

It is train-ticket booking sample application

Introduction:

- *It is a java based application*
- *Build using maven*
- *It has database to store the data entered through application*

Software Requirements:

- *Java version (Openjdk-11-jdk)*
- *Git*
- *Maven*
- *Docker*
- *RDS*

Procedure:

- *Create a ubuntu server and on that server install all required softwares*
- *Clone the application from git hub*
- *url : <https://github.com/sudarshansw7/train-ticket-reservation.git>*
- *build the code with maven*
- *create Dockerfile and create docker image and push into dockerhub*
- *Now create container using the image*
- *Acces the application from browser*
- *Create RDS (oracle) database on AWS and connect it to the application*
- *Connect oracle using sql developer*

Steps:

- Git clone <https://github.com/sudarshansw7/train-ticket-reservation.git>
- Create RDS in AWS
- In the src code file , you will find application.properties file, in that file provide username ,password and endpoint of RDS database in the place of localhost
vim application.properties

```
username=RESERVATION
password=MANAGER
driverName = oracle.jdbc.driver.OracleDriver
connectionString=jdbc:oracle:thin:@localhost:1521:orcl
```

- Go into the project folder and create artifact using the command
mvn package
- You will find the artifact in the target folder after building in the form of .war file
- Now bring the .war file into the root folder
- There create dockerfile
vim dockerfile

```
FROM tomcat:9
MAINTAINER sudarshansw7@gmail.com
RUN mv webapps webappsbkp
RUN mv webapps.dist webapps
COPY *.war /usr/local/tomcat/webapps/testapp.war
```

- Now build the docker image
docker build -t sudarshansw7/train-application .
- Push the image into docker hub
docker push sudarshansw7/train-applicaion
- Now create container using that image
docker run - -name container_name -d -p hostport:8080 sudarshansw7/train-applicaton

Database connections:

- Open sqldeveloper and connect, give rds endpoint and username and password of rds and connect it
- Now create user inside the database
username: RESERVATION
Password: MANAGER
- Now give permission to user to access the db

```
# GRANT DBA TO RESERVATION;
COMMIT;
```

- Now create userdb ,clicking on + icon in database
- Now go into admindb created by you in mysqldeveloper
- Now create the tables into maindb

```

# CREATE TABLE "RESERVATION"."CUSTOMER"
(
"MAILID" VARCHAR2(40) PRIMARY KEY,
"PWORD" VARCHAR2(20) NOT NULL,
"FNAME" VARCHAR2(20) NOT NULL,
"LNAME" VARCHAR2(20),
"ADDR" VARCHAR2(100),
"PHNO" NUMBER(12) NOT NULL
);

CREATE TABLE "RESERVATION"."ADMIN"
(
"MAILID" VARCHAR2(40) PRIMARY KEY,
"PWORD" VARCHAR2(20) NOT NULL,
"FNAME" VARCHAR2(20) NOT NULL,
"LNAME" VARCHAR2(20),
"ADDR" VARCHAR2(100),
"PHNO" NUMBER(12) NOT NULL
);

CREATE TABLE "RESERVATION"."TRAIN"
(
"TR_NO" NUMBER(10) PRIMARY KEY,
"TR_NAME" VARCHAR2(70) NOT NULL,
"FROM_STN" VARCHAR2(20) NOT NULL,
"TO_STN" VARCHAR2(20) NOT NULL,
"SEATS" NUMBER(4) NOT NULL,
"FARE" NUMBER(6,2) NOT NULL
);

CREATE TABLE "RESERVATION"."HISTORY"
(
"TRANSID" VARCHAR2(36) PRIMARY KEY,
"MAILID" VARCHAR2(40) REFERENCES "RESERVATION"."CUSTOMER"(MAILID),
"TR_NO" NUMBER(10),
"DATE" DATE,
"FROM_STN" VARCHAR2(20) NOT NULL,
"TO_STN" VARCHAR2(20) NOT NULL,
"SEATS" NUMBER(3) NOT NULL,
"AMOUNT" NUMBER(8,2) NOT NULL
);

COMMIT;

INSERT INTO RESERVATION.ADMIN VALUES('admin@demo.com','admin','System','Admin','Demo Address
123 colony','9874561230');
INSERT INTO RESERVATION.CUSTOMER VALUES('shashi@demo.com','shashi','Shashi','Raj','Kolkata,
West Bengal','954745222');

INSERT INTO RESERVATION.TRAIN VALUES(10001,'JODHPUR EXP','HOWRAH','JODHPUR', 152, 490.50);
INSERT INTO RESERVATION.TRAIN VALUES(10002,'YAMUNA EXP','GAYA','DELHI', 52, 550.50);
INSERT INTO RESERVATION.TRAIN VALUES(10003,'NILANCHAL EXP','GAYA','HOWRAH', 92, 451);
INSERT INTO RESERVATION.TRAIN VALUES(10004,'JAN SATABDI EXP','RANCHI','PATNA', 182, 550);
INSERT INTO RESERVATION.TRAIN VALUES(10005,'GANGE EXP','MUMBAI','KERALA', 12, 945);
INSERT INTO RESERVATION.TRAIN VALUES(10006,'GARIB RATH EXP','PATNA','DELHI', 1, 1450.75);

INSERT INTO RESERVATION.HISTORY VALUES('BBC374-NSDF-4673','shashi@demo.com',10001,TO_DATE('02-
FEB-2024'), 'HOWRAH', 'JODHPUR', 2, 981);
INSERT INTO RESERVATION.HISTORY VALUES('BBC375-NSDF-4675','shashi@demo.com',10004,TO_DATE('12-
JAN-2024'), 'RANCHI', 'PATNA', 1, 550);
INSERT INTO RESERVATION.HISTORY VALUES('BBC373-NSDF-4674','shashi@demo.com',10006,TO_DATE('22-
JULY-2024'), 'PATNA', 'DELHI', 3, 4352.25);

COMMIT;

```

