

MP2 Readme

Project Summary:

This project has two sub-parts:

- MP2 JSP (This project uses only JSP/JSTL for the various tasks)
- MP2 MVC (This project uses the MVC architecture for the various tasks)

Database: Employees

Tables: Departments, Dept_Manager

Relationship: Dept_id which is the primary key in the Departments table is the foreign key in the Dept_Manager table.

Aim: Perform CRUD operations on both the Departments and the Dept_Manager table.

Design:

- The homePage has links to create records and view the existing records.
- The homePage page has links to view records for the two tables and create a new record for the tables. Depending on your need you can choose to read all records for the departments table or the Dept_Manager table from the homePage.
- On clicking the view all records, all the data present in the table will be displayed. Each of these records have a link on either side of them to either edit the record or delete the record.
- If a user selects to delete the record, then the corresponding record gets deleted and the view is sent back to the show records page. Since the table creation script has a cascade on delete on the foreign key, any records in the Dept_Manager table will get deleted without any issues.
- If a user selects to edit a record, then a corresponding record gets populated in a edit page where the record can be edited. Due to the nature of table and key constraints, primary keys and foreign are not allowed to be updated.
- If a user selects the correct value, then the record gets updated and the page gets redirected to view all records for the corresponding table.
- If a user wants to insert a new record, he will have to go back to the homePage. There are links to create new entry for both the tables.
- For the Departments table, an entry is possible if both the department_id and the dept_name are not already present in the table. If they are already present, then an error message gets displayed on the same page.
- For the Dept_Manager table, an entry is possible if both department_id and emp_id are already present in the table.
- Some basic validations are done such as checking if the entry is not null. SQL Exceptions are also captured and displayed on the pages so that the user understands when he has made an error either with the kind of data entered due to foreign key constraints.
- Links are present from every page to navigate back to the home page

Development Insights:

- Used the same page to update and create records and used a single controller for all the operations.
- Both the JSP and the MVC projects have the extra credit feature implemented for two tables Departments and Dept_Manager tables where you can perform CRUD operations.
- I have captured sql exceptions in both the projects and displayed it on the pages so that user can be made aware of any constraint issues while dealing with foreign keys.
- Javadocs have been added for the MVC part of the project.

Requirements:

- Download the zip file jnl7MP2.zip and extract it.
- Import the projects - JNL7 MP2 JSP and JNL7 MP2 JSP into your netbeans workspace. Select File->Open Project and navigate it to the location where you have extracted your files and select Open Project. Do the same for the next project as well.
- Import the Employees Database:

1. [Download this zip file](#)
2. Extract to your C:\Program Files\MySQL\MySQL Server 5.6\bin directory
3. Then, execute the following for the employees database from a cmd prompt:

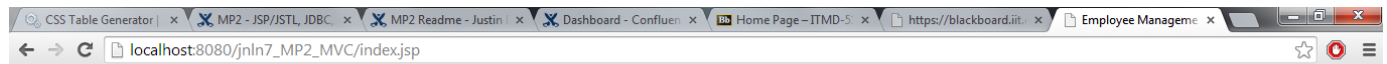
```
cd "C:\Program Files\MySQL\MySQL Server 5.6\bin"
```

```
mysql.exe -u root -p < employees_db\employees.sql
```

- Create the employees database. On Netbeans go to Services. Right click Databases->New Connection->Select Driver as MySQL Driver->Next->Database will be employees, username and password will be itmd4515->Next->Finish
- Create a JDBC Resource and a JDBC Connection Pool and name it as mp2DS and mp2Pool respectively. Right click on the project, select New->Other->JDBC Resource-> Next->Create a new JDBC Connection ->name the JNDI name as mp2DS->Next->Next->rename JDBC Connection Pool as mp2Pool, Select the employees database->Next->Finish
- Before running the projects, perform a Clean and Build, and Deploy them by right clicking on the project and selecting the appropriate

- options.
- Right click on the project and select Run.

Screen Captures:



Employee Management System

Welcome

Would you like to:

[Create a new Employee Department Record](#)

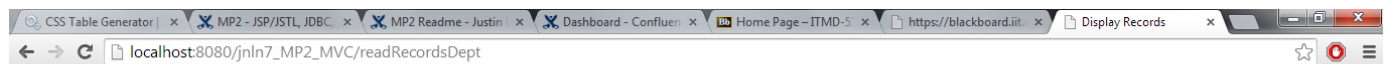
[Create a new Department Record](#)

[Show all Employee Department Records](#)

[Show all Department Records](#)

[Javadoc](#)

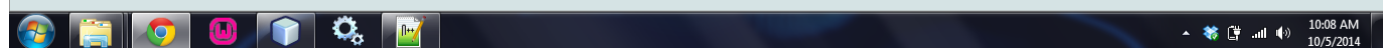
[Return to Home Page](#)



Employee Management System

	Department Number	Department Name	
EDIT	d001	Customer Services	Delete
EDIT	d002	Finance	Delete
EDIT	d003	justin11	Delete
EDIT	d004	Production	Delete
EDIT	d005	Research and Dev	Delete
EDIT	d006	dasuuzz	Delete
EDIT	d007	Sales	Delete
EDIT	d008	Human Resourcess	Delete
EDIT	d009	Customer Servic	Delete
EDIT	d011	asdsac	Delete
EDIT	d014	aasdfa	Delete
EDIT	d023	justin	Delete

[Return to Home Page](#)





Expected Results/Known Issues:

- In the MP2 JSP part of the project, while updating a record, if the first time a user clears the existing record and submits the record and then tries to update it then the update does not happen as I did not store to previous state of the variable.

Test script:

- Click on create a new Department record->Enter Department Number as d040 and Department Name as 'Team Integrity'->Click on submit
- Go back to the home page and select show all department records
- Click on the edit link for the Department we just created (Department Number d040)- >Change the Department Name to 'New Department'-> Click on submit. You will be able to view the new updated record.
- Go back to the home page and select show all department records
- Click on the delete link for the Department we just updated (Department Number d040). You will be able to view the record has been deleted.
- Click on create a New Employee Department Record->Enter Department Number as d001 and Employee Number as 110567, From Date as 11-11-1999, To Date as 12-12-1000->Click on submit
- Go back to the home page and select show all Employee Department Records
- Click on the edit link for the Department number and employee number we just created (Department Number d001 Employee Number as 110567)- >Change the To Date to '01-01-2050'-> Click on submit. You will be able to view the new updated record.
- Go back to the home page and select show all Employee Department Records
- Click on the delete link for the Department and employee number we just updated (Department Number d001 Employee Number as 110567). You will be able to view the record has been deleted.