ENVIRONMENT SETUP

SOFTWARE REQUIREMENT

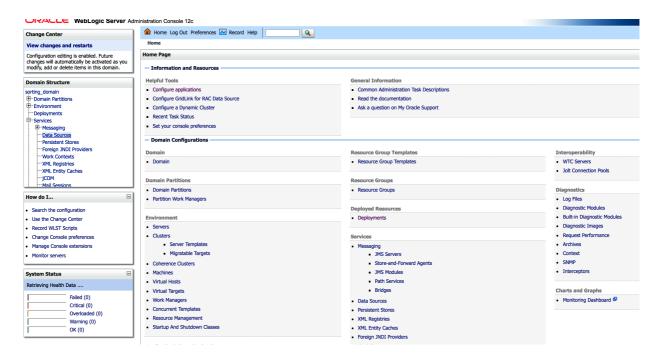Install the below listed softwares,

- Apache Maven 3.5
- Weblogic 12c
- MySQL
- Google Chrome

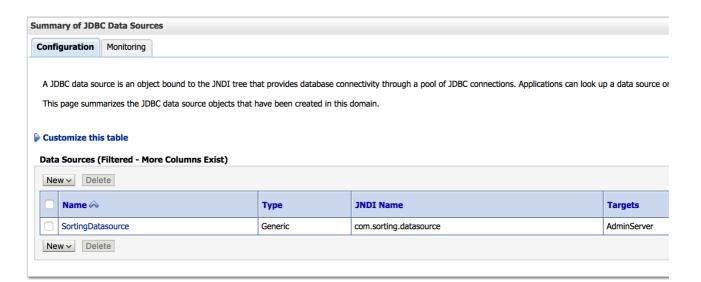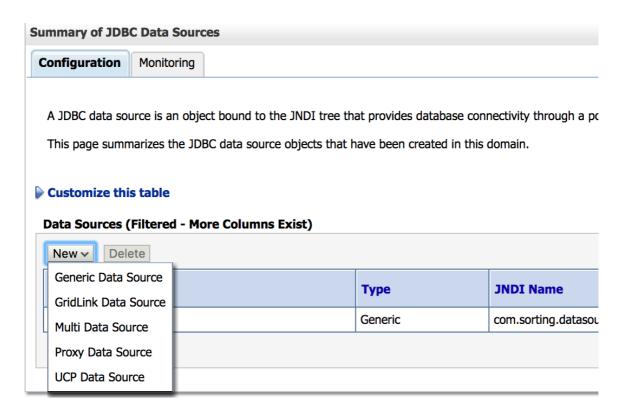## DATASOURCE SETUP

Following Steps shows about creating datasource

1. Click Datasource link from the left panel.

2. Click New button.

3. Select Generic Data Source Option.

Summary of JDBC Data Sources

| Configuration | Monitoring |

A JDBC data source is an object bound to the JNDI tree that provides database connectivity through a po

This page summarizes the JDBC data source objects that have been created in this domain.

▷ **Customize this table**

Data Sources (Filtered - More Columns Exist)

| New ▾ | Delete |

Generic Data Source			Type	JNDI Name
GridLink Data Source			Generic	com.sorting.datasou
Multi Data Source				
Proxy Data Source				
UCP Data Source				

4. Enter the following details in the fields,**Name** : Sorting, **Scope** : Global, **JNDI Name**:
com.sorting.datasource, **Database Type**: MySql

Create a New JDBC Data Source

| Back | Next | Finish | Cancel |

JDBC Data Source Properties

The following properties will be used to identify your new JDBC data source.

* Indicates required fields

What would you like to name your new JDBC data source?

* Name: Sorting

What scope do you want to create your data source in ?

Scope: Global ⬍

What JNDI name would you like to assign to your new JDBC Data Source?

JNDI Name:

com.sorting.datasource

What database type would you like to select?

Database Type: MySQL ⬍

| Back | Next | Finish | Cancel |

5. Select the **com.mysql.jdbc.Driver** from drop down option.

Create a New JDBC Data Source

Back   Next   Finish   Cancel

JDBC Data Source Properties

The following properties will be used to identify your new JDBC data source.

Database Type:	MySQL

What database driver would you like to use to create database connections? Note: * indicates that the driver is explicitly supported by Oracle WebLog

Database Driver: MySQL's Driver (Type 4) Versions:using com.mysql.jdbc.Driver ⬍

Back   Next   Finish   Cancel

6. Select the **Supports Global Transactions** and **Emulate Two-Phase Commit**

Create a New JDBC Data Source

Back   Next   Finish   Cancel

Transaction Options

You have selected non-XA JDBC driver to create database connection in your new data source.

Does this data source support global transactions? If yes, please choose the transaction protocol for this data source.

