

PROIECT SISTEME DE GESTIUNE A BAZELOR DE DATE

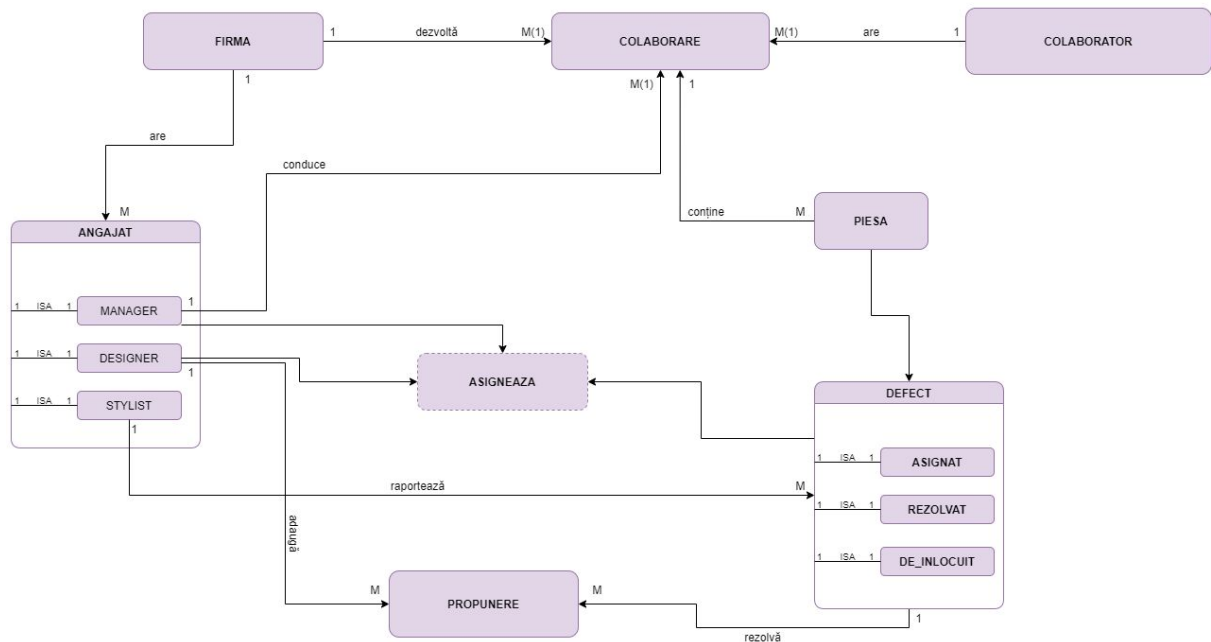
Silistru Delia-Ştefania, grupa 241

- **Prezentarea bazei de date și utilizarea ei**

O firma de vestimentatie haute-couture face mai multe colaborari, fiecare dintre acestea apartinand cate unui brand mass-market. Firma de vestimentatie are angajati ce pot fi de tip manager, designer si stylist. Fiecare colaborare este condusa de catre un singur angajat care trebuie sa aiba postul de manager. O colaborare poate sa fie reprezentata de mai multe piese vestimentare. La o proba pentru o piesa vestimentara se observa anumite defecte. Un defect este raportat de catre un stylist, un manager stabileste un termen limita pentru rezolvarea defectului si il asigneaza unui designer. Un defect are o stare curenta (asignat, rezolvat, de inlocuit). De-a lungul timpului defectul trece prin mai multe stari. Un defect poate avea propuneri asociate de catre designer.

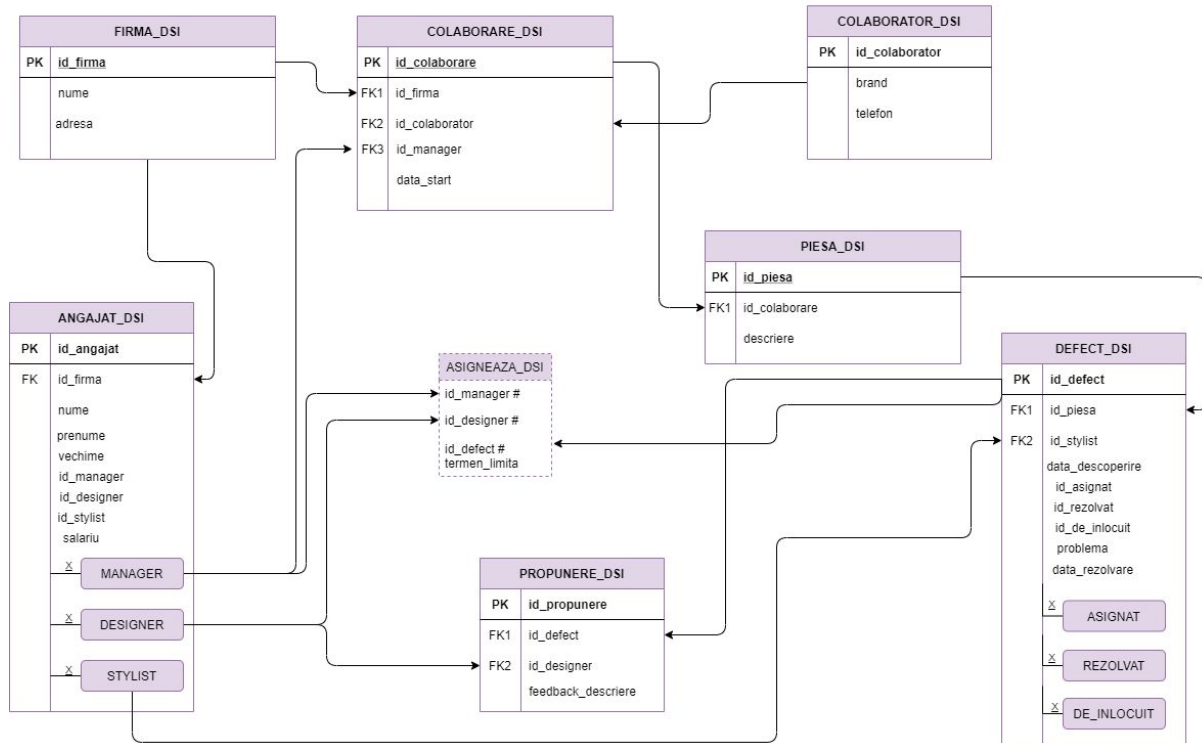
- **Diagrama entitate-relație (ERD)**

DIAGRAMA ENTITATE-RELAȚIE



- **Diagrama conceptuală cu toate atributele necesare**

DIAGRAMA CONCEPTUALĂ



- Definirea tabelelor in Oracle: FIRMA_DSI, COLABORARE_DSI, COLABORATOR_DSI, ANGAJAT_DSI, PIESA_DSI, DEFECT_DSI, PROPUNERE_DSI, ASIGNEAZA_DSI

-----CREAREA TABELELOR-----

-----CREAREA TABELULUI FIRMA_DSI-----

```
CREATE TABLE FIRMA_DSI
(id_firma NUMBER(4)
CONSTRAINT id_firma_nn NOT NULL
, nome VARCHAR2(25),
adresa VARCHAR(25)
);
```

```
CREATE UNIQUE INDEX id_firma_pk  
ON FIRMA_DSI(id_firma);
```

```
ALTER TABLE FIRMA_DSI  
ADD ( CONSTRAINT id_firma_pk  
      PRIMARY KEY (id_firma)  
    );
```

-----CREAREA TABELULUI COLABORATOR_DSI-----

```
CREATE TABLE COLABORATOR_DSI  
( id_colaborator NUMBER(4)  
  CONSTRAINT id_colaborator_nn NOT NULL  
  , brand VARCHAR2(25),  
  telefon NUMBER(4)  
);
```

```
CREATE UNIQUE INDEX id_colaborator_pk  
ON COLABORATOR_DSI(id_colaborator);
```

```
ALTER TABLE COLABORATOR_DSI  
ADD ( CONSTRAINT id_colaborator_pk  
      PRIMARY KEY (id_colaborator)  
    );
```

-----CREAREA TABELULUI ANGAJAT_DSI-----

```
CREATE TABLE ANGAJAT_DSI  
(id_angajat NUMBER(4)  
  , id_firma NUMBER(4)  
  , nume VARCHAR2(25)  
  , prenume VARCHAR2(25)  
  , vechime NUMBER(4)  
  , id_manager NUMBER(4)  
  , id_design NUMBER(4)  
  , id_stylist NUMBER(4)  
);
```

```
CREATE UNIQUE INDEX id_angajat_pk  
ON ANGAJAT_DSI (id_angajat);
```

```
ALTER TABLE ANGAJAT_DSI  
ADD ( CONSTRAINT id_angajat_pk  
      PRIMARY KEY (id_angajat)  
    , CONSTRAINT id_firma_fk  
      FOREIGN KEY (id_firma)
```

```

REFERENCES FIRMA_DSI(id_firma)
);

ALTER TABLE ANGAJAT_DSI
ADD salariu NUMBER(4);

SELECT *FROM ANGAJAT_DSI

-----CREAREA TABELULUI COLABORARE_DSI-----

CREATE TABLE COLABORARE_DSI
(id_colaborare NUMBER(4)
, id_firma NUMBER(4)
, id_colaborator NUMBER(4)
, id_manager NUMBER(4)
, data_start DATE
CONSTRAINT data_start_nn NOT NULL
);

CREATE UNIQUE INDEX id_colaborare_pk
ON COLABORARE_DSI (id_colaborare);

ALTER TABLE COLABORARE_DSI
ADD ( CONSTRAINT id_colaborare_pk
PRIMARY KEY (id_colaborare)
, CONSTRAINT id_firma_firma_fk
FOREIGN KEY (id_firma)
REFERENCES FIRMA_DSI(id_firma)
, CONSTRAINT id_colaborator_fk
FOREIGN KEY (id_colaborator)
REFERENCES COLABORATOR_DSI(id_colaborator)
, CONSTRAINT id_manager_fk
FOREIGN KEY (id_manager)
REFERENCES ANGAJAT_DSI(id_angajat)
);

-----CREARE TABEL PIESA_DSI-----

CREATE TABLE PIESA_DSI
(
id_piesa NUMBER(4)
, id_colaborare NUMBER(4)
, descriere VARCHAR2(25)
CONSTRAINT descriere_nn NOT NULL
);

