

Fresher(Upto 2 years)

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1. SpringBoot

- a. SpringCore basics
- b. SpringJDBC
- c. SpringORM
- d. SpringDataJPa
- e. SpringMVC
- f. SpringAOP

2+ years of Experience

- 1. SpringBoot
- 2. SpringRest and Microservices
- 3. Design patterns and basics of Cloud

DataJpa Pending topics

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- 1. Working with Embedded Database
- 2. Working with Postgresql Database
- 3. Working with Mulitple database
- 4. Association
- 5. SpringMail

Embedded :: By default it would be a part of software.

Embedded Database :: When running the application(In JRE it would available)  
Once the application stops then Database Memory would be taken away from JRE.

For POC(Proof of Concept) by default SpringBoot supports a database called "H2".

Working with EmbeddedDatabase[Default port is the port which is used for running applications]

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Create a dependancy with H2,Lombok,Datajpa,SpringWeb

1. To work with Embedded Database we need to use the following dependancy in pom.xml file

```
<dependency>
    <groupId>com.h2database</groupId>
    <artifactId>h2</artifactId>
    <scope>runtime</scope>
</dependency>
```

2. application.properties

#Details about H2 database

```
spring.datasource.driverClassName=org.h2.Driver
spring.datasource.url=jdbc:h2:mem:ineurondb
spring.datasource.username=sa
spring.datasource.password=
```

#Displaying the query details on console

```
spring.jpa.show-sql=true
spring.jpa.hibernate.ddl-auto=update
spring.jpa.properties.hibernate.format_sql=true
```

```
#Dialect information of h2 database
spring.jpa.database-platform=org.hibernate.dialect.H2Dialect

#enabling the H2 console
spring.h2.console.enabled=true

#Server port to host our application and same port will be used for H2-Database
also
server.port=4444
```

```
3. Model(Student)[id,name,email,address]
4. in.ineuron.restcontroller
    [Endpoints
      a. POST  => /register
      b. GET   => /student/findAll,
      c. GET   => /student/find/{id} ,
      d. PUT   => /register
      e. DELETE => /student/{id}
    ]
```

```
5. run the application and test the h2 database in the following url
    http://localhost:4444/h2-console
```

refer:: SpringRest-H2-Database-App

Working with PostgreSQL[Portno:: 5432]

=====

Download and install postgresql from the following link  
<https://www.enterprisedb.com/downloads/postgres-postgresql-downloads>

```
1. Create a project with the following starter files
    datajpa,web,postgresql driver
```

pom.xml

=====

```
<dependency>
    <groupId>org.postgresql</groupId>
    <artifactId>postgresql</artifactId>
    <scope>runtime</scope>
</dependency>
```

```
2. Create application.properties
```

```
#Driver url,username,password
spring.datasource.dbcp2.driver-class-name= org.postgresql.Driver
spring.datasource.url=jdbc:postgresql://localhost:5432/ineuronDb
spring.datasource.username=postgres
spring.datasource.password=root123
```

```
## Hibernate Properties
```

```
# The SQL dialect makes Hibernate generate better SQL for the chosen database
spring.jpa.properties.hibernate.dialect = org.hibernate.dialect.PostgreSQLDialect
spring.jpa.show-sql=true
spring.jpa.properties.hibernate.format_sql=true
```

```
# Hibernate ddl auto (create, create-drop, validate, update)
spring.jpa.hibernate.ddl-auto = update
```

#Server port to host our application and same port will be used for H2-Database also  
server.port=4444

3. To open postgresql just pgadmin4 and type password of the dbadmin to open.
4. Run the application and test in postman client

refer:: SpringRest-PostgreSQL-App