☑ **Supports Global Transactions**

Select this option if you want to enable non-XA JDBC connections from the data source to participate in global transactions using the *Logging Last Resource* (LLR) transaction optimization. Recomme

◯ **Logging Last Resource**

Select this option if you want to enable non-XA JDBC connections from the data source to emulate participation in global transactions using JTA. Select this option only if your application can tolerate

🔘 **Emulate Two-Phase Commit**

Select this option if you want to enable non-XA JDBC connections from the data source to participate in global transactions using the one-phase commit transaction processing. With this option, no c

◯ **One-Phase Commit**
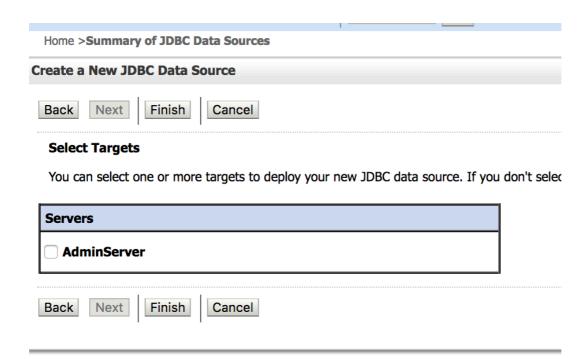
Back   Next   Finish   Cancel

7. Enter the Database Name : sorting , Host Name: localhost, Port : 3306, Database User Name: root, Password: << >> and click Next.

Create a New JDBC Data Source

Back Next Finish Cancel

Connection Properties

Define Connection Properties.

What is the name of the database you would like to connect to?

Database Name: `sorting`

What is the name or IP address of the database server?

Host Name: `localhost`

What is the port on the database server used to connect to the database?

Port: `3306`

What database account user name do you want to use to create database connections?

Database User Name: `root`

What is the database account password to use to create database connections?

Password: `••••••••`

Confirm Password: `••••••••`

Back Next Finish Cancel

8. Click Test Configuration, Message will show as Connection test succeeded.

Messages

✔ Connection test succeeded.

Create a New JDBC Data Source

Test Configuration Back Next Finish Cancel

Test Database Connection

Test the database availability and the connection properties you provided.

What is the full package name of JDBC driver class used to create database connections in the connection pool?

(Note that this driver class must be in the classpath of any server to which it is deployed.)

Driver Class Name: `com.mysql.jdbc.Driver`

What is the URL of the database to connect to? The format of the URL varies by JDBC driver.

URL: `jdbc:mysql://localhost:3306/sorting`

What database account user name do you want to use to create database connections?

Database User Name: `root`

What is the database account password to use to create database connections?

(Note: for secure password management, enter the password in the Password field instead of the Properties field below)

Password: `••••••••••••••••`

Confirm Password: `••••••••••••••••`

What are the properties to pass to the JDBC driver when creating database connections?

Properties:

`user=root`

9.select Click the **Admin Server** option and click Finish.

Home >**Summary of JDBC Data Sources**

Create a New JDBC Data Source

Back   Next   Finish   Cancel

Select Targets

You can select one or more targets to deploy your new JDBC data source. If you don't selec

Servers
☐ **AdminServer**

Back   Next   Finish   Cancel

BUILDING THE APPLICATION

1. Open the command prompt and go to project extracted location, and enter the below mentioned command

     Maven package

          Or

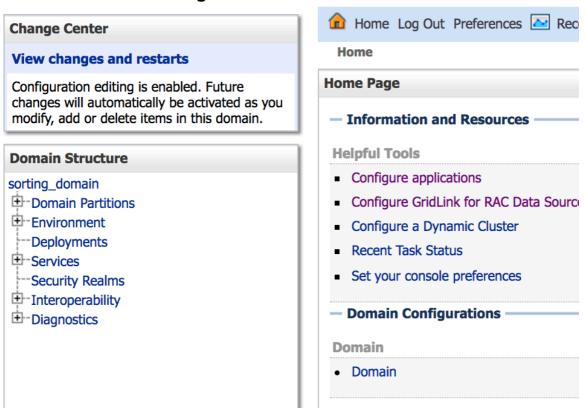   **Maven clean package**

Build successful will be shown below in the command prompt.

```
[INFO] Building war: /Users/banusekaiank/Documents/workspace
[INFO] WEB-INF/web.xml already added, skipping
[INFO] ------------------------------------------------
[INFO] BUILD SUCCESS
[INFO] ------------------------------------------------
[INFO] Total time: 3.600 s
[INFO] Finished at: 2017-08-19T23:43:42+05:30
[INFO] Final Memory: 19M/215M
[INFO] ------------------------------------------------
```
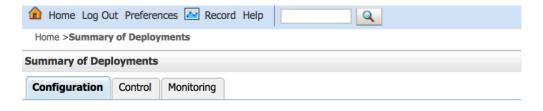
DEPLOYING THE APPLICATION

