

Database 4 - JDBC Assignment

You are required to create a database for a topic/product of your choice and connect to this database from a Java GUI using JDBC.

You should base your work on the **template** given. Your assignment should:

1. Create a relational database, you will need to submit the setup script (sql) for your database and tables. You must have a minimum of 2 tables
2. Implement: Create, Read, Update and Delete (CRUD) operations through JDBC.
3. Using the functionality of the “Export Data” panel on the template GUI provided as a guideline, implement exports that query relevant data and export it in CSV format.
4. Use appropriate Stored Programs where necessary and showcase all you have learned in SQL this Semester
5. Visualization – create charts to present results for relevant queries
 - This can be an exported csv showing charts/visuals created in Excel .
6. Write a word document (max 5 pages) with the following:
 - The key concept of your project – what can it be used for?
 - What information does it give the user?
 - Snapshot(s) of your java GUI
 - The highlights of your project e.g. a stored program you created etc
 - Conclusion - what are the main benefits to an end user of the JDBC application you have created? What did you learn etc?

Notes:

- MainClass.java creates an instance of JDBCMainWindow
- JDBCMainWindowContent.java will contains your code
- JDBCMainWindowContent.java, Line 171 contains the initiate_db_conn()

JDBC 2024 Assignment

File

CRUD Actions

ID:

Insert

Delete

Update

Export

Clear

Database Content

id	firstName	lastName	age	gender	position	department	rate	hours
1	Joe	Mullins	64	M	Lecturer	Engineering	63.08	12
2	Joan	Macgill	27	F	Researcher	Science	38.00	35
3	Jim	Mitchell	51	M	Researcher	Business	38.00	25
4	John	Magner	47	M	Lecturer	Humanities	63.08	16
5	Jean	Madden	45	F	Professor	Design	76.45	14
6	Jack	Minogue	61	M	Administrat.	Hospitality	45.57	37
7	Josephine	Mahony	33	F	Head	Nursing	98.56	40
8	Juan	Mosley	56	M	Professor	Engineering	76.45	11
9	Jamie	Mullen	45	M	Researcher	Science	38.00	37
10	Julie	Mooney	39	F	Lecturer	Business	63.08	18
11	Jane	Mccarthy	37	F	Administrat.	Design	45.57	45
12	James	May	38	M	Researcher	Hospitality	38.00	9
13	Joseph	Manning	32	M	Lecturer	Hospitality	63.08	16
14	Judith	Milner	36	F	Lecturer	Nursing	63.08	20
15	Jerome	Murphy	26	M	Head	Engineering	98.56	42
16	Jude	Manley	28	M	Head	Science	98.56	41

Export Data

NumLecturesForDepartment:

AvgAgeForDepartment:

ListAllDepartments:

ListAllPositions:

Submission Instructions

You must submit a zip file via Moodle containing your

1. Completed A1 plagiarism form
2. Word document, as described in Task 6.
3. Java project files
4. Database setup script
5. Data Visualization
 - e.g. Charts/ Excel files showing your exported data and any charts you have created from that data
6. An mp4 video file/screencast of you presenting/demonstrating/explaining your project.
 - At the start of this video, you should show the tables in the database.
 - Then you must show all buttons on your project working/attempted.
 - Show all output to files.
7. You must show all extra features you may have added, e.g. stored procedure etc.

You can use e.g. screencastOmatic to create your video.

<https://screencast-o-matic.com/screen-recorder>.

This video should be a max of 8 minutes