

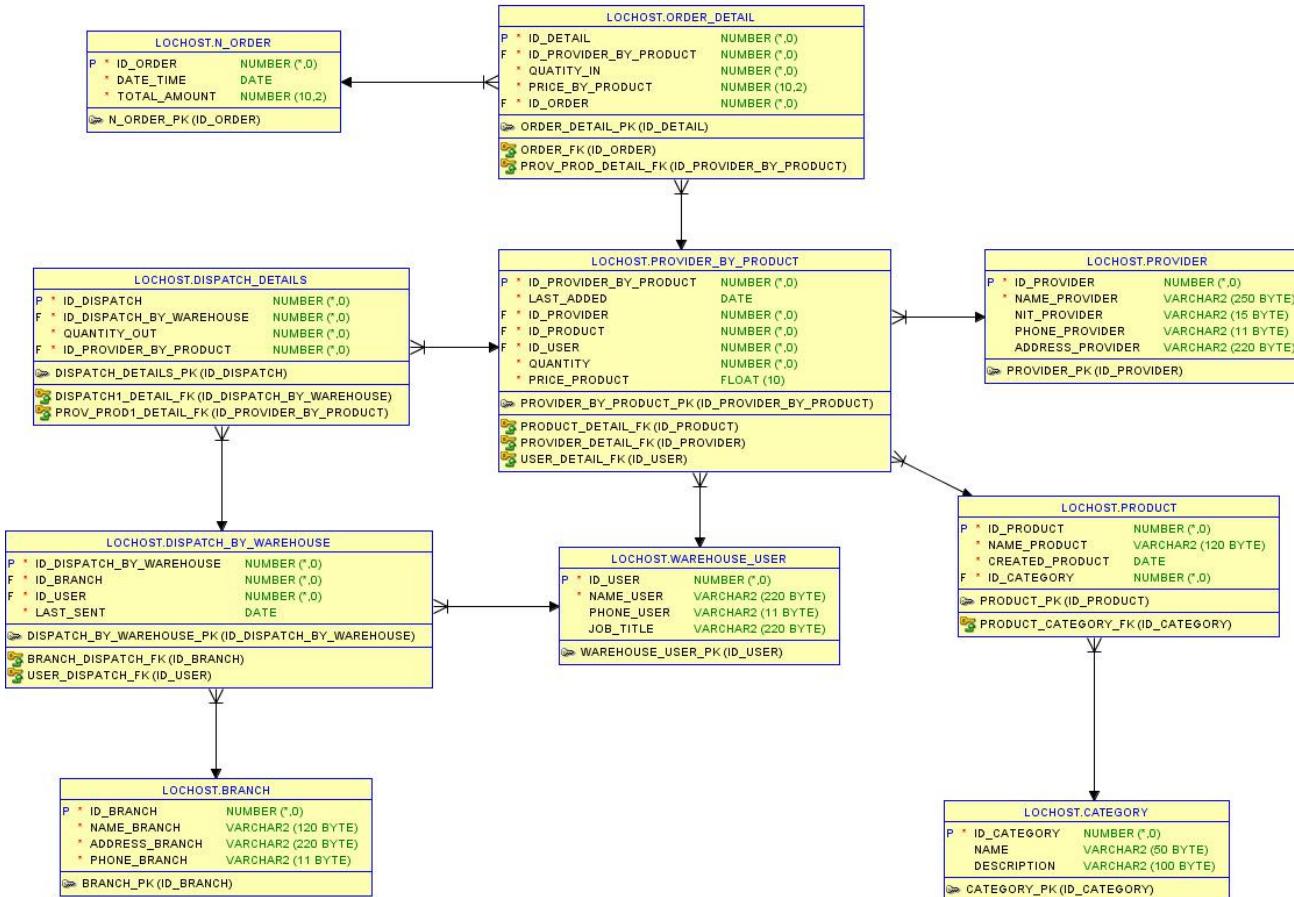


Proyecto Warehouse.

ORACLE®

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Modelado de Datos.



MONITOREO DE TRANSACCIONES.

--INSERTING BRANCH

```
CREATE OR REPLACE PROCEDURE B_BRANCH_CREATE (PID_BRANCH IN BITACORA_BRANCH.ID_BRANCH%TYPE, PNAME_BRANCH IN BITACORA_BRANCH.NAME_BRANCH%TYPE,
PADDRESS_BRANCH IN BITACORA_BRANCH.ADDRESS_BRANCH%TYPE, PPHONE_BRANCH IN BITACORA_BRANCH.PHONE_BRANCH%TYPE) AS
BEGIN
    INSERT INTO BITACORA_BRANCH VALUES (USER, 'INSERT', PID_BRANCH, PNAME_BRANCH, PADDRESS_BRANCH, PPHONE_BRANCH, SYSDATE);
END;
```

--DELETING BRANCH

```
CREATE OR REPLACE PROCEDURE B_BRANCH_DELETE (PID_BRANCH IN BITACORA_BRANCH.ID_BRANCH%TYPE, PNAME_BRANCH IN BITACORA_BRANCH.NAME_BRANCH%TYPE,
PADDRESS_BRANCH IN BITACORA_BRANCH.ADDRESS_BRANCH%TYPE, PPHONE_BRANCH IN BITACORA_BRANCH.PHONE_BRANCH%TYPE) AS
BEGIN
    INSERT INTO BITACORA_BRANCH VALUES (USER, 'DELETE', PID_BRANCH, PNAME_BRANCH, PADDRESS_BRANCH, PPHONE_BRANCH, SYSDATE);
END;
```

--UPDATING BRANCH

```
CREATE OR REPLACE PROCEDURE B_BRANCH_UPDATE (PID_BRANCH IN BITACORA_BRANCH.ID_BRANCH%TYPE, PNAME_BRANCH IN BITACORA_BRANCH.NAME_BRANCH%TYPE,
PADDRESS_BRANCH IN BITACORA_BRANCH.ADDRESS_BRANCH%TYPE, PPHONE_BRANCH IN BITACORA_BRANCH.PHONE_BRANCH%TYPE) AS
BEGIN
    INSERT INTO BITACORA_BRANCH VALUES (USER, 'UPDATING', PID_BRANCH, PNAME_BRANCH, PADDRESS_BRANCH, PPHONE_BRANCH, SYSDATE);
END;
```