```

```

CREATE UNIQUE INDEX id_piesa_pk
ON PIESA_DSI (id_piesa);

ALTER TABLE PIESA_DSI
ADD ( CONSTRAINT id_piesa_pk
      PRIMARY KEY (id_piesa)
    , CONSTRAINT id_colaborare_fk
      FOREIGN KEY (id_colaborare)
      REFERENCES COLABORARE_DSI(id_colaborare)
    );

```

-----CREAREA TABELULUI DEFECT_DSI-----

```

CREATE TABLE DEFECT_DSI
(
    id_defect NUMBER(4)
  , id_piesa NUMBER(4)
  , id_stylist NUMBER(4)
  , data_descoperire DATE
    CONSTRAINT data_descoperire_nn NOT NULL
  , data_rezolvare DATE
  , id_asignat NUMBER(4)
  , id_rezolvat NUMBER(4)
  , id_de_inlocuit NUMBER(4)
  , problema VARCHAR2(25)
    CONSTRAINT problema_nn NOT NULL
);

```

```

CREATE UNIQUE INDEX id_defect_pk
ON DEFECT_DSI (id_defect);

```

```

ALTER TABLE DEFECT_DSI
ADD ( CONSTRAINT id_defect_pk
      PRIMARY KEY (id_defect)
    , CONSTRAINT id_piesa_fk
      FOREIGN KEY (id_piesa)
      REFERENCES PIESA_DSI(id_piesa)
    , CONSTRAINT id_stylist_fk
      FOREIGN KEY (id_stylist)
      REFERENCES ANGAJAT_DSI(id_angajat)
    );

```

-----CREAREA TABELULUI PROPRUNERE-----

```

CREATE TABLE PROPUNERE_DSI
(
    id_propunere NUMBER(4)

```

```

, id_defect NUMBER(4)
, id_designer NUMBER(4)
, feedback_descriere VARCHAR2(25)
    CONSTRAINT feedback_descriere_nn NOT NULL
);

CREATE UNIQUE INDEX id_propunere_pk
ON PROPUNERE_DSI (id_propunere);

ALTER TABLE PROPUNERE_DSI
ADD ( CONSTRAINT id_propunere_pk
      PRIMARY KEY (id_propunere)
    , CONSTRAINT id_defect_fk
      FOREIGN KEY (id_defect)
      REFERENCES DEFECT_DSI(id_defect)
    , CONSTRAINT id_designer_fk
      FOREIGN KEY (id_designer)
      REFERENCES ANGAJAT_DSI(id_angajat)
    );

-----CREAREA TABELULUI ASIGNEAZA-----
CREATE TABLE ASIGNEAZA_DSI
( id_manager NUMBER(4) REFERENCES ANGAJAT_DSI(id_angajat),
  id_designer NUMBER(4) REFERENCES ANGAJAT_DSI(id_angajat),
  id_defect NUMBER(4) REFERENCES DEFECT_DSI(id_defect),
  termen_limita DATE
  CONSTRAINT termen_limita_nn NOT NULL,
  primary key(id_manager, id_designer, id_defect));

-----AM TERMINAT DE CREAT TABELELE-----

```

Statement 1	<pre>CREATE TABLE FIRMA_DSI (id_firma NUMBER(4) CONSTRAINT id_firma_nn NOT NULL , nume VARCHAR2(25), adresa VARCHAR(25))</pre> <p>Table created.</p>	Statement 4	<pre>CREATE TABLE COLABORATOR_DSI (id_colaborator NUMBER(4) CONSTRAINT id_colaborator_nn NOT NULL , brand VARCHAR2(25), telefon NUMBER(4))</pre> <p>Table created.</p>
Statement 2	<pre>CREATE UNIQUE INDEX id_firma_pk ON FIRMA_DSI(id_firma)</pre> <p>Index created.</p>	Statement 5	<pre>CREATE UNIQUE INDEX id_colaborator_pk ON COLABORATOR_DSI(id_colaborator)</pre> <p>Index created.</p>
Statement 3	<pre>ALTER TABLE FIRMA_DSI ADD (CONSTRAINT id_firma_pk PRIMARY KEY (id_firma))</pre> <p>Table altered.</p>	Statement 6	<pre>ALTER TABLE COLABORATOR_DSI ADD (CONSTRAINT id_colaborator_pk PRIMARY KEY (id_colaborator))</pre> <p>Table altered.</p>

Statement 7	<pre>CREATE TABLE ANGAJAT_DSI (id_angajat NUMBER(4) , id_firma NUMBER(4) , nume VARCHAR2(25) , prenume VARCHAR2(25) , vechime NUMBER(4) , id_manager NUMBER(4) , id_design NUMBER(4) , id_stylist NUMBER(4))</pre> <p>Table created.</p>	Statement 11	<pre>CREATE TABLE COLABORARE_DSI (id_colaborare NUMBER(4) , id_firma NUMBER(4) , id_colaborator NUMBER(4) , id_manager NUMBER(4) , data_start DATE CONSTRAINT data_start_nn NOT NULL)</pre> <p>Table created.</p>
Statement 8	<pre>CREATE UNIQUE INDEX id_angajat_pk ON ANGAJAT_DSI (id_angajat)</pre> <p>Index created.</p>	Statement 12	<pre>CREATE UNIQUE INDEX id_colaborare_pk ON COLABORARE_DSI (id_colaborare)</pre> <p>Index created.</p>
Statement 9	<pre>ALTER TABLE ANGAJAT_DSI ADD (CONSTRAINT id_angajat_pk PRIMARY KEY (id_angajat) , CONSTRAINT id_firma_fk FOREIGN KEY (id_firma) REFERENCES FIRMA_DSI(id_firma))</pre> <p>Table altered.</p>	Statement 13	<pre>ALTER TABLE COLABORARE_DSI ADD (CONSTRAINT id_colaborare_pk PRIMARY KEY (id_colaborare) , CONSTRAINT id_firma_firma_fk FOREIGN KEY (id_firma) REFERENCES FIRMA_DSI(id_firma) , CONSTRAINT id_colaborator_fk FOREIGN KEY (id_colaborator) REFERENCES COLABORATOR_DSI(id_colaborator) , CONSTRAINT id_manager_fk FOREIGN KEY (id_manager) REFERENCES ANGAJAT_DSI(id_angajat))</pre> <p>Table altered.</p>
Statement 10	<pre>ALTER TABLE ANGAJAT_DSI ADD salariu NUMBER(4)</pre> <p>Table altered.</p>		

Statement 14	<pre>CREATE TABLE PIESA_DSI (id_piesa NUMBER(4) , id_colaborare NUMBER(4) , descriere VARCHAR2(25) CONSTRAINT descriere_nn NOT NULL)</pre> <p>Table created.</p>
Statement 15	<pre>CREATE UNIQUE INDEX id_piesa_pk ON PIESA_DSI (id_piesa)</pre> <p>Index created.</p>
Statement 16	<pre>ALTER TABLE PIESA_DSI ADD (CONSTRAINT id_piesa_pk PRIMARY KEY (id_piesa) , CONSTRAINT id_colaborare_fk FOREIGN KEY (id_colaborare) REFERENCES COLABORARE_DSI(id_colaborare))</pre> <p>Table altered.</p>

Statement 20	<pre>CREATE TABLE PROPUNERE_DSI (id_propunere NUMBER(4) , id_defect NUMBER(4) , id_designer NUMBER(4) , feedback_descriere VARCHAR2(25) CONSTRAINT feedback_descriere_nn NOT NULL)</pre> <p>Table created.</p>
Statement 21	<pre>CREATE UNIQUE INDEX id_propunere_pk ON PROPUNERE_DSI (id_propunere)</pre> <p>Index created.</p>
Statement 22	<pre>ALTER TABLE PROPUNERE_DSI ADD (CONSTRAINT id_propunere_pk PRIMARY KEY (id_propunere) , CONSTRAINT id_defect_fk FOREIGN KEY (id_defect) REFERENCES DEFECT_DSI(id_defect) , CONSTRAINT id_designer_fk FOREIGN KEY (id_designer) REFERENCES ANGAJAT_DSI(id_angajat))</pre> <p>Table altered.</p>

Statement 23	<pre>CREATE TABLE ASIGNEAZA_DSI (id_manager NUMBER(4) REFERENCES ANGAJAT_DSI(id_angajat), id_designer NUMBER(4) REFERENCES ANGAJAT_DSI(id_angajat), id_defect NUMBER(4) REFERENCES DEFECT_DSI(id_defect), termen_limita DATE CONSTRAINT termen_limita_nn NOT NULL, primary key(id_manager, id_designer, id_defect))</pre> <p>Table created.</p>
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Statement 17	<pre>CREATE TABLE DEFECT_DSI (id_defect NUMBER(4) , id_piesa NUMBER(4) , id_stylist NUMBER(4) , data_descoperire DATE CONSTRAINT data_descoperire_nn NOT NULL , data_rezolvare DATE , id_asignat NUMBER(4) , id_rezolvat NUMBER(4) , id_de_inlocuit NUMBER(4) , problema VARCHAR2(25) CONSTRAINT problema_nn NOT NULL)</pre> <p>Table created.</p>
Statement 18	<pre>CREATE UNIQUE INDEX id_defect_pk ON DEFECT_DSI (id_defect)</pre> <p>Index created.</p>
Statement 19	<pre>ALTER TABLE DEFECT_DSI ADD (CONSTRAINT id_defect_pk PRIMARY KEY (id_defect) , CONSTRAINT id_piesa_fk FOREIGN KEY (id_piesa) REFERENCES PIESA_DSI(id_piesa) , CONSTRAINT id_stylist_fk FOREIGN KEY (id_stylist) REFERENCES ANGAJAT_DSI(id_angajat))</pre> <p>Table altered.</p>

- Popularea tabelelor in Oracle: FIRMA_DSI, COLABORARE_DSI, COLABORATOR_DSI, ANGAJAT_DSI, PIESA_DSI, DEFECT_DSI, PROPUNERE_DSI, ASIGNEAZA_DSI

-----POPULAREA TABELULUI FIRMA_DSI-----

```
INSERT INTO FIRMA_DSI VALUES (1, 'Dior', 'Paris25');
```

```
SELECT *FROM FIRMA_DSI;
```

-----POPULAREA TABELULUI COLABORATOR_DSI-----

```
INSERT INTO COLABORATOR_DSI VALUES (1, 'Zara', 2322);
```

```
INSERT INTO COLABORATOR_DSI VALUES (2, 'HM', 1222);
```

```
INSERT INTO COLABORATOR_DSI VALUES (3, 'Asos', 2533);
```

```
INSERT INTO COLABORATOR_DSI VALUES (4, 'Guess', 8333);
```

```
INSERT INTO COLABORATOR_DSI VALUES (5, 'Aldo', 1234);
```

```
INSERT INTO COLABORATOR_DSI VALUES (6, 'Polo', 6543);
```

```
INSERT INTO COLABORATOR_DSI VALUES (7, 'Adidas', 8865);
```

```
SELECT *FROM COLABORATOR_DSI
```

-----POPULAREA TABELULUI ANGAJAT_DSI-----

```
INSERT INTO ANGAJAT_DSI VALUES (1, 1, 'Gavril', 'Bogdan', 5, 1, NULL, NULL, 8900);
```

```
INSERT INTO ANGAJAT_DSI VALUES (2, 1, 'Stirbu', 'Denisa', 2, NULL, 1, NULL, 6544);
```

```
INSERT INTO ANGAJAT_DSI VALUES (3, 1, 'Trifan', 'Magda', 3, NULL, NULL, 1, 7888);
```

```
INSERT INTO ANGAJAT_DSI VALUES (4, 1, 'Urse', 'Ilinca', 7, 1, NULL, NULL, 8300);
```

```
INSERT INTO ANGAJAT_DSI VALUES (5, 1, 'Neagu', 'Andi', 6, 1, NULL, NULL, 9212);
```

```
INSERT INTO ANGAJAT_DSI VALUES (6, 1, 'Costea', 'Ionut', 1, 1, NULL, NULL, 5643);
```

```
INSERT INTO ANGAJAT_DSI VALUES (7, 1, 'Silistru', 'Delia', 9, 1, NULL, NULL, 9999);
```

```
INSERT INTO ANGAJAT_DSI VALUES (8, 1, 'Ceausu', 'Corina', 8, NULL, 1, NULL, 9121);
```

```
INSERT INTO ANGAJAT_DSI VALUES (9, 1, 'Calin', 'Andrei', 10, NULL, NULL, 1, 8775);
```

```
INSERT INTO ANGAJAT_DSI VALUES (10, 1, 'Filip', 'Alexandra', 11, NULL, 1, NULL, 8221);
```

```
INSERT INTO ANGAJAT_DSI VALUES (11, 1, 'Dorcioman', 'Razvan', 12, 1, NULL, NULL, 7755);
```

```

INSERT INTO ANGAJAT_DSI VALUES (12, 1, 'Bulmaci', 'Raluca', 13, 1, NULL,
NULL, 9887);
INSERT INTO ANGAJAT_DSI VALUES (13, 1, 'Panainte', 'Iulia', 14, NULL, NULL, 1,
9812);
INSERT INTO ANGAJAT_DSI VALUES (14, 1, 'Atudore', 'Darius', 15, NULL, 1,
NULL, 6574);
INSERT INTO ANGAJAT_DSI VALUES (15, 1, 'Zota', 'Bianca', 20, NULL, 1, NULL,
8751);
INSERT INTO ANGAJAT_DSI VALUES (16, 1, 'Tilici', 'Ioana', 21, NULL, 1, NULL,
7888);

```

```

SELECT *FROM ANGAJAT_DSI;

```

-----POPULARE TABEL COLABORARE_DSI-----

```

INSERT INTO COLABORARE_DSI VALUES(1, 1, 1, 1, '01-JAN-19');
INSERT INTO COLABORARE_DSI VALUES(2, 1, 2, 4, '20-NOV-20');
INSERT INTO COLABORARE_DSI VALUES(3, 1, 3, 5, '19-FEB-18');
INSERT INTO COLABORARE_DSI VALUES(4, 1, 4, 6, '17-DEC-19');
INSERT INTO COLABORARE_DSI VALUES(5, 1, 5, 7, '18-MAY-20');
INSERT INTO COLABORARE_DSI VALUES(6, 1, 6, 11, '15-JAN-17');
INSERT INTO COLABORARE_DSI VALUES(7, 1, 7, 12, '15-DEC-15');

```

```

SELECT *FROM COLABORARE_DSI;

```

-----POPULARE TABEL PIESA_DSI-----

```

INSERT INTO PIESA_DSI VALUES(1, 1, 'top cu maneci bufante');
INSERT INTO PIESA_DSI VALUES(2, 2, 'pantaloni piele naturala');
INSERT INTO PIESA_DSI VALUES(3, 3, 'rochie din paiete');
INSERT INTO PIESA_DSI VALUES(4, 4, 'esarfa matase naturala');
INSERT INTO PIESA_DSI VALUES(5, 5, 'sandale cu toc subtire');
INSERT INTO PIESA_DSI VALUES(6, 6, 'rochie imprimeu floral');
INSERT INTO PIESA_DSI VALUES(7, 7, 'fusta scurta din catifea');

```

```

SELECT *FROM PIESA_DSI;

```

-----POPULARE TABEL DEFECT_DSI-----

```

INSERT INTO DEFECT_DSI VALUES(1, 1, 3, '23-JUN-19',NULL, 1, NULL, NULL,
'problema simetrie');
INSERT INTO DEFECT_DSI VALUES(2, 3, 9, '12-JAN-20','17-FEB-20', NULL, 1,
NULL, 'paiete lipsa');

```

```
INSERT INTO DEFECT_DSI VALUES(3, 7, 13, '10-JAN-19','12-DEC-19',NULL, 1,
NULL, 'material deteriorat');
```

```
SELECT *FROM DEFECT_DSI;
```

-----POPULARE TABEL ASIGNEAZA_DSI-----

```
INSERT INTO ASIGNEAZA_DSI VALUES(1, 2, 1, '27-JUL-19');
INSERT INTO ASIGNEAZA_DSI VALUES(4, 8, 2, '18-FEB-20');
INSERT INTO ASIGNEAZA_DSI VALUES(5, 10, 3, '03-DEC-19');
INSERT INTO ASIGNEAZA_DSI VALUES(11, 15, 1, '27-JUL-19');
INSERT INTO ASIGNEAZA_DSI VALUES(7, 14, 1, '27-JUL-19');
INSERT INTO ASIGNEAZA_DSI VALUES(6, 8, 3, '03-DEC-19');
INSERT INTO ASIGNEAZA_DSI VALUES(12, 16, 1, '27-JUL-19');
INSERT INTO ASIGNEAZA_DSI VALUES(6, 15, 3, '03-DEC-19');
INSERT INTO ASIGNEAZA_DSI VALUES(4, 2, 3, '03-DEC-19');
INSERT INTO ASIGNEAZA_DSI VALUES(5, 15, 1, '27-JUL-19');
```

```
select *from ASIGNEAZA_DSI;
```

-----POPULARE TABEL PROPUNERE_DSI-----

```
INSERT INTO PROPUNERE_DSI VALUES(1, 1, 2, 'ajustare maneca');
INSERT INTO PROPUNERE_DSI VALUES(2, 2, 10, 'lipire paiete');
INSERT INTO PROPUNERE_DSI VALUES(3, 3, 15, 'inlocuire material');
```

```
SELECT *FROM PROPUNERE_DSI;
```

```
COMMIT;
```

-----AM TERMINAT DE POPULAT TABELELE-----

```
190 INSERT INTO FIRMA_DSI VALUES (1, 'Dior', 'Paris25');
191
192 SELECT *FROM FIRMA_DSI;
193
194 -----POPULAREA TABELULUI COLABORATOR_DSI-----
195
196 INSERT INTO COLABORATOR_DSI VALUES (1, 'Zara', 2322);
197 INSERT INTO COLABORATOR_DSI VALUES (2, 'HM', 1222);
198 INSERT INTO COLABORATOR_DSI VALUES (3, 'Asos', 2533);
199 INSERT INTO COLABORATOR_DSI VALUES (4, 'Guess', 8333);
200 INSERT INTO COLABORATOR_DSI VALUES (5, 'Aldo', 1234);
201 INSERT INTO COLABORATOR_DSI VALUES (6, 'Polo', 6543);
202 INSERT INTO COLABORATOR_DSI VALUES (7, 'Adidas', 8865);
203
204 SELECT *FROM COLABORATOR_DSI
205
206 -----POPULAREA TABELULUI ANGAJAT_DSI-----
207
208
209 INSERT INTO ANGAJAT_DSI VALUES (1, 1, 'Gavril', 'Bogdan', 5, 1, NULL, NULL, 8900);
210 INSERT INTO ANGAJAT_DSI VALUES (2, 1, 'Stirbu', 'Denisa', 2, NULL, 1, NULL, 6544);
211 INSERT INTO ANGAJAT_DSI VALUES (3, 1, 'Trifan', 'Magda', 3, NULL, NULL, 1, 7888);
212 INSERT INTO ANGAJAT_DSI VALUES (4, 1, 'Urse', 'Ilinca', 7, 1, NULL, NULL, 8300);
213 INSERT INTO ANGAJAT_DSI VALUES (5, 1, 'Neagu', 'Andi', 6, 1, NULL, NULL, 9212);
214 INSERT INTO ANGAJAT_DSI VALUES (6, 1, 'Costea', 'Ionut', 1, 1, NULL, NULL, 5643);
215 INSERT INTO ANGAJAT_DSI VALUES (7, 1, 'Siliustru', 'Delia', 9, 1, NULL, NULL, 9999);
216 INSERT INTO ANGAJAT_DSI VALUES (8, 1, 'Ceausu', 'Corina', 8, NULL, 1, NULL, 9121);
217 INSERT INTO ANGAJAT_DSI VALUES (9, 1, 'Calin', 'Andrei', 10, NULL, NULL, 1, 8775);
218 INSERT INTO ANGAJAT_DSI VALUES (10, 1, 'Filip', 'Alexandra', 11, NULL, 1, NULL, 8221);
219 INSERT INTO ANGAJAT_DSI VALUES (11, 1, 'Dorcioman', 'Razvan', 12, 1, NULL, NULL, 7755);
220 INSERT INTO ANGAJAT_DSI VALUES (12, 1, 'Bulmaci', 'Raluca', 13, 1, NULL, NULL, 9887);
221 INSERT INTO ANGAJAT_DSI VALUES (13, 1, 'Panainte', 'Iulia', 14, NULL, NULL, 1, 9812);
222 INSERT INTO ANGAJAT_DSI VALUES (14, 1, 'Atudore', 'Darius', 15, NULL, 1, NULL, 6574);
223 INSERT INTO ANGAJAT_DSI VALUES (15, 1, 'Zota', 'Bianca', 20, NULL, 1, NULL, 8751);
224 INSERT INTO ANGAJAT_DSI VALUES (16, 1, 'Tilici', 'Ioana', 21, NULL, 1, NULL, 7888);
225
226 SELECT *FROM ANGAJAT_DSI;
227
```

```

229
230
231 -----POPULARE TABEL COLABORARE_DSI-----
232
233 INSERT INTO COLABORARE_DSI VALUES(1, 1, 1, 1, '01-JAN-19');
234 INSERT INTO COLABORARE_DSI VALUES(2, 1, 2, 4, '20-NOV-20');
235 INSERT INTO COLABORARE_DSI VALUES(3, 1, 3, 5, '19-FEB-18');
236 INSERT INTO COLABORARE_DSI VALUES(4, 1, 4, 6, '17-DEC-19');
237 INSERT INTO COLABORARE_DSI VALUES(5, 1, 5, 7, '18-MAY-20');
238 INSERT INTO COLABORARE_DSI VALUES(6, 1, 6, 11, '15-JAN-17');
239 INSERT INTO COLABORARE_DSI VALUES(7, 1, 7, 12, '15-DEC-15');
240
241 SELECT *FROM COLABORARE_DSI;
242
243
244 -----POPULARE TABEL PIESA_DSI-----
245
246 INSERT INTO PIESA_DSI VALUES(1, 1, 'top cu maneci bufante');
247 INSERT INTO PIESA_DSI VALUES(2, 2, 'pantaloni piele naturala');
248 INSERT INTO PIESA_DSI VALUES(3, 3, 'rochie din paiete');
249 INSERT INTO PIESA_DSI VALUES(4, 4, 'esarfa matase naturala');
250 INSERT INTO PIESA_DSI VALUES(5, 5, 'sandale cu toc subtire');
251 INSERT INTO PIESA_DSI VALUES(6, 6, 'rochie imprimeu floral');
252 INSERT INTO PIESA_DSI VALUES(7, 7, 'fusta scurta din catifea');
253
254 SELECT *FROM PIESA_DSI;
255
256 -----POPULARE TABEL DEFECT_DSI-----
257
258
259 INSERT INTO DEFECT_DSI VALUES(1, 1, 3, '23-JUN-19', 1, NULL, NULL, 'problema simetrie');
260 INSERT INTO DEFECT_DSI VALUES(2, 3, 9, '12-JAN-20', NULL, 1, NULL, 'paiete lipsa');
261 INSERT INTO DEFECT_DSI VALUES(3, 7, 13, '10-JAN-19', NULL, 1, NULL, 'material deteriorat');
262
263 SELECT *FROM DEFECT_DSI;
264
265 -----POPULARE TABEL ASIGNEAZA_DSI-----
266
267
268 INSERT INTO ASIGNEAZA_DSI VALUES(1, 2, 1, '27-JUL-19');
269 INSERT INTO ASIGNEAZA_DSI VALUES(4, 8, 2, '18-FEB-20');
270 INSERT INTO ASIGNEAZA_DSI VALUES(5, 10, 3, '03-DEC-19');
271 INSERT INTO ASIGNEAZA_DSI VALUES(11, 15, 1, '27-JUL-19');
272 INSERT INTO ASIGNEAZA_DSI VALUES(7, 14, 1, '27-JUL-19');
273 INSERT INTO ASIGNEAZA_DSI VALUES(6, 8, 3, '03-DEC-19');
274 INSERT INTO ASIGNEAZA_DSI VALUES(12, 16, 1, '27-JUL-19');
275 INSERT INTO ASIGNEAZA_DSI VALUES(6, 15, 3, '03-DEC-19');
276 INSERT INTO ASIGNEAZA_DSI VALUES(4, 2, 3, '03-DEC-19');
277 INSERT INTO ASIGNEAZA_DSI VALUES(5, 15, 1, '27-JUL-19');
278
279 select *from ASIGNEAZA_DSI;
280
281 -----POPULARE TABEL PROPUNERE_DSI-----
282
283 INSERT INTO PROPUNERE_DSI VALUES(1, 1, 2, 'ajustare maneca');
284 INSERT INTO PROPUNERE_DSI VALUES(2, 2, 10, 'lipire paiete');
285 INSERT INTO PROPUNERE_DSI VALUES(3, 3, 15, 'inlocuire material');
286
287 SELECT *FROM PROPUNERE_DSI;
288
289 COMMIT;
290 -----AM TERMINAT DE POPULAT TABELELE-----
291
292

```

Statement 25



SELECT *FROM FIRMA_DSI

ID_FIRMA	NUME	ADRESA
1	Dior	Paris25

Download CSV

Statement 40

`SELECT *FROM COLABORATOR_DSI`

ID_COLABORATOR	BRAND	TELEFON
1	Zara	2322
2	HM	1222
3	Asos	2533
4	Guess	8333
5	Aldo	1234
6	Polo	6543
7	Adidas	8865

Download CSV
7 rows selected.

Statement 65

`SELECT *FROM COLABORARE_DSI`

ID_COLABORARE	ID_FIRMA	ID_COLABORATOR	ID_MANAGER	DATA_START
1	1	1	1	01-JAN-19
2	1	2	4	20-NOV-20
3	1	3	5	19-FEB-18
4	1	4	6	17-DEC-19
5	1	5	7	18-MAY-20
6	1	6	11	15-JAN-17
7	1	7	12	15-DEC-15

Download CSV
7 rows selected.

Statement 51

`SELECT *FROM ANGAJAT_DSI`

ID_ANGAJAT	ID_FIRMA	NUME	PRENUME	VECHIME	ID_MANAGER	ID_DESIGN	ID_STYLIST	SALARIU
1	1	Gavril	Bogdan	5	1	-	-	8900
2	1	Stirbu	Denisa	2	-	1	-	6544
3	1	Trifan	Magda	3	-	-	1	7888
4	1	Urse	Ilinca	7	1	-	-	8300
5	1	Neagu	Andi	6	1	-	-	9212
6	1	Costea	Ionut	1	1	-	-	5643
7	1	Silistru	Delia	9	1	-	-	9999
8	1	Ceausu	Corina	8	-	1	-	9121
9	1	Calin	Andrei	10	-	-	1	8775
10	1	Filip	Alexandra	11	-	1	-	8221
11	1	Dorcioman	Razvan	12	1	-	-	7755
12	1	Bulmaci	Raluca	13	1	-	-	9887
13	1	Panainte	Iulia	14	-	-	1	9812
14	1	Atudore	Darius	15	-	1	-	6574
15	1	Zota	Bianca	20	-	1	-	8751
16	1	Tilici	Ioana	21	-	1	-	7888

Download CSV
16 rows selected.

Statement 73

`SELECT *FROM PIESA_DSI`

ID_PIESA	ID_COLABORARE	DESCRIERE
1	1	top cu maneci bufante
2	2	pantaloni piele naturala
3	3	rochie din paiete
4	4	esarfa matase naturala
5	5	sandale cu toc subtire
6	6	rochie imprimeu floral
7	7	fusta scurta din catifea

Download CSV
7 rows selected.

Statement 87

`select *from ASIGNEAZA_DSI`

ID_MANAGER	ID_DESIGNER	ID_DEFECT	TERMEN_LIMITA
1	2	1	27-JUL-19
4	8	2	18-FEB-20
5	10	3	12-JAN-19
11	15	1	29-SEP-19
7	14	1	29-OCT-19
6	8	3	25-APR-19
12	16	1	17-NOV-19
6	15	3	03-DEC-19
4	2	3	16-JAN-19
5	15	1	27-DEC-19

Download CSV
10 rows selected.

Statement 91

`SELECT *FROM PROPUNERE_DSI`

ID_PROPUNERE	ID_DEFECT	ID_DESIGNER	FEEDBACK_DESCRIERE
1	1	2	ajustare maneca
2	2	10	lipire paiete
3	3	15	inlocuire material

Download CSV
3 rows selected.

Statement 74

SELECT *FROM DEFECT_DSI

ID_DEFECT	ID_PIESA	ID_STYLIST	DATA_DESCOPERIRE	DATA_REZOLVARE	ID_ASIGNAT	ID_REZOLVAT	ID_DE_INLOCUIT	PROBLEMA
1	1	3	23-JUN-19	-	1	-	-	problema simetrie
2	3	9	12-JAN-20	17-FEB-20	-	1	-	paiete lipsa
3	7	13	10-JAN-19	12-DEC-19	-	1	-	material deteriorat

Download CSV

3 rows selected.

Statement 92

COMMIT

Statement processed.

Desi am inceput proiectul lucrand pe Oracle Live SQL, am continuat pe SQL Developer.

Oracle SQL Developer

File Edit View Navigate Run Team Tools Window Help

Connections

gr741
group41_011g
project_sghd

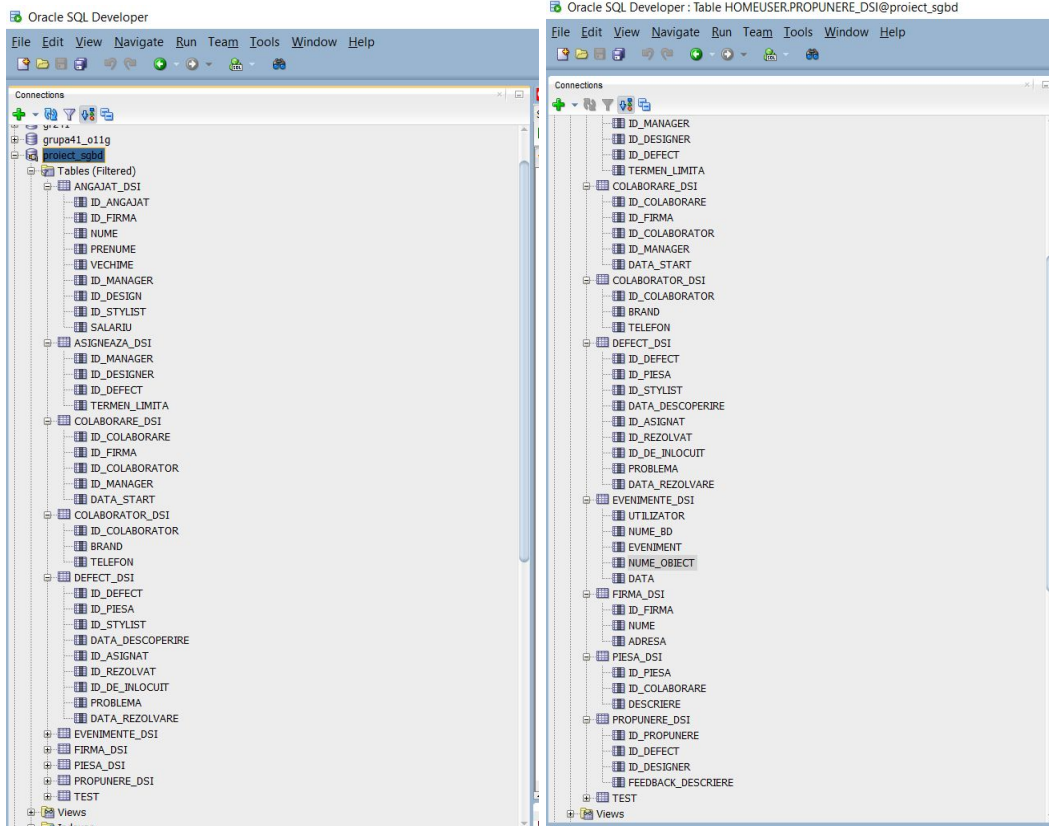
Tables

TABLE NAME	NUM_ROWS	STATUS	COLUMNS	COMMENTS	INDEXED_COLUMNS	AVG_ROW_LEN	TABLESPACE_NAME	ESTIMATED_SIZE	LAST_DDL_TIME	CREATED	REFERENCED_OBJECTS	TRIGGS
1 ANGAJAT_DSI	16	VALID	9	(null)	1	32	USERS	512	06-JAN-21	06-JAN-21	5	2
2 ASIGNEAZA_DSI	10	VALID	4	(null)	1	17	USERS	170	06-JAN-21	06-JAN-21	2	0
3 COLABORARE_DSI	7	VALID	5	(null)	1	20	USERS	140	06-JAN-21	06-JAN-21	1	0
4 COLABORATOR_DSI	7	VALID	3	(null)	1	12	USERS	84	06-JAN-21	06-JAN-21	1	0
5 DEFECT_DSI	3	VALID	9	(null)	1	44	USERS	132	07-JAN-21	06-JAN-21	3	0
6 EVENIMENTE_DSI	1	VALID	5	(null)	0	32	USERS	32	09-JAN-21	09-JAN-21	1	0
7 FIRMA_DSI	1	VALID	3	(null)	1	16	USERS	16	06-JAN-21	06-JAN-21	0	0
8 PIESA_DSI	7	VALID	3	(null)	1	29	USERS	203	06-JAN-21	06-JAN-21	1	0
9 PROPUNERE_DSI	3	VALID	4	(null)	1	25	USERS	75	06-JAN-21	06-JAN-21	0	0
10 TEST	0	VALID	1	(null)	0	0	USERS	0	09-JAN-21	09-JAN-21	0	0

Reports

All Reports
Analytic View Reports
Data Dictionary Reports
Data Modeler Reports
OLAP Reports
TimesTen Reports
User Defined Reports

Complex - Log
Messages - Unifying page - Documents - Languages



1. Definiti un subprogram stocat care sa utilizeze un tip de colectie studiat prin care sa obtineti salariile angajatilor a caror id-uri sunt date ca parametru printr-un vector, precum si procentajul salariului fiecarui angajat din totalul salariilor acestora.

```

CREATE OR REPLACE TYPE angajati_ids IS TABLE OF NUMBER;
/

CREATE OR REPLACE PROCEDURE salariile(V_ANGAJATI angajati_ids)
AS
    TYPE SALARII IS TABLE OF NUMBER;
    V_SALARII SALARII := SALARII();
    J NUMBER :=1;
    V_TOTAL NUMBER :=0;
BEGIN
    FOR I IN V_ANGAJATI.FIRST..V_ANGAJATI.LAST LOOP
        V_SALARII.EXTEND(1);

        SELECT SALARIU
        INTO V_SALARII(J)
        FROM ANGAJAT_DSI
        WHERE ID_ANGAJAT = V_ANGAJATI(I);

        V_TOTAL := V_TOTAL + V_SALARII(J);
        J := J+1;
    END LOOP;

```



```

FOR I IN V_SALARII.FIRST..V_SALARII.LAST LOOP
    DBMS_OUTPUT.PUT_LINE('Angajatul cu id-ul ' || V_ANGAJATI(I) || ' are
salariul ' || V_SALARII(I) || ' care reprezinta' || 100*V_SALARII(I)/V_TOTAL || '% din
totalul salariilor angajatilor dati' );
END LOOP;

END;
/

SET SERVEROUTPUT ON;

DECLARE
    vt_angajati angajati_ids := angajati_ids();
BEGIN
    vt_angajati.extend(3);
    vt_angajati(1) := 2;
    vt_angajati(2) := 3;
    vt_angajati(3) := 4;
    salariile(vt_angajati);
END;
/

```

The screenshot shows an SQL Worksheet with the following content:

```

1 CREATE OR REPLACE TYPE angajati_ids IS TABLE OF NUMBER;
2 /
3
4 CREATE OR REPLACE PROCEDURE salariile(V_ANGAJATI angajati_ids)
5 AS
6     TYPE SALARII IS TABLE OF NUMBER;
7     V_SALARII SALARII := SALARII();
8     J NUMBER :=1;
9     V_TOTAL NUMBER :=0;
10 BEGIN
11     FOR I IN V_ANGAJATI.FIRST..V_ANGAJATI.LAST LOOP
12         V_SALARII.EXTEND(1);
13
14         SELECT SALARIU
15         INTO V_SALARII(J)

```

The bottom pane shows the output of the procedure:

```

Procedure SALARIILE compiled

Angajatul cu id-ul 2 are salariul 6544 care reprezinta28.78761217666725321133204293506950554285% din totalul salariilor angajatilor d
Angajatul cu id-ul 3 are salariul 7888 care reprezinta34.69998240366003871194791483371458736583% din totalul salariilor angajatilor d
Angajatul cu id-ul 4 are salariul 8300 care reprezinta36.51240541967270807672004223121590709133% din totalul salariilor angajatilor d

PL/SQL procedure successfully completed.

```

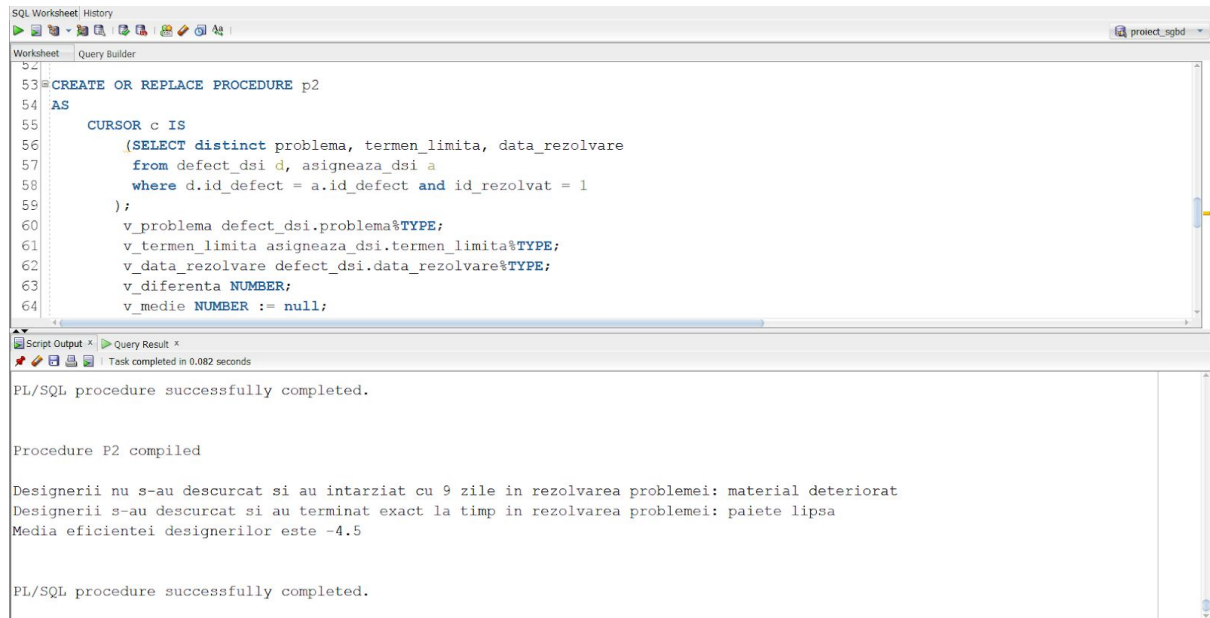
2. Definiti un subprogram stocat care sa utilizeze un tip de cursor studiat prin care sa obtineti informatii legate de timpul in care designerii au reusit sa rezolve defectul care le-a fost asiguate. La final afisati media acestor intervale de timp.

```

CREATE OR REPLACE PROCEDURE p2
AS
    CURSOR c IS
        (SELECT distinct problema, termen_limita, data_rezolvare
         from defect_dsi d, asigneaza_dsi a
         where d.id_defect = a.id_defect and id_rezolvat = 1
        );
    v_problema defect_dsi.problema%TYPE;
    v_termen_limita asigneaza_dsi.termen_limita%TYPE;
    v_data_rezolvare defect_dsi.data_rezolvare%TYPE;
    v_diferenta NUMBER;
    v_medie NUMBER := null;
    v_total NUMBER := 0;
    v_nr_elemente NUMBER := 0;
BEGIN
    OPEN c;
    loop
        fetch c into v_problema, v_termen_limita, v_data_rezolvare;
        exit when c%notfound;
        v_diferenta := v_data_rezolvare - v_termen_limita;
        if v_data_rezolvare > v_termen_limita then
            DBMS_OUTPUT.PUT_LINE('Designerii nu s-au descurcat si au intarziat cu ' ||
v_diferenta || ' zile in rezolvarea problemei: ' || v_problema );
            v_total := v_total - v_diferenta;
        elsif v_diferenta > 0 then
            DBMS_OUTPUT.PUT_LINE('Designerii s-au descurcat si au terminat cu ' ||
v_diferenta || ' zile mai devreme de limita in rezolvarea problemei: ' || v_problema );
            v_total := v_total + v_diferenta;
        else
            DBMS_OUTPUT.PUT_LINE('Designerii s-au descurcat si au terminat exact la timp
in rezolvarea problemei: ' || v_problema );
        end if;
    end loop;
    select count(*) into v_nr_elemente
    from defect_dsi where id_rezolvat = 1;
    v_medie := v_total / v_nr_elemente;
    DBMS_OUTPUT.PUT_LINE('Media eficientei designerilor este ' || v_medie);
    close c;
END;
/

begin
    p2;
end;
/

```



```
53 CREATE OR REPLACE PROCEDURE p2
54 AS
55     CURSOR c IS
56     (SELECT distinct problema, termen limita, data rezolvare
57      from defect_dsi d, asigneaza_dsi a
58      where d.id_defect = a.id_defect and id_rezolvat = 1
59     );
60     v_problema defect_dsi.problema%TYPE;
61     v_termen limita asigneaza_dsi.termen limita%TYPE;
62     v_data rezolvare defect_dsi.data rezolvare%TYPE;
63     v_diferenta NUMBER;
64     v_medie NUMBER := null;
```

PL/SQL procedure successfully completed.

Procedure P2 compiled

Designerii nu s-au descurcat si au intarziat cu 9 zile in rezolvarea problemei: material deteriorat
Designerii s-au descurcat si au terminat exact la timp in rezolvarea problemei: paiete lipsa
Media eficientei designerilor este -4.5

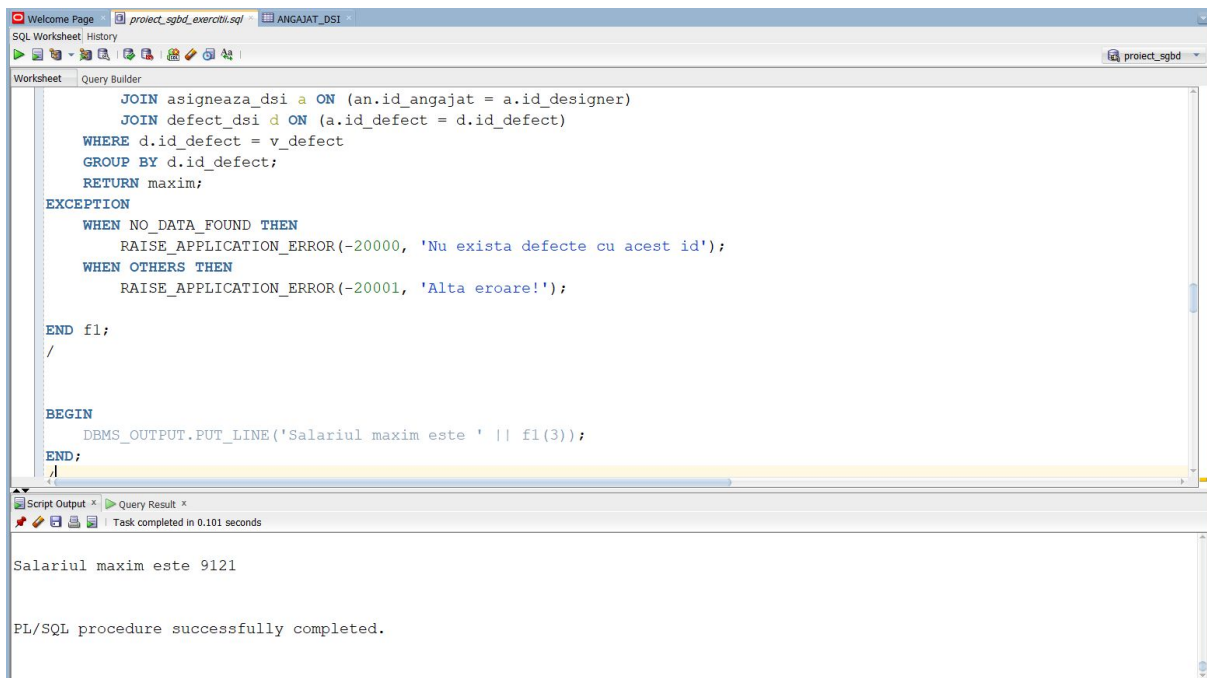
PL/SQL procedure successfully completed.

3. Sa se defineasca un subprogram stocat de tip functie care sa afiseze cel mai mare salariu al unui designer care a lucrat la rezolvarea unui defect dat.

```
CREATE OR REPLACE FUNCTION f1
(v_defect defect_dsi.id_defect%TYPE)
RETURN NUMBER
IS
maxim NUMBER;
BEGIN
    SELECT MAX(salariu) INTO maxim
    FROM angajat_dsi an
        JOIN asigneaza_dsi a ON (an.id_angajat = a.id_designer)
        JOIN defect_dsi d ON (a.id_defect = d.id_defect)
    WHERE d.id_defect = v_defect
    GROUP BY d.id_defect;
    RETURN maxim;
EXCEPTION
    WHEN NO_DATA_FOUND THEN
        RAISE_APPLICATION_ERROR(-20000, 'Nu exista defecte cu acest id');
    WHEN OTHERS THEN
        RAISE_APPLICATION_ERROR(-20001, 'Alta eroare!');

END f1;
/

BEGIN
    DBMS_OUTPUT.PUT_LINE('Salariul maxim este ' || f1(3));
END;
/
```



The screenshot shows the SQL Developer interface with a PL/SQL procedure named 'f1' being executed. The procedure joins 'angajat_dsi' and 'defect_dsi' tables, filters by 'v_defect', and returns the maximum salary. The 'Script Output' pane shows the result: 'Salariul maxim este 9121' and a confirmation that the procedure completed successfully.

```
JOIN asigneaza_dsi a ON (a.id_angajat = a.id_designer)
JOIN defect_dsi d ON (a.id_defect = d.id_defect)
WHERE d.id_defect = v_defect
GROUP BY d.id_defect;
RETURN maxim;
EXCEPTION
WHEN NO_DATA_FOUND THEN
RAISE_APPLICATION_ERROR(-20000, 'Nu exista defecte cu acest id');
WHEN OTHERS THEN
RAISE_APPLICATION_ERROR(-20001, 'Alta eroare!');

END f1;
/

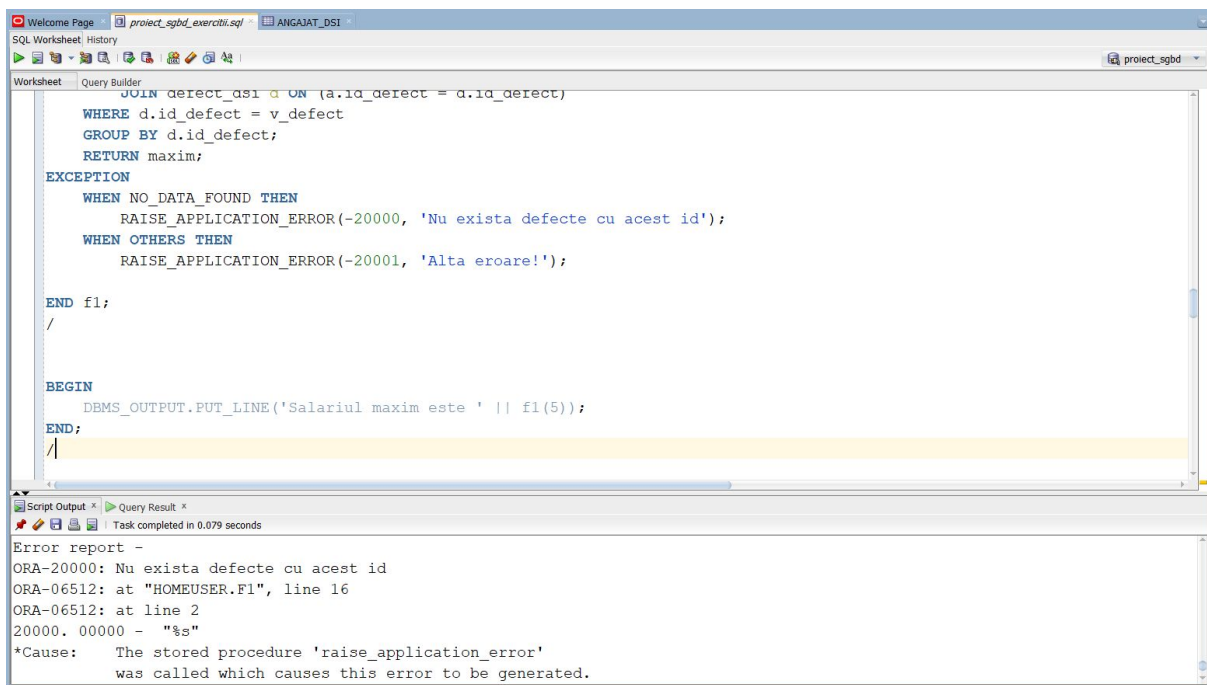
BEGIN
DBMS_OUTPUT.PUT_LINE('Salariul maxim este ' || f1(3));
END;
/
```

Script Output x Query Result x
Task completed in 0.101 seconds

Salariul maxim este 9121

PL/SQL procedure successfully completed.

--cazul in care este dat un defect care nu exista in baza de date



The screenshot shows the same PL/SQL procedure being executed, but with an error. The 'Script Output' pane displays an 'Error report' with ORA-20000 and ORA-06512 messages, indicating that the defect ID does not exist in the database.

```
JOIN defect_dsi d ON (a.id_defect = d.id_defect)
WHERE d.id_defect = v_defect
GROUP BY d.id_defect;
RETURN maxim;
EXCEPTION
WHEN NO_DATA_FOUND THEN
RAISE_APPLICATION_ERROR(-20000, 'Nu exista defecte cu acest id');
WHEN OTHERS THEN
RAISE_APPLICATION_ERROR(-20001, 'Alta eroare!');

END f1;
/

BEGIN
DBMS_OUTPUT.PUT_LINE('Salariul maxim este ' || f1(5));
END;
/
```

Script Output x Query Result x
Task completed in 0.079 seconds

Error report -
ORA-20000: Nu exista defecte cu acest id
ORA-06512: at "HOMEUSER.F1", line 16
ORA-06512: at line 2
20000. 00000 - "%s"
*Cause: The stored procedure 'raise_application_error' was called which causes this error to be generated.

4. Sa se afiseze numele stilistului care a lucrat in colaborare cu o companie data.

```
CREATE OR REPLACE PROCEDURE p3
(v_brand colaborator_dsi.brand%TYPE)
IS
v_nume angajat_dsi.nume%TYPE;
BEGIN
```

```

SELECT nume INTO v_nume
FROM angajat_dsi a JOIN defect_dsi d ON (a.id_angajat = d.id_stylist)
      JOIN piesa_dsi p ON (p.id_piesa = d.id_piesa)
      JOIN colaborare_dsi c ON (p.id_colaborare = c.id_colaborare)
      JOIN colaborator_dsi co ON (c.id_colaborator = co.id_colaborator)
WHERE co.brand = v_brand;

DBMS_OUTPUT.PUT_LINE('Numele stilistului care lucreaza in colaborare cu ' || v_brand
|| ' este ' || v_nume);

EXCEPTION
  WHEN NO_DATA_FOUND THEN
    RAISE_APPLICATION_ERROR(-20000, 'Nu exista firma cu numele dat');
  WHEN OTHERS THEN
    RAISE_APPLICATION_ERROR(-20001, 'Alta eroare!');

END p3;
/

BEGIN
  p3('Zara');
END;
/

```

The screenshot shows an SQL Developer window with the following components:

- Top Panel:** Contains the SQL code for the procedure `p3`, which selects the name of the stylist associated with a given brand (Zara) and outputs it.
- Bottom Panel:** Displays the execution results. It shows that the procedure was compiled successfully and then executed, resulting in the output: "Numele stilistului care lucreaza in colaborare cu Zara este Trifan".

```

DBMS_OUTPUT.PUT_LINE('Numele stilistului care lucreaza in colaborare cu ' || v_brand || ' este ' || v_nume);

EXCEPTION
  WHEN NO_DATA_FOUND THEN
    RAISE_APPLICATION_ERROR(-20000, 'Nu exista firma cu numele dat');
  WHEN OTHERS THEN
    RAISE_APPLICATION_ERROR(-20001, 'Alta eroare!');

END p3;
/

BEGIN
  p3('Zara');
END;
/

```

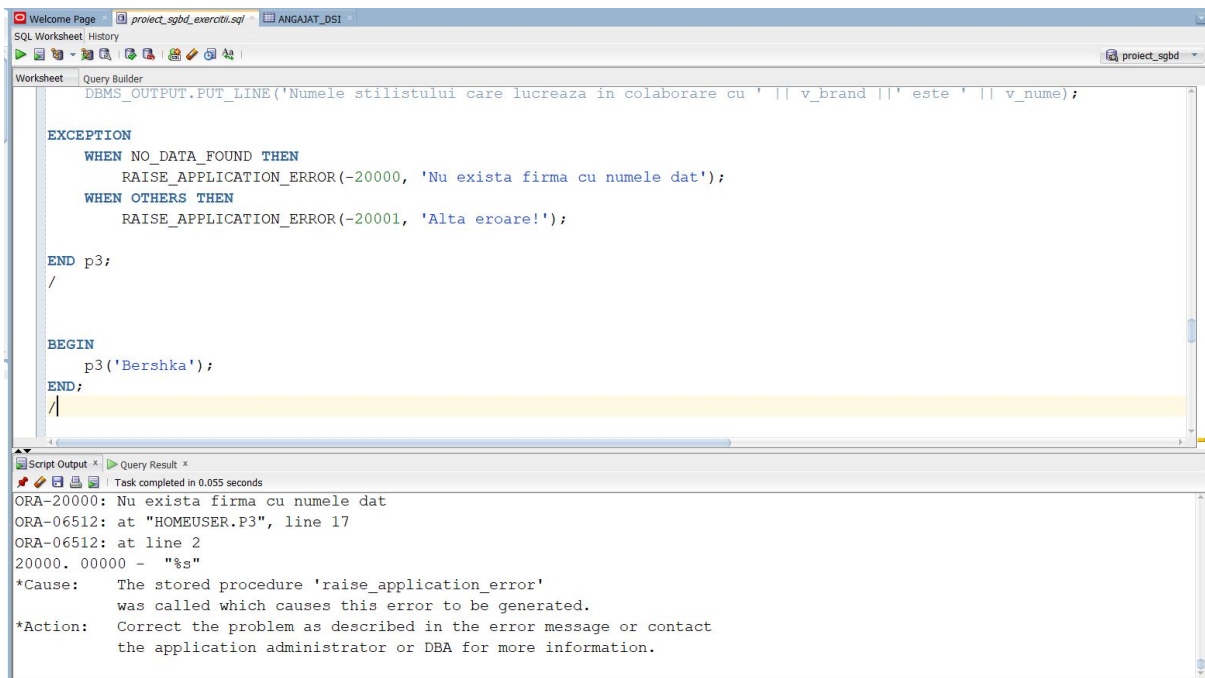
Script Output x Query Result x
Task completed in 0.064 seconds

Procedure P3 compiled

Numele stilistului care lucreaza in colaborare cu Zara este Trifan

PL/SQL procedure successfully completed.

-- cazul in care este dat ca parametru numele unei firme care nu exista in baza de date



The screenshot shows the SQL Developer interface. The top pane displays a PL/SQL block with an exception handler. The bottom pane shows the script output with an error message.

```
DBMS_OUTPUT.PUT_LINE('Numele stilistului care lucreaza in colaborare cu ' || v_brand || ' este ' || v_nume);

EXCEPTION
  WHEN NO_DATA_FOUND THEN
    RAISE_APPLICATION_ERROR(-20000, 'Nu exista firma cu numele dat');
  WHEN OTHERS THEN
    RAISE_APPLICATION_ERROR(-20001, 'Alta eroare!');

END p3;
/

BEGIN
  p3('Bershka');
END;
```

Script Output: Task completed in 0.055 seconds
ORA-20000: Nu exista firma cu numele dat
ORA-06512: at "HOMEUSER.P3", line 17
ORA-06512: at line 2
20000. 00000 - "%s"
*Cause: The stored procedure 'raise_application_error' was called which causes this error to be generated.
*Action: Correct the problem as described in the error message or contact the application administrator or DBA for more information.

5. Definiti un trigger care sa permita lucrul asupra tabelului angajat_dsi (INSERT, UPDATE, DELETE) doar in intervalul de ora 9:00 - 16:00, de luni pana sambata.

```
CREATE OR REPLACE TRIGGER trig1
  BEFORE INSERT OR UPDATE OR DELETE ON angajat_dsi
BEGIN
  IF (TO_CHAR(SYSDATE,'D') = 1)
    OR(TO_CHAR(SYSDATE, 'HH24') NOT BETWEEN 9 AND 16)
  THEN
    RAISE_APPLICATION_ERROR (-20100, 'Tabelul nu poate fi actualizat decat in timpul
programului de lucru');
  END IF;
END;
/

UPDATE angajat_dsi set salariu = 8000
where id_angajat = 16;
```

The screenshot shows an SQL Developer window with a worksheet titled 'ANGAJAT_DSI'. The worksheet contains the following SQL code:

```
CREATE OR REPLACE TRIGGER trig1
BEFORE INSERT OR UPDATE OR DELETE ON angajat_dsi
BEGIN
  IF (TO_CHAR(SYSDATE, 'D') = 1)
    OR (TO_CHAR(SYSDATE, 'HH24') NOT BETWEEN 9 AND 16)
  THEN
    RAISE_APPLICATION_ERROR (-20100, 'Tabelul nu poate fi actualizat decat in timpul programului de lucru');
  END IF;
END;
/

UPDATE angajat_dsi set salariu = 8000
where id_angajat = 16;
```

Below the code, the 'Script Output' pane shows the following messages:

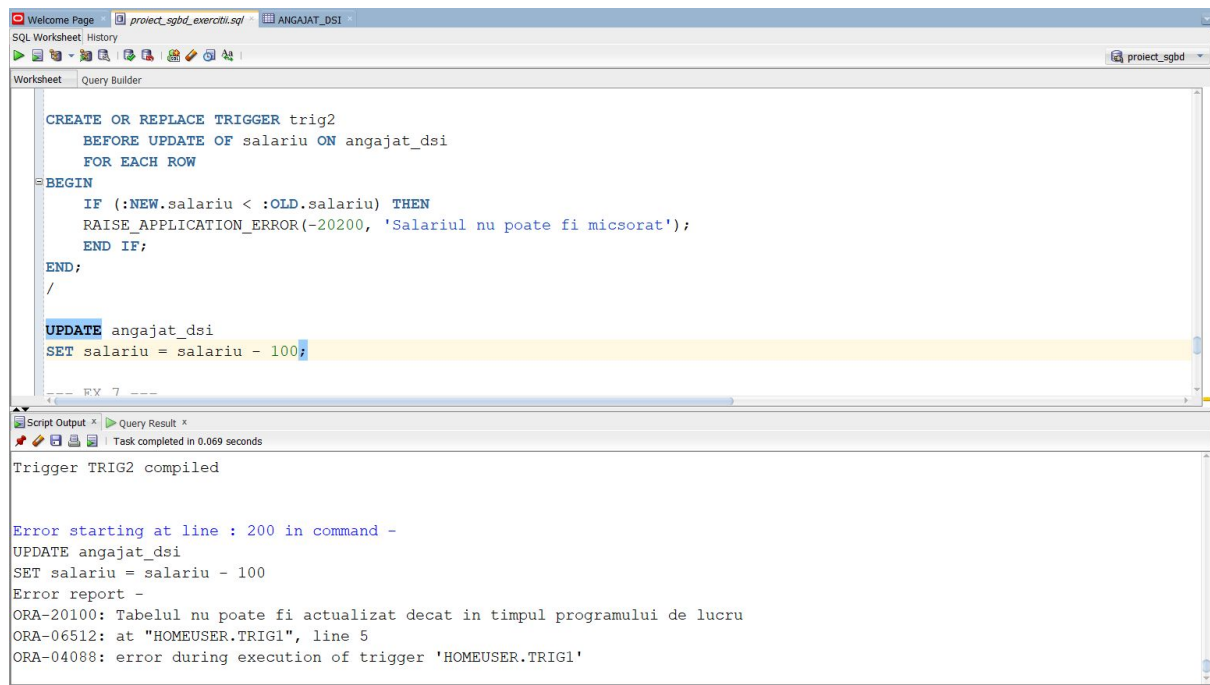
```
Trigger TRIG1 compiled

Error starting at line : 185 in command -
UPDATE angajat_dsi set salariu = 8000
where id_angajat = 16
Error report -
ORA-20100: Tabelul nu poate fi actualizat decat in timpul programului de lucru
ORA-06512: at "HOMEUSER.TRIG1", line 5
ORA-04088: error during execution of trigger 'HOMEUSER.TRIG1'
```

6. Definiti un trigger prin care sa nu se permita micsorarea salariilor angajatilor.

```
CREATE OR REPLACE TRIGGER trig2
  BEFORE UPDATE OF salariu ON angajat_dsi
  FOR EACH ROW
BEGIN
  IF (:NEW.salariu < :OLD.salariu) THEN
    RAISE_APPLICATION_ERROR(-20200, 'Salariul nu poate fi micsorat');
  END IF;
END;
/

UPDATE angajat_dsi
SET salariu = salariu - 100;
```



The screenshot shows the SQL Developer interface. The main window displays the following SQL code:

```
CREATE OR REPLACE TRIGGER trig2
BEFORE UPDATE OF salariu ON angajat_dsi
FOR EACH ROW
BEGIN
    IF (:NEW.salariu < :OLD.salariu) THEN
        RAISE_APPLICATION_ERROR(-20200, 'Salariul nu poate fi micșorat');
    END IF;
END;
/

UPDATE angajat_dsi
SET salariu = salariu - 100;
```

The bottom pane, titled 'Script Output', shows the execution results:

```
Trigger TRIG2 compiled

Error starting at line : 200 in command -
UPDATE angajat_dsi
SET salariu = salariu - 100
Error report -
ORA-20100: Tabelul nu poate fi actualizat decat in timpul programului de lucru
ORA-06512: at "HOMEUSER.TRIG1", line 5
ORA-04088: error during execution of trigger 'HOMEUSER.TRIG1'
```

7. Creati un tabel care sa contina campurile

- utilizator
- nume_bd
- eveniment
- nume_obiect
- data

Si definiti un trigger care sa introduca date in acest tabel dupa ce utilizatorul a folosit o comanda LDD.

```
CREATE TABLE evenimente_dsi
(utilizator VARