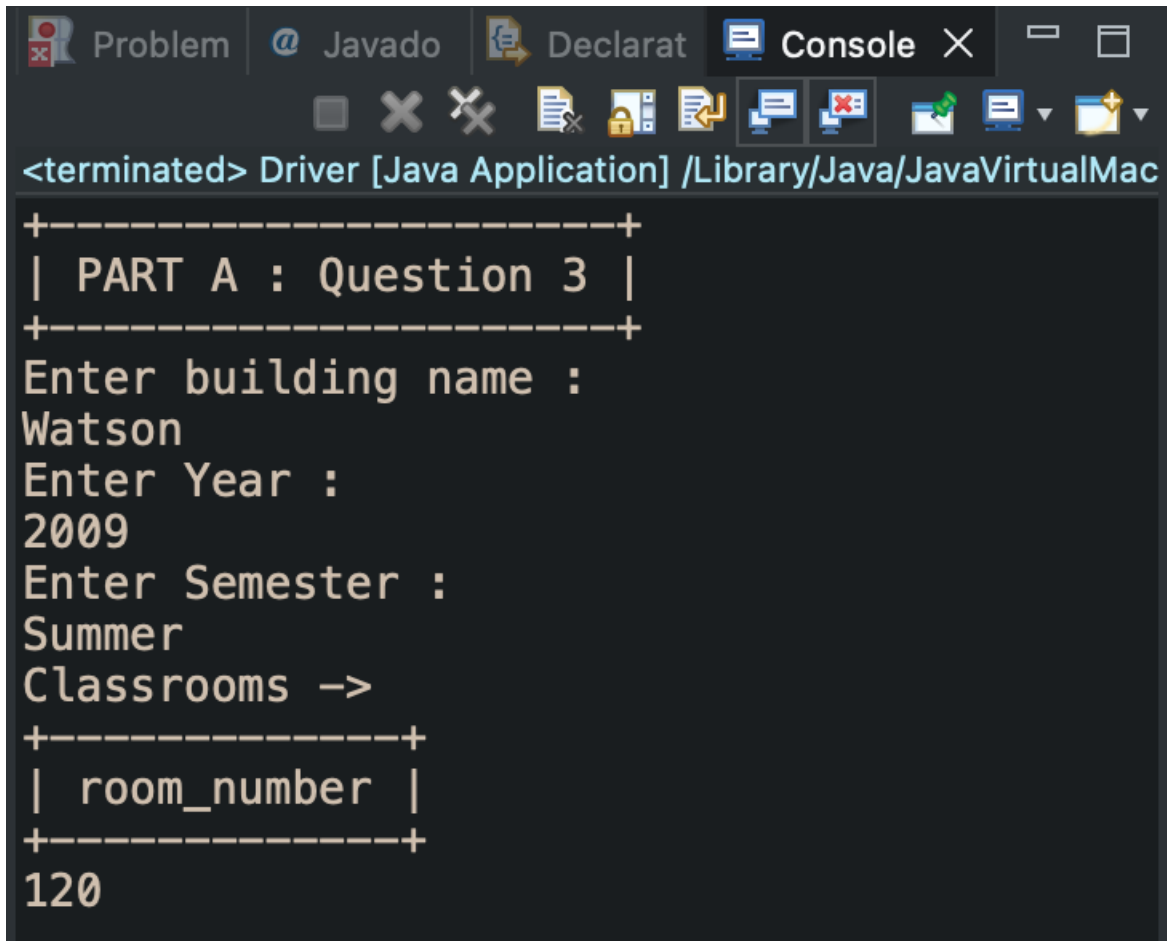
- 1.2 List the departments (in asc order) and the total number of students and instructors they have.



The screenshot shows a Java IDE with a console window titled "Console". The console output is as follows:

```
<terminated> Driver [Java Application] /Library/Java/JavaVirtualMac
+-----+
| PART A : Question 2 |
+-----+
dept_name  s_count  i_count
-----
Biology    1         1
Chemical   0         2
Civil      0         0
Comp. Sci. 23        4
Elec. Eng. 2         1
Finance    1         2
History    1         2
MMAE       0         0
Music      1         1
Physics    3         2
|
```

- 1.3 For a given building, find classrooms (room\_no) with capacity more than 30 and in which no courses are scheduled this year and semester.

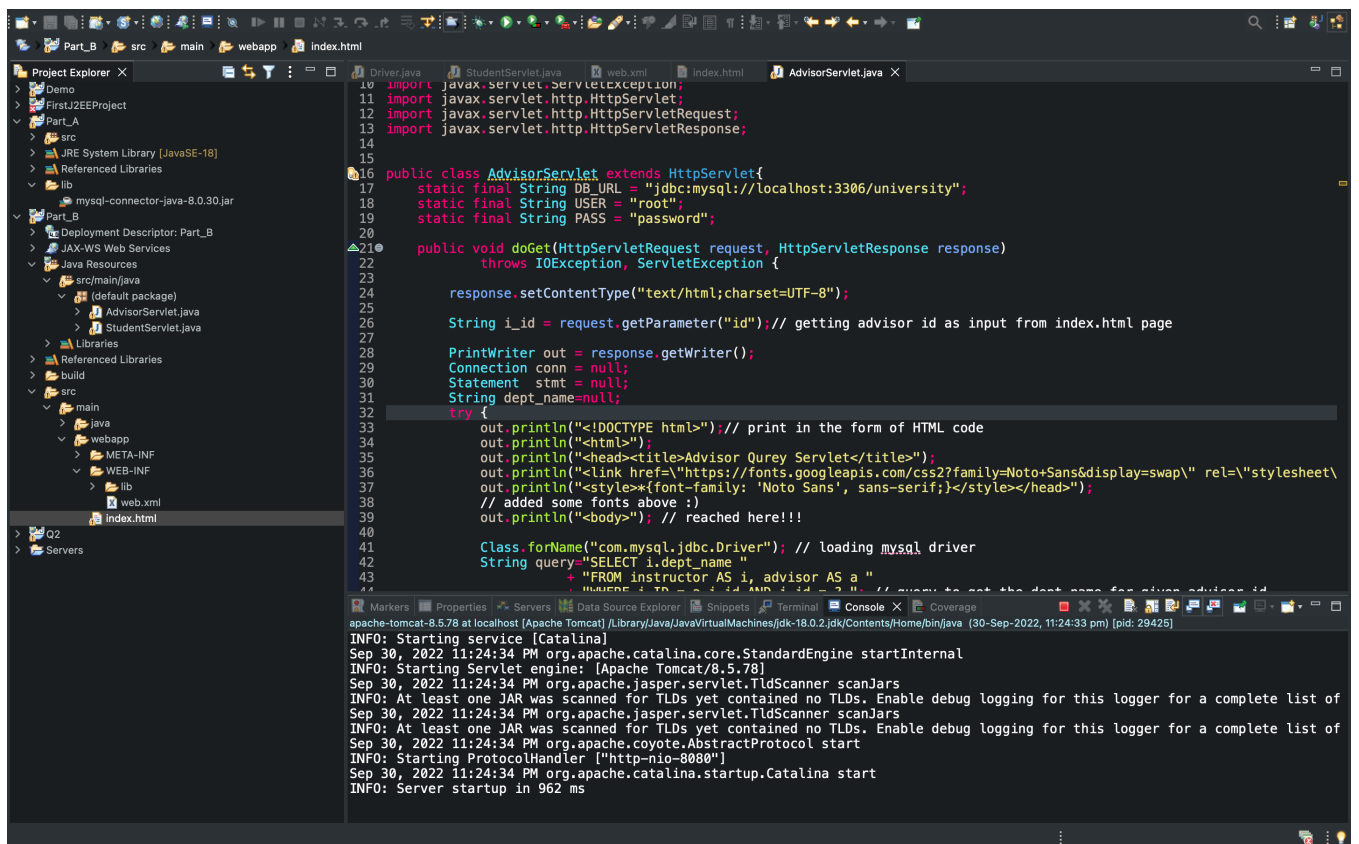


```
<terminated> Driver [Java Application] /Library/Java/JavaVirtualMac
+-----+
| PART A : Question 3 |
+-----+
Enter building name :
Watson
Enter Year :
2009
Enter Semester :
Summer
Classrooms ->
+-----+
| room_number |
+-----+
120
```

## 2 Part B

### 2.1 Design a new html page to take advisor id as input. Write a servlet to display the department to which the advisor belongs using the Java and J2EE program. Output should contain advisor id and department name.

All the program related to part B is inside the **AdvisorServlet.java** file.



```
10 import javax.servlet.ServletException;
11 import javax.servlet.http.HttpServlet;
12 import javax.servlet.http.HttpServletRequest;
13 import javax.servlet.http.HttpServletResponse;
14
15
16 public class AdvisorServlet extends HttpServlet{
17     static final String DB_URL = "jdbc:mysql://localhost:3306/university";
18     static final String USER = "root";
19     static final String PASS = "password";
20
21     public void doGet(HttpServletRequest request, HttpServletResponse response)
22         throws IOException, ServletException {
23
24         response.setContentType("text/html;charset=UTF-8");
25
26         String i_id = request.getParameter("id");// getting advisor id as input from index.html page
27
28         PrintWriter out = response.getWriter();
29         Connection conn = null;
30         Statement stmt = null;
31         String dept_name=null;
32         try {
33             out.println("<!DOCTYPE html>");// print in the form of HTML code
34             out.println("<html>");
35             out.println("<head><title>Advisor Query Servlet</title>");
36             out.println("<link href='\"https://fonts.googleapis.com/css2?family=Noto+Sans&display=swap\"' rel='\"stylesheet\"'");
37             out.println("<style>*(font-family: 'Noto Sans', sans-serif);</style></head>");
38             // added some fonts above :)
39             out.println("<body>");// reached here!!!
40
41             Class.forName("com.mysql.jdbc.Driver");// loading mysql driver
42             String query="SELECT i.dept name "
43                 + "FROM instructor AS i, advisor AS a "
44                 + "WHERE i.ID = a.i_id AND a.s_id = ? "; // query to get the dept name for given advisor id
```

```
Markers Properties Servers Data Source Explorer Snippets Terminal Console Coverage
apache-tomcat-8.5.78 at localhost [Apache Tomcat] /Library/Java/JavaVirtualMachines/jdk-18.0.2.jdk/Contents/Home/bin/java (30-Sep-2022, 11:24:33 pm) [pid: 29425]
INFO: Starting service [Catalina]
Sep 30, 2022 11:24:34 PM org.apache.catalina.core.StandardEngine startInternal
INFO: Starting Servlet engine: [Apache Tomcat/8.5.78]
Sep 30, 2022 11:24:34 PM org.apache.jasper.servlet.TldScanner scanJars
INFO: At least one JAR was scanned for TLDs yet contained no TLDs. Enable debug logging for this logger for a complete list of
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INFO: At least one JAR was scanned for TLDs yet contained no TLDs. Enable debug logging for this logger for a complete list of
Sep 30, 2022 11:24:34 PM org.apache.coyote.AbstractProtocol start
INFO: Starting ProtocolHandler ["http-nio-8080"]
Sep 30, 2022 11:24:34 PM org.apache.catalina.startup.Catalina start
INFO: Server startup in 962 ms
```

Insert title here x +

localhost:8080/Part\_B/index.html

Enter Advisor Id:

Advisor Qurey Servlet x +

localhost:8080/Part\_B/AdvisorServlet?id=10101

Advisor id is 10101 And he belongs to the department Comp. Sci.

==== 1 rows found =====