CREATE OR REPLACE TRIGGER B_BRANCH AFTER INSERT OR UPDATE OR DELETE ON BRANCH FOR EACH ROW

BEGIN

```
    IF INSERTING THEN
        B_BRANCH_CREATE(:new.ID_BRANCH, :new.NAME_BRANCH, :new.ADDRESS_BRANCH, :new.PHONE_BRANCH);
    ELSIF DELETING THEN
        B_BRANCH_DELETE(:old.ID_BRANCH, :old.NAME_BRANCH, :old.ADDRESS_BRANCH, :old.PHONE_BRANCH);
    ELSIF UPDATING THEN
        B_BRANCH_UPDATE(:old.ID_BRANCH, :old.NAME_BRANCH, :old.ADDRESS_BRANCH, :old.PHONE_BRANCH);
    END IF;
END;
```

TRIGGERS y FUNCIONES.

```
CREATE OR REPLACE TRIGGER PRODUCT_IN AFTER INSERT
ON ORDER_DETAIL FOR EACH ROW
BEGIN
    UPDATE N_ORDER SET TOTAL_AMOUNT = TOTAL_AMOUNT + :NEW.PRICE_BY_PRODUCT WHERE ID_ORDER = :NEW.ID_ORDER;
    UPDATE provider_by_product SET quantity = quantity + :new.quantity_in WHERE id_provider_by_product = :new.id_provider_by_product;
END;

CREATE OR REPLACE TRIGGER PRODUCT_OUT BEFORE INSERT
ON DISPATCH_DETAILS FOR EACH ROW
DECLARE
    current_qty INTEGER;
BEGIN
    current_qty := FETCH_QUANTITY(:new.id_provider_by_product);
    IF (current_qty > :new.quantity_out) then
        UPDATE provider_by_product SET quantity = quantity - :new.quantity_out WHERE id_provider_by_product = :new.id_provider_by_product;
    ELSE
        raise_application_error(-20000
            , 'Bodega insuficiente para el despacho.');
    END IF;
END;

CREATE OR REPLACE FUNCTION FETCH_QUANTITY(IDPR IN NUMBER) RETURN NUMBER IS
    F_QUANTITY INTEGER;
BEGIN
    SELECT quantity INTO F_QUANTITY FROM provider_by_product where id_provider_by_product = IDPR;
    RETURN F_QUANTITY;
END;
```

DB-Link , ETL

```
CREATE DATABASE LINK WAREHOUSE_LINK CONNECT TO WAREHOUSE IDENTIFIED BY ROOT USING
'(DESCRIPTION =
  (ADDRESS = (PROTOCOL = TCP)(HOST = localhost)(PORT = 1521))
  (CONNECT_DATA =
    (SERVER = DEDICATED)
    (SERVICE_NAME = xe)
  )
)';

CREATE OR REPLACE PROCEDURE SP_ETL (SQL_TABLE_NAME IN VARCHAR2, QUERY_NAME IN VARCHAR2) IS
  ddl_script VARCHAR2(1000);
  exist INTEGER;
BEGIN

  SELECT COUNT(*) INTO exist FROM SYS.ALL_TABLES WHERE TABLE_NAME=SQL_TABLE_NAME;

  IF (exist)=1 THEN
    ddl_script := 'DROP TABLE IF EXISTS '|| SQL_TABLE_NAME;
    EXECUTE IMMEDIATE ddl_script;
  END IF;
  ddl_script := ' CREATE TABLE '|| SQL_TABLE_NAME || ' AS ' || QUERY_NAME;

  EXECUTE IMMEDIATE ddl_script;
  EXCEPTION
  WHEN OTHERS THEN
    DBMS_OUTPUT.PUT_LINE('DDL FALLO '||SQL_TABLE_NAME||':: ERROR::'||SQLERRM);
END;
/
```

PROCEDIMIENTOS

Procedimientos:

```
--PROCEDIMIENTOS CRUD BRANCH
--CREATE
CREATE OR REPLACE PROCEDURE CREATE_BRANCH (PNAME_BRANCH IN BRANCH.NAME_BRANCH%TYPE, PADDRESS_BRANCH IN BRANCH.ADDRESS_BRANCH%TYPE, PPHONE_BRANCH IN BRANCH.PHONE_BRANCH%TYPE) AS
BEGIN
    INSERT INTO BRANCH (ID_BRANCH,NAME_BRANCH,ADDRESS_BRANCH,PHONE_BRANCH) VALUES (SQ_BRANCH.NEXTVAL,PNAME_BRANCH,PADDRESS_BRANCH,PPHONE_BRANCH);
    COMMIT;
END;

--UPDATE
CREATE OR REPLACE PROCEDURE UPDATE_BRANCH (PID_BRANCH IN BRANCH.ID_BRANCH%TYPE, PNAME_BRANCH IN BRANCH.NAME_BRANCH%TYPE,
PADDRESS_BRANCH IN BRANCH.ADDRESS_BRANCH%TYPE, PPHONE_BRANCH IN BRANCH.PHONE_BRANCH%TYPE) AS
BEGIN
    UPDATE BRANCH
    SET
        NAME_BRANCH = PNAME_BRANCH, ADDRESS_BRANCH = PADDRESS_BRANCH , PHONE_BRANCH = PPHONE_BRANCH
    WHERE
        ID_BRANCH = PID_BRANCH;
    COMMIT;
END;

--DELETE
CREATE OR REPLACE PROCEDURE DELETE_BRANCH (PID_BRANCH IN BRANCH.ID_BRANCH%TYPE) AS
BEGIN
    DELETE FROM BRANCH WHERE ID_BRANCH = PID_BRANCH;
END DELETE_BRANCH;
```

SEQUENCE.

Secuencias:

```
CREATE SEQUENCE SQ_BRANCH INCREMENT BY 1 START WITH 1;  
CREATE SEQUENCE SQ_CATEGORY INCREMENT BY 1 START WITH 1;  
CREATE SEQUENCE SQ_DISPATCH_BY_WAREHOUSE INCREMENT BY 1 START WITH 1;  
CREATE SEQUENCE SQ_DISPATCH_DETAILS INCREMENT BY 1 START WITH 1;  
CREATE SEQUENCE SQ_N_ORDER INCREMENT BY 1 START WITH 1;  
CREATE SEQUENCE SQ_ORDER_DETAIL INCREMENT BY 1 START WITH 1;  
CREATE SEQUENCE SQ_PRODUCT INCREMENT BY 1 START WITH 1;  
CREATE SEQUENCE SQ_PROVIDER INCREMENT BY 1 START WITH 1;  
CREATE SEQUENCE SQ_PROVIDER_BY_PRODUCT INCREMENT BY 1 START WITH 1;  
CREATE SEQUENCE SQ_WAREHOUSE_USER INCREMENT BY 1 START WITH 1;
```

DML, DDL, DCL, TCL

DML DATA MANIPULATION LANGUAGE.

DDL DATA DEFINITION LANGUAGE.

DCL DATA CONTROL LANGUAGE.

TCL TRANSACTIONAL CONTROL LANGUAGE.

```
CREATE OR REPLACE PROCEDURE UPDATE_WAREHOUSE_USER(PID_USER IN WAREHOUSE_USER.ID_USER%TYPE, I
PPHONE_USER IN WAREHOUSE_USER.PHONE_USER%TYPE,PJOB_TITLE WAREHOUSE_USER.JOB_TITLE%TYPE)AS
BEGIN
    UPDATE WAREHOUSE_USER
    SET
        NAME_USER = PNAME_USER,
        PHONE_USER = PPHONE_USER,
        JOB_TITLE = PJOB_TITLE
    WHERE
        ID_USER = PID_USER;
    COMMIT;
END;
```

```
insert into WAREHOUSE_USER (ID_USER, NAME_USER, PHONE_USER, JOB_TITLE) values (1, 'Karl Calcraft', '287-306-3425', 'Senior Editor');
insert into WAREHOUSE_USER (ID_USER, NAME_USER, PHONE_USER, JOB_TITLE) values (2, 'Xaviera Bilsford', '684-698-5887', 'Research Associate');
insert into WAREHOUSE_USER (ID_USER, NAME_USER, PHONE_USER, JOB_TITLE) values (3, 'Jason Madle', '108-181-6105', 'Sales Representative');
```

—BRANCH

```
CREATE TABLE BITACORA_BRANCH (
    ID_USER      VARCHAR2(120) NOT NULL,
    TRANSACTION  VARCHAR2(120) NOT NULL,
    ID_BRANCH    INTEGER NOT NULL,
    NAME_BRANCH  VARCHAR2(120) ,
    ADDRESS_BRANCH  VARCHAR2(220) ,
    PHONE_BRANCH  VARCHAR2(15),
    DATE_TIME    DATE NOT NULL
);
```

```
GRANT "AUDIT_ADMIN" TO "ADMON";
```

— SYSTEM PRIVILEGES

```
GRANT ALTER ANY TABLE TO "ADMON";
```

```
GRANT UPDATE ANY TABLE TO "ADMON";
```

```
GRANT INSERT ANY TABLE TO "ADMON";
```

```
GRANT SELECT ANY TABLE TO "ADMON";
```

```
GRANT SELECT ANY CUBE TO "ADMON";
```

```
GRANT SELECT ANY TRANSACTION TO "ADMON";
```

SEGURIDAD.

Se crearon usuarios, roles y permisos para garantizar la seguridad de la base de datos.

```
--SEGURIDAD CREACION DE USUARIOS, ROLES Y PERMISOS

--Administrador
Alter session set "_ORACLE_SCRIPT" = true;
Create USER admon identified BY "Admon1";
DEFAULT TABLESPACE "USERS"
TEMPORARY TABLESPACE "TEMP"
ACCOUNT UNLOCK;

-- ROLES
GRANT "AUDIT_ADMIN" TO "ADMON";
-- SYSTEM PRIVILEGES
GRANT ALTER ANY TABLE TO "ADMON";
GRANT UPDATE ANY TABLE TO "ADMON";
GRANT INSERT ANY TABLE TO "ADMON";
GRANT SELECT ANY TABLE TO "ADMON";
GRANT SELECT ANY CUBE TO "ADMON";
GRANT SELECT ANY TRANSACTION TO "ADMON";

--Cajero
Alter session set "_ORACLE_SCRIPT" = true;
Create USER cajero identified BY "Cajero1";
DEFAULT TABLESPACE "USERS"
TEMPORARY TABLESPACE "TEMP"
ACCOUNT UNLOCK;

-- ROLES
GRANT "CONNECT" TO "Cajero";
-- SYSTEM PRIVILEGES
GRANT UPDATE ANY TABLE TO "cajero";
GRANT INSERT ANY TABLE TO "cajero";
GRANT SELECT ANY TABLE TO "cajero";
```

--DBA

```
Alter session set "_ORACLE_SCRIPT" = true;
Create USER "BDA" identified by "DBA1";
DEFAULT TABLESPACE "USERS"
TEMPORARY TABLESPACE "TEMP"
ACCOUNT UNLOCK ;
-- ROLES
ALTER USER "BDA" DEFAULT ROLE "DBA";
-- SYSTEM PRIVILEGES
GRANT CREATE JOB TO "BDA" ;
GRANT DROP ANY CONTEXT TO "BDA" ;
GRANT UPDATE ANY CUBE TO "BDA" ;
GRANT ALTER ANY ANALYTIC VIEW TO "BDA" ;
GRANT DROP ANY TRIGGER TO "BDA" ;
GRANT DROP ANY SQL TRANSLATION PROFILE TO "BDA" ;
GRANT MANAGE ANY FILE GROUP TO "BDA" ;
GRANT ALTER PUBLIC DATABASE LINK TO "BDA" ;
GRANT MANAGE FILE GROUP TO "BDA" ;
GRANT ALTER ANY INDEX TO "BDA" ;
GRANT DROP ANY SEQUENCE TO "BDA" ;
GRANT ALTER PROFILE TO "BDA" ;
GRANT INHERIT ANY PRIVILEGES TO "BDA" ;
GRANT UNDER ANY TABLE TO "BDA" ;
GRANT CREATE ASSEMBLY TO "BDA" ;
GRANT DROP ANY LIBRARY TO "BDA" ;
GRANT ALTER ANY EDITION TO "BDA" ;
GRANT CREATE ROLE TO "BDA" ;
GRANT CREATE LIBRARY TO "BDA" ;
GRANT DROP ROLLBACK SEGMENT TO "BDA" ;
GRANT CREATE TRIGGER TO "BDA" ;
GRANT ALTER ANY PROCEDURE TO "BDA" ;
GRANT ADMINISTER DATABASE TRIGGER TO "BDA" ;
GRANT DROP ANY MEASURE FOLDER TO "BDA" ;
GRANT CREATE ANY PROCEDURE TO "BDA" ;
GRANT ALTER ANY OUTLINE TO "BDA" ;
GRANT CREATE ANY ANALYTIC VIEW TO "BDA" ;
GRANT EXECUTE ANY INDEXTYPE TO "BDA" ;
GRANT USE ANY JOB RESOURCE TO "BDA" ;
GRANT CREATE ANY DIRECTORY TO "BDA" ;
```

```
GRANT ALTER ANY RULE SET TO "BDA" ;
GRANT USE ANY SQL TRANSLATION PROFILE TO "BDA" ;
GRANT ALTER ANY MINING MODEL TO "BDA" ;
GRANT DEBUG CONNECT SESSION TO "BDA" ;
GRANT LOGMINING TO "BDA" ;
GRANT DROP ANY ATTRIBUTE DIMENSION TO "BDA" ;
GRANT CREATE ANY MINING MODEL TO "BDA" ;
GRANT CREATE LOCKDOWN PROFILE TO "BDA" ;
GRANT ALTER SESSION TO "BDA" ;
GRANT CREATE MATERIALIZED VIEW TO "BDA" ;
GRANT CREATE PLUGGABLE DATABASE TO "BDA" ;
GRANT DROP ANY ANALYTIC VIEW TO "BDA" ;
GRANT WRITE ANY ANALYTIC VIEW CACHE TO "BDA" ;
GRANT MERGE ANY VIEW TO "BDA" ;
GRANT CREATE ANY INDEX TO "BDA" ;
GRANT READ ANY ANALYTIC VIEW CACHE TO "BDA" ;
GRANT CREATE DIMENSION TO "BDA" ;
GRANT EXECUTE ANY RULE SET TO "BDA" ;
GRANT CREATE SQL TRANSLATION PROFILE TO "BDA" ;
GRANT ALTER ANY MATERIALIZED VIEW TO "BDA" ;
GRANT AUDIT SYSTEM TO "BDA" ;
GRANT CREATE OPERATOR TO "BDA" ;
GRANT MANAGE ANY QUEUE TO "BDA" ;
GRANT ALTER ANY SQL PROFILE TO "BDA" ;
GRANT GRANT ANY OBJECT PRIVILEGE TO "BDA" ;
GRANT CREATE INDEXTYPE TO "BDA" ;
GRANT AUDIT ANY TO "BDA" ;
GRANT INHERIT ANY REMOTE PRIVILEGES TO "BDA" ;
GRANT DEBUG ANY PROCEDURE TO "BDA" ;
GRANT CREATE ANY MEASURE FOLDER TO "BDA" ;
GRANT CREATE ANY SEQUENCE TO "BDA" ;
GRANT CREATE MEASURE FOLDER TO "BDA" ;
GRANT UPDATE ANY CUBE BUILD PROCESS TO "BDA" ;
GRANT CREATE VIEW TO "BDA" ;
GRANT ALTER DATABASE LINK TO "BDA" ;
GRANT ALTER ANY ASSEMBLY TO "BDA" ;
GRANT ALTER ANY SQL TRANSLATION PROFILE TO "BDA" ;
GRANT CREATE ANY EVALUATION CONTEXT TO "BDA" ;
GRANT SELECT ANY MINING MODEL TO "BDA" ;
GRANT DELETE ANY CUBE DIMENSION TO "BDA" ;
GRANT ALTER ANY TABLE TO "BDA" ;
GRANT ALTER ANY ATTRIBUTE DIMENSION TO "BDA" ;
GRANT CREATE SESSION TO "BDA" ;
```

```
GRANT CREATE RULE TO "BDA" ;
GRANT BECOME USER TO "BDA" ;
GRANT SELECT ANY CUBE BUILD PROCESS TO "BDA" ;
GRANT SELECT ANY TABLE TO "BDA" ;
GRANT INSERT ANY MEASURE FOLDER TO "BDA" ;
GRANT CREATE ANY SQL PROFILE TO "BDA" ;
GRANT FORCE ANY TRANSACTION TO "BDA" ;
GRANT DELETE ANY TABLE TO "BDA" ;
GRANT ALTER ANY SEQUENCE TO "BDA" ;
GRANT SELECT ANY CUBE DIMENSION TO "BDA" ;
GRANT CREATE ANY EDITION TO "BDA" ;
GRANT CREATE EXTERNAL JOB TO "BDA" ;
GRANT EM EXPRESS CONNECT TO "BDA" ;
GRANT DROP ANY MATERIALIZED VIEW TO "BDA" ;
GRANT CREATE ANY CUBE BUILD PROCESS TO "BDA" ;
GRANT FLASHBACK ANY TABLE TO "BDA" ;
GRANT DROP ANY RULE SET TO "BDA" ;
GRANT BACKUP ANY TABLE TO "BDA" ;
GRANT ALTER ANY CUBE TO "BDA" ;
GRANT CREATE CREDENTIAL TO "BDA" ;
GRANT CREATE TABLE TO "BDA" ;
GRANT EXECUTE ANY LIBRARY TO "BDA" ;
GRANT DROP ANY OUTLINE TO "BDA" ;
GRANT EXECUTE ASSEMBLY TO "BDA" ;
GRANT CREATE ANY HIERARCHY TO "BDA" ;
GRANT CREATE ANALYTIC VIEW TO "BDA" ;
GRANT CREATE ANY DIMENSION TO "BDA" ;
GRANT DROP ANY TABLE TO "BDA" ;
GRANT ADMINISTER KEY MANAGEMENT TO "BDA" ;
GRANT ALTER ANY CLUSTER TO "BDA" ;
GRANT EXECUTE ANY CLASS TO "BDA" ;
GRANT ALTER ANY CUBE BUILD PROCESS TO "BDA" ;
GRANT CREATE ANY CREDENTIAL TO "BDA" ;
GRANT DROP ANY DIMENSION TO "BDA" ;
GRANT CREATE ANY RULE SET TO "BDA" ;
GRANT SELECT ANY SEQUENCE TO "BDA" ;
GRANT UNDER ANY TYPE TO "BDA" ;
GRANT MANAGE TABLESPACE TO "BDA" ;
GRANT DROP ANY OPERATOR TO "BDA" ;
GRANT CREATE ANY OPERATOR TO "BDA" ;
GRANT DROP ANY HIERARCHY TO "BDA" ;
GRANT EXEMPT IDENTITY POLICY TO "BDA" ;
```

```
GRANT CREATE TYPE TO "BDA" ;
GRANT CREATE TABLESPACE TO "BDA" ;
GRANT SELECT ANY TRANSACTION TO "BDA" ;
GRANT DELETE ANY MEASURE FOLDER TO "BDA" ;
GRANT CREATE ANY CUBE TO "BDA" ;
GRANT LOCK ANY TABLE TO "BDA" ;
GRANT CREATE EVALUATION CONTEXT TO "BDA" ;
GRANT DROP ANY TYPE TO "BDA" ;
GRANT ADVISOR TO "BDA" ;
GRANT CREATE PUBLIC DATABASE LINK TO "BDA" ;
GRANT ANALYZE ANY TO "BDA" ;
GRANT CREATE ATTRIBUTE DIMENSION TO "BDA" ;
GRANT DROP ANY RULE TO "BDA" ;
GRANT INSERT ANY CUBE DIMENSION TO "BDA" ;
GRANT CREATE ROLLBACK SEGMENT TO "BDA" ;
GRANT CREATE ANY JOB TO "BDA" ;
GRANT ALTER USER TO "BDA" ;
GRANT QUERY REWRITE TO "BDA" ;
GRANT SELECT ANY DICTIONARY TO "BDA" ;
GRANT CREATE PUBLIC SYNONYM TO "BDA" ;
GRANT GLOBAL QUERY REWRITE TO "BDA" ;
GRANT ALTER ANY CUBE DIMENSION TO "BDA" ;
GRANT CREATE ANY CUBE DIMENSION TO "BDA" ;
GRANT DROP ANY CLUSTER TO "BDA" ;
GRANT CREATE ANY RULE TO "BDA" ;
GRANT UPDATE ANY CUBE DIMENSION TO "BDA" ;
GRANT ADMINISTER RESOURCE MANAGER TO "BDA" ;
GRANT CREATE ANY SYNONYM TO "BDA" ;
GRANT DROP ANY SYNONYM TO "BDA" ;
GRANT DROP ANY MINING MODEL TO "BDA" ;
GRANT EXECUTE ANY PROCEDURE TO "BDA" ;
GRANT CREATE SYNONYM TO "BDA" ;
GRANT SET CONTAINER TO "BDA" ;
GRANT EXECUTE ANY PROGRAM TO "BDA" ;
GRANT EXEMPT REDACTION POLICY TO "BDA" ;
GRANT EXECUTE ANY TYPE TO "BDA" ;
GRANT ON COMMIT REFRESH TO "BDA" ;
GRANT DEBUG CONNECT ANY TO "BDA" ;
GRANT CREATE SEQUENCE TO "BDA" ;
GRANT CREATE HIERARCHY TO "BDA" ;
GRANT SELECT ANY MEASURE FOLDER TO "BDA" ;
GRANT COMMENT ANY MINING MODEL TO "BDA" ;
GRANT ADMINISTER SQL TUNING SET TO "BDA" ;
GRANT CREATE ANY INDEXTYPE TO "BDA" ;
```

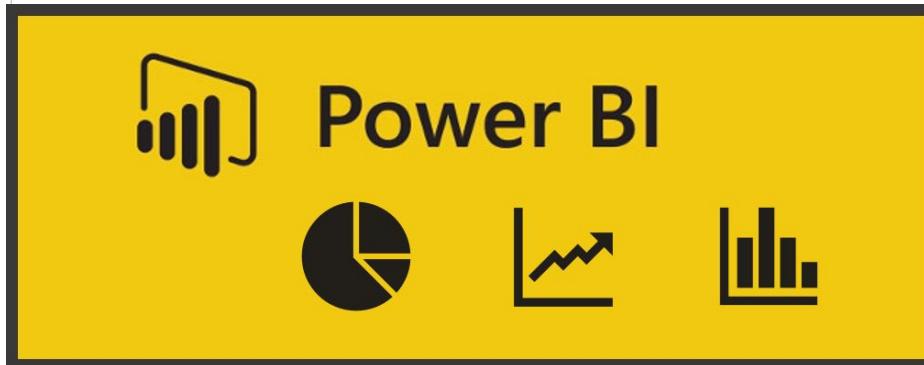
```
GRANT DROP ANY INDEX TO "BDA" ;
GRANT RESTRICTED SESSION TO "BDA" ;
GRANT DEQUEUE ANY QUEUE TO "BDA" ;
GRANT ANALYZE ANY DICTIONARY TO "BDA" ;
GRANT ALTER ANY INDEXTYPE TO "BDA" ;
GRANT TRANSLATE ANY SQL TO "BDA" ;
GRANT ADMINISTER ANY SQL TUNING SET TO "BDA" ;
GRANT CREATE USER TO "BDA" ;
GRANT EXECUTE ANY OPERATOR TO "BDA" ;
GRANT CREATE CUBE BUILD PROCESS TO "BDA" ;
GRANT CREATE PROFILE TO "BDA" ;
GRANT ALTER ANY ROLE TO "BDA" ;
GRANT UPDATE ANY TABLE TO "BDA" ;
GRANT ALTER ANY LIBRARY TO "BDA" ;
GRANT DROP ANY VIEW TO "BDA" ;
GRANT CREATE ANY CLUSTER TO "BDA" ;
GRANT EXECUTE ANY RULE TO "BDA" ;
GRANT ALTER TABLESPACE TO "BDA" ;
GRANT UNDER ANY VIEW TO "BDA" ;
GRANT EXECUTE ANY ASSEMBLY TO "BDA" ;
GRANT GRANT ANY PRIVILEGE TO "BDA" ;
GRANT ALTER ANY TRIGGER TO "BDA" ;
GRANT CREATE ANY VIEW TO "BDA" ;
GRANT ALTER LOCKDOWN PROFILE TO "BDA" ;
GRANT EXPORT FULL DATABASE TO "BDA" ;
GRANT ALTER ANY MEASURE FOLDER TO "BDA" ;
GRANT ALTER ANY EVALUATION CONTEXT TO "BDA" ;
GRANT TEXT DATASTORE ACCESS TO "BDA" ;
GRANT FLASHBACK ARCHIVE ADMINISTER TO "BDA" ;
GRANT IMPORT FULL DATABASE TO "BDA" ;
GRANT CREATE ANY OUTLINE TO "BDA" ;
GRANT COMMENT ANY TABLE TO "BDA" ;
GRANT READ ANY TABLE TO "BDA" ;
GRANT CREATE DATABASE LINK TO "BDA" ;
GRANT DROP PUBLIC SYNONYM TO "BDA" ;
GRANT DROP USER TO "BDA" ;
GRANT CHANGE NOTIFICATION TO "BDA" ;
GRANT CREATE MINING MODEL TO "BDA" ;
GRANT INSERT ANY TABLE TO "BDA" ;
GRANT DROP LOCKDOWN PROFILE TO "BDA" ;
GRANT DROP PROFILE TO "BDA" ;
GRANT CREATE ANY MATERIALIZED VIEW TO "BDA" ;
GRANT CREATE RULE SET TO "BDA" ;
```

```
GRANT EXEMPT ACCESS POLICY TO "BDA" ;
GRANT MANAGE SCHEDULER TO "BDA" ;
GRANT READ ANY FILE GROUP TO "BDA" ;
GRANT FORCE TRANSACTION TO "BDA" ;
GRANT DROP ANY CUBE BUILD PROCESS TO "BDA" ;
GRANT ALTER ANY TYPE TO "BDA" ;
GRANT DROP ANY PROCEDURE TO "BDA" ;
GRANT CREATE ANY SQL TRANSLATION PROFILE TO "BDA" ;
GRANT DROP PUBLIC DATABASE LINK TO "BDA" ;
GRANT DROP ANY INDEXTYPE TO "BDA" ;
GRANT DROP ANY SQL PROFILE TO "BDA" ;
GRANT ALTER SYSTEM TO "BDA" ;
GRANT UNLIMITED TABLESPACE TO "BDA" ;
GRANT DROP ANY ROLE TO "BDA" ;
GRANT ALTER ANY DIMENSION TO "BDA" ;
GRANT DROP ANY CUBE DIMENSION TO "BDA" ;
GRANT DROP ANY CUBE TO "BDA" ;
GRANT CREATE ANY TRIGGER TO "BDA" ;
GRANT DROP ANY ASSEMBLY TO "BDA" ;
GRANT CREATE ANY TABLE TO "BDA" ;
GRANT ADMINISTER SQL MANAGEMENT OBJECT TO "BDA" ;
GRANT DROP ANY DIRECTORY TO "BDA" ;
GRANT ENQUEUE ANY QUEUE TO "BDA" ;
GRANT DROP ANY EVALUATION CONTEXT TO "BDA" ;
GRANT CREATE ANY ASSEMBLY TO "BDA" ;
GRANT CREATE ANY TYPE TO "BDA" ;
GRANT REDEFINE ANY TABLE TO "BDA" ;
GRANT CREATE CLUSTER TO "BDA" ;
GRANT CREATE ANY CONTEXT TO "BDA" ;
GRANT EXECUTE ANY EVALUATION CONTEXT TO "BDA" ;
GRANT RESUMABLE TO "BDA" ;
GRANT CREATE ANY LIBRARY TO "BDA" ;
GRANT DROP ANY EDITION TO "BDA" ;
GRANT CREATE PROCEDURE TO "BDA" ;
GRANT ALTER DATABASE TO "BDA" ;
GRANT SELECT ANY CUBE TO "BDA" ;
GRANT GRANT ANY ROLE TO "BDA" ;
GRANT ALTER ANY RULE TO "BDA" ;
GRANT CREATE ANY ATTRIBUTE DIMENSION TO "BDA" ;
GRANT CREATE CUBE DIMENSION TO "BDA" ;
GRANT ALTER ANY OPERATOR TO "BDA" ;
GRANT CREATE CUBE TO "BDA" ;
GRANT ALTER RESOURCE COST TO "BDA" ;
GRANT ALTER ANY HIERARCHY TO "BDA" ;
GRANT DROP TABLESPACE TO "BDA" ;
```

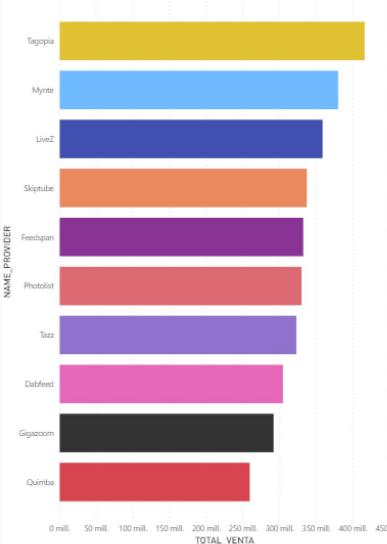
Módulo de Business Intelligence BI.

TOP 10 Y 20 COMPRAS A PROVEEDOR

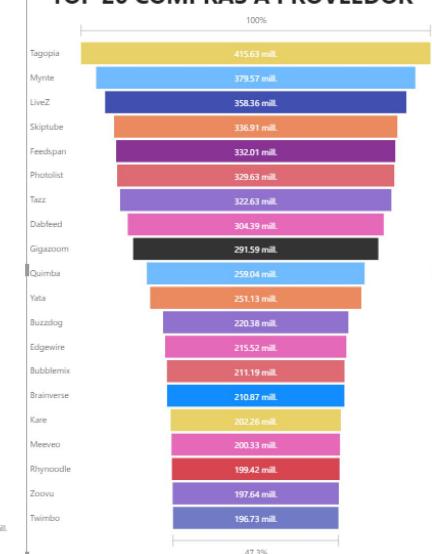
```
Create view Query1 as SELECT P.NAME_PROVIDER, COUNT(1) as CANTIDAD, SUM(TOTAL_VENTA) AS TOTAL_VENTA FROM (
    SELECT OD.ID_ORDER, PBP.ID_PROVIDER, PBP.QUANTITY * PRICE_PRODUCT TOTAL_VENTA
    FROM ORDER_DETAIL OD
    LEFT JOIN PROVIDER_BY_PRODUCT PBP ON OD.ID_PROVIDER_BY_PRODUCT = PBP.ID_PROVIDER_BY_PRODUCT
    ORDER BY OD.ID_ORDER) R
JOIN PROVIDER P ON R.ID_PROVIDER = P.ID_PROVIDER
GROUP BY p.name_provider
ORDER BY P.NAME_PROVIDER
;
```



TOP 10 COMPRAS A PROVEEDOR



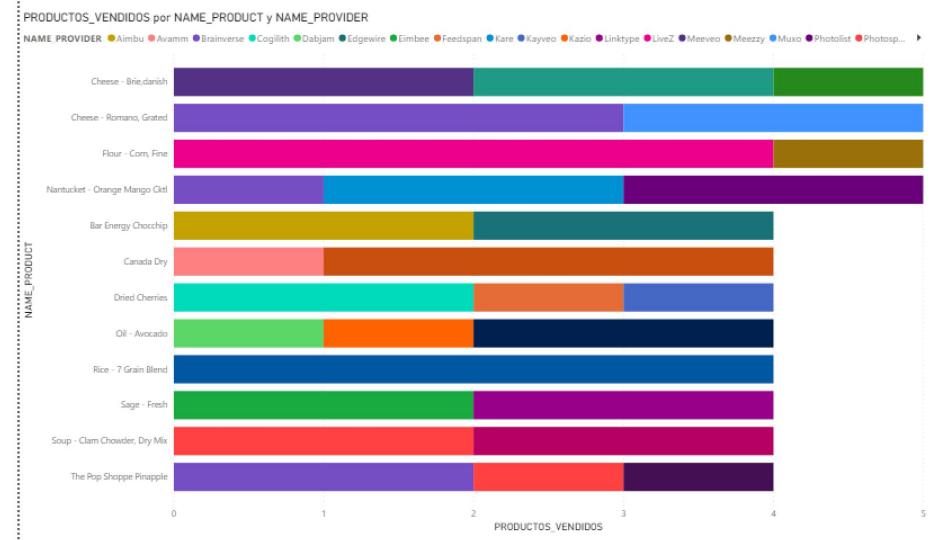
TOP 20 COMPRAS A PROVEEDOR



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TOP 10 ÓRDENES TOTALES POR PROVEEDOR

```
CREATE VIEW Query2 AS SELECT pr.name_provider, p.name_product, MAX(C) AS PRODUCTOS_VENDIDOS, r.av precio_promedio
FROM
(
    SELECT PBP.ID_PROVIDER PROV, PBP.ID_PRODUCT PROD, count(1) AS C, avg(pbp.price_product) av
    FROM ORDER_DETAIL OD
    LEFT JOIN PROVIDER_BY_PRODUCT PBP ON OD.ID_PROVIDER_BY_PRODUCT = PBP.ID_PROVIDER_BY_PRODUCT
    group by PBP.ID_PROVIDER, PBP.ID_PRODUCT
) R
join product p on r.prod = p.id_product
join provider pr on r.prov = pr.id_provider
group by pr.name_provider, p.name_product, r.av
order by MAX(C) desc
;
```



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LISTA DE DESPACHO POR USUARIO Y PROVEEDOR

```
CREATE VIEW Query3 AS SELECT WU.NAME_USER "NOMBRE USUARIO", P.NAME_PROVIDER, SUM(DD.QUANTITY_OUT) CANTIDAD_SALIDA
FROM DISPATCH_DETAILS DD
LEFT JOIN PROVIDER_BY_PRODUCT PBP ON DD.ID_PROVIDER_BY_PRODUCT = PBP.ID_PROVIDER_BY_PRODUCT
LEFT JOIN PROVIDER P ON PBP.ID_PROVIDER = P.ID_PROVIDER
LEFT JOIN WAREHOUSE_USER WU ON PBP.ID_USER = WU.ID_USER
WHERE P.ID_PROVIDER IN (
    SELECT SS.ID_PROVIDER FROM (
        SELECT PBP.ID_PROVIDER, SUM(DD.QUANTITY_OUT)S
        FROM DISPATCH_DETAILS DD
        LEFT JOIN PROVIDER_BY_PRODUCT PBP ON DD.ID_PROVIDER_BY_PRODUCT = PBP.ID_PROVIDER_BY_PRODUCT
        GROUP BY PBP.ID_PROVIDER
        ORDER BY SUM(DD.QUANTITY_OUT) DESC
    ) SS
    WHERE ROWNUM < 11
)
GROUP BY CUBE(WU.NAME_USER, P.NAME_PROVIDER)
ORDER BY WU.NAME_USER, P.NAME_PROVIDER;
```

NOMBRE USUARIO	NAME_PROVIDER	CANTIDAD_SALIDA
	Zoombeat	5.00
Alta Veschambes	Zoombeat	0.00
Karl Calcraft	Zoombeat	1.00
Stevena Byrd	Zoombeat	2.00
Xaviera Bilsford	Zoombeat	2.00
	Yoveo	5.00
Bellina Northleigh	Yoveo	0.00
Dyna Farherty	Yoveo	1.00
Jason Madle	Yoveo	0.00
Norah Drife	Yoveo	2.00
Stevena Byrd	Yoveo	1.00
Yelena Stepney	Yoveo	1.00
	Yambee	5.00
Alta Veschambes	Yambee	2.00
Bellina Northleigh	Yambee	1.00
Karl Calcraft	Yambee	2.00
Stevena Byrd	Yambee	0.00
	Twimbo	6.00
Bellina Northleigh	Twimbo	1.00
Dyna Farherty	Twimbo	5.00
Kaela Isgar	Twimbo	0.00
	Trunyx	5.00
Dyna Farherty	Trunyx	1.00
Jason Madle	Trunyx	1.00
Kaela Isgar	Trunyx	0.00

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MATRIZ DE DESPACHO DE PROVEEDOR POR FECHA

```
CREATE VIEW Query4 AS SELECT P.NAME_PROVIDER, DW.LAST_SENT FECHA_SALIDA, SUM(DD.QUANTITY_OUT) CANTIDAD_SALIDA
FROM DISPATCH_DETAILS DD
LEFT JOIN PROVIDER_BY_PRODUCT PBP ON DD.ID_PROVIDER_BY_PRODUCT = PBP.ID_PROVIDER_BY_PRODUCT
LEFT JOIN PROVIDER P ON PBP.ID_PROVIDER = P.ID_PROVIDER
RIGHT JOIN DISPATCH_BY_WAREHOUSE DW ON DW.ID_DISPATCH_BY_WAREHOUSE = DD.ID_DISPATCH_BY_WAREHOUSE
WHERE P.ID_PROVIDER IN (
    SELECT SS.ID_PROVIDER FROM (
        SELECT PBP.ID_PROVIDER, SUM(DD.QUANTITY_OUT)S
        FROM DISPATCH_DETAILS DD
        LEFT JOIN PROVIDER_BY_PRODUCT PBP ON DD.ID_PROVIDER_BY_PRODUCT = PBP.ID_PROVIDER_BY_PRODUCT
        GROUP BY PBP.ID_PROVIDER
        ORDER BY SUM(DD.QUANTITY_OUT) DESC
    ) SS
    WHERE ROWNUM < 11
)
GROUP BY ROLLUP(P.NAME_PROVIDER, DW.LAST_SENT)
;
```

Año	Avamm	Feedspan	Kayveo	Quimba	Trunyx	Twimbo	Yambee	Yoveo	Zoombeat	Total		
+	53.00	5.00	5.00	7.00	5.00	5.00	5.00	6.00	5.00	5.00	106.00	
+	2018		2.00	3.00	2.00	1.00	1.00	2.00	1.00	0.00	1.00	13.00
+	2019		2.00	5.00	3.00	2.00	4.00	4.00	3.00	3.00	3.00	32.00
+	2020		1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	2.00	8.00

Sitios de contingencia (Backups)

Se instaló Ubuntu en una máquina virtual, para realizar copias de seguridad a la base de datos.

Se instaló Oracle 11g XE y se montó la base de datos.

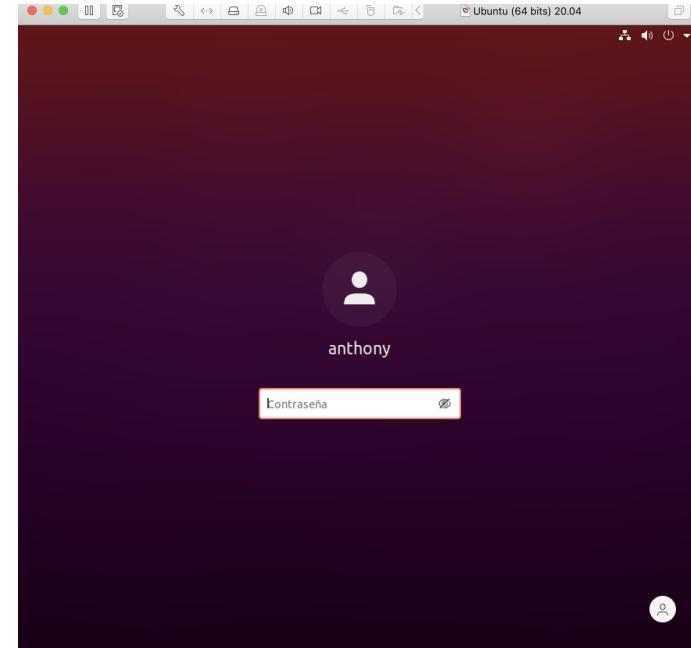
```
anthonym@anthony-virtual-machine: ~
root@anthony-virtual-machine: ~
anthonym@anthony-virtual-machine: ~
anthonym@anthony-virtual-machine: ~

ID_DISPATCH_BY_WAREHOUSE ID_BRANCH ID_USER LAST_SEN
-----
 481        401      3 01/11/18
 482        313      2 20/02/20
 483        408      2 24/12/19
 484        245      9 29/04/20
 485        372      2 14/02/19
 486        379      4 07/06/19
 487        297      6 14/06/18
 488        232      4 17/01/20
 489        254      6 23/02/20
 490        224      5 17/08/18
 491        449      6 02/03/19

ID_DISPATCH_BY_WAREHOUSE ID_BRANCH ID_USER LAST_SEN
-----
 492        193      8 12/08/19
 493        298      9 07/08/19
 496        348      4 19/07/18

443 rows selected.

SQL>
```



Se utilizó RMAN para realizar el Backup.

```
root@anthony-virtua... ✘ anthony@anthony-vir... ✘ anthony@anthony-vir...
connected to target database: XE (DBID=2922657035)

RMAN> backup database;

Starting backup at 28/05/20
using target database control file instead of recovery catalog
allocated channel: ORA_DISK_1
channel ORA_DISK_1: SID=30 device type=DISK
channel ORA_DISK_1: starting full datafile backup set
channel ORA_DISK_1: specifying datafile(s) in backup set
input datafile file number=00002 name=/u01/app/oracle/oradata/XE/sysaux.dbf
input datafile file number=00001 name=/u01/app/oracle/oradata/XE/system.dbf
input datafile file number=00004 name=/u01/app/oracle/oradata/XE/users.dbf
input datafile file number=00003 name=/u01/app/oracle/oradata/XE/undotbs1.dbf
channel ORA_DISK_1: starting piece 1 at 28/05/20
channel ORA_DISK_1: finished piece 1 at 28/05/20
piece handle=/u01/app/oracle/fast_recovery_area/XE/backupset/2020_05_28/o1_mf_nn
ndf_TAG20200528T225523_hf15fvvc_.bkp tag=TAG20200528T225523 comment=None
channel ORA_DISK_1: backup set complete, elapsed time: 00:00:07
channel ORA_DISK_1: starting full datafile backup set
channel ORA_DISK_1: specifying datafile(s) in backup set
including current control file in backup set
including current SPFILE in backup set
channel ORA_DISK_1: starting piece 1 at 28/05/20
channel ORA_DISK_1: finished piece 1 at 28/05/20
piece handle=/u01/app/oracle/fast_recovery_area/XE/backupset/2020_05_28/o1_mf_nc
snf_TAG20200528T225523_hf15g4vl_.bkp tag=TAG20200528T225523 comment=None
channel ORA_DISK_1: backup set complete, elapsed time: 00:00:01
Finished backup at 28/05/20
```

Creamos backup.sh

```
GNU nano 4.8                                backup.sh
#!/bin/bash
export CLASSPATH=.:${ORACLE_HOME}/jdbc/lib/ojdbc6.jar
cd /u01/app/oracle/product/11.2.0/xe/apex/utilities
## ejecuta backup de la App 100, configurar usuario y clave del Workspace donde está la aplicación
java oracle/apex/APEXExport -db localhost:1521:xe -user usuario -password clave
-applicationid 100 >> /backup/log-aplicacion.log
## copia el archivo generado de la aplicación a la carpeta backup
cp /u01/app/oracle/product/11.2.0/xe/apex/utilities/f*.sql /backup/
## Backup completo de la BD, configurar clave de usuario system de la BD Oracle
su - oracle -c 'exp system/system file=/backup/backup.dmp log=/backup/log-backup.log  OWN>
## Se crea una carpeta con la fecha actual y se copian los ficheros dentro de ella
carpeta=$(date +"%d_%m_%y")
mkdir /backup/$carpeta
cp /backup/f*.sql /backup/$carpeta
cp /backup/backup.dmp /backup/$carpeta

[ 15 líneas leidas ]
```

^G Ver ayuda ^O Guardar ^W Buscar ^K Cortar Texto ^J Justificar ^C Posición
^X Salir ^R Leer fich. ^\ Reemplazar ^U Pegar ^T Ortografía ^ I Ir a línea

Nombre	Tamaño	Modificación
backup.sh	0 bytes	02:55
log-aplicacion.log	0 bytes	02:55
log-backup.log	0 bytes	02:55

Programamos el backup con Crontab para que se realice de forma diaria.

```
GNU nano 4.8                               /tmp/crontab.0KXYSk/crontab          Modificado
# To define the time you can provide concrete values for
# minute (m), hour (h), day of month (dom), month (mon),
# and day of week (dow) or use '*' in these fields (for 'any').
#
# Notice that tasks will be started based on the cron's system
# daemon's notion of time and timezones.
#
# Output of the crontab jobs (including errors) is sent through
# email to the user the crontab file belongs to (unless redirected).
#
# For example, you can run a backup of all your user accounts
# at 5 a.m every week with:
# 0 5 * * 1 tar -zcf /var/backups/home.tgz /home/
#
# For more information see the manual pages of crontab(5) and cron(8)
#
# m h  dom mon dow   command
59 23    *    *    *  backup/backup.sh

^G Ver ayuda   ^O Guardar   ^W Buscar   ^K Cortar Texto ^J Justificar   ^C Posición
^X Salir      ^R Leer fich.  ^\ Reemplazar  ^U Pegar    ^T Ortografía ^_ Ir a línea
```

ASPECTOS TÉCNICOS.

Capas de Servidores: El proyecto se distribuye en un servidor de aplicaciones tomcat, el uso de docker para virtualizar oracle y windows.

Nivel Web. Se implementó un servicio Restful construido en java usando el framework Spring boot.



Install **Oracle** database
on **Docker**
and connect with
SQL Developer