1. Open the browser and the weblogic console url and click the Deployment link in the left panel,

2. Click the Install button the Deployment sections,

3. Enter the path as <<project location >>\target\ and select the OnlineSort.war file as shown below and click next,

Install Application Assistant

Back | Next | Finish | Cancel

Locate deployment to install and prepare for deployment

Select the file path that represents the application root directory, archive file, exploded archive directory, or application module descriptor that you want to install. You

Note: Only valid file paths are displayed below. If you cannot find your deployment files, Upload your file(s) and/or confirm that your application contains the require

Path:	/Users/ /Documents/workspace-sts-3.9.0.RELEASE/OnlineSort/target/OnlineSort.war
Recently Used Paths:	/Users/ Documents/workspace-sts-3.9.0.RELEASE/OnlineSort/target
	/Users/ Documents/workspace-sts-3.9.0.RELEASE/OnlineMergeSort/target
Current Location:	localhost / Users / Documents / workspace-sts-3.9.0.RELEASE / OnlineSort / target

- **OnlineSort** (open directory)
  - 📁 classes
  - 📁 generated-sources
  - 📁 maven-status
- 🔘 **OnlineSort.war**

Back | Next | Finish | Cancel

4. Select the Intall this deployment as an application, and click next,

Home >**Summary of Deployments**

Install Application Assistant

Back | Next | Finish | Cancel

Choose installation type and scope

Select if the deployment should be installed as an application or library. Also decide the scope of this deployment.

The application and its components will be targeted to the same locations. This is the most common usage.

🔘 **Install this deployment as an application**

Application libraries are deployments that are available for other deployments to share. Libraries should be available on all of the targets running their referencing

⚪ **Install this deployment as a library**

Select a scope in which you want to install the deployment.

Scope: Global ⇕

Back | Next | Finish | Cancel

5. Click finish

Home >**Summary of Deployments**

Install Application Assistant

| Back | Next | Finish | Cancel |

Optional Settings

You can modify these settings or accept the defaults.

* Indicates required fields

━━ **General** ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━

What do you want to name this deployment?

* **Name:**   OnlineSort

━━ **Security** ━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━━

What security model do you want to use with this application?

🔘 **DD Only: Use only roles and policies that are defined in the deployment descriptors.**

⚪ **Custom Roles: Use roles that are defined in the Administration Console; use policies that are define**

⚪ **Custom Roles and Policies: Use only roles and policies that are defined in the Administration Conso**

⚪ **Advanced: Use a custom model that you have configured on the realm's configuration page.**

━━ **Source Accessibility** ━━━━━━━━━━━━━━━━━━━━━━━━━━━

How should the source files be made accessible?

🔘 **Use the defaults defined by the deployment's targets**

Recommended selection.

⚪ **Copy this application onto every target for me**

During deployment, the files will be copied automatically to the Managed Servers to which the application is targete

6. Now the application is installed successfully (State: Active and health : ok)

Summary of Deployments

| **Configuration** | Control | Monitoring |

This page displays the list of Java EE applications and standalone application modules installed to this domain.

You can update (redeploy) or delete installed applications and modules from the domain by selecting the checkbox next to the application name and then using the controls on t

To install a new application or module for deployment to targets in this domain, click **Install**.
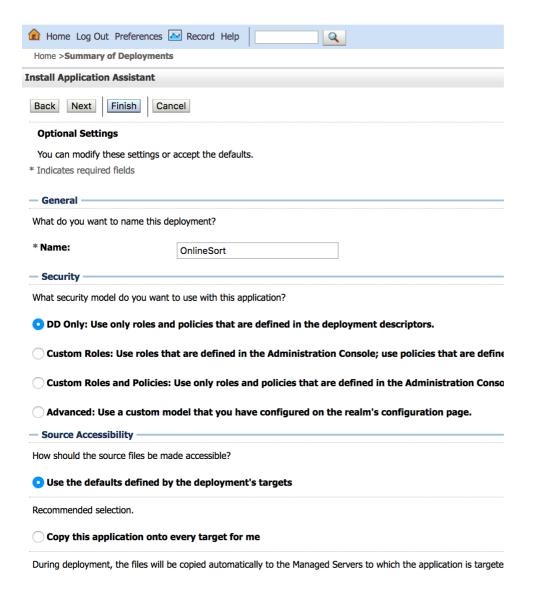
▷ **Customize this table**

Deployments

| Install | Update | Delete |

	Name ⌃	**State**	**Health**	**Type**
☐ ⊞ 📦 OnlineSort		Active	✔ OK	Web Ap

| Install | Update | Delete |

DATABASE SETUP

Execute the below sql script after logged in the MySql server,

```sql
CREATE DATABASE sorting;

CREATE TABLE SortingResults
(
    sortId mediumint not null AUTO_INCREMENT,
    guid tinytext not null,
    unSortedList mediumtext not null,
    PRIMARY KEY (sortId)
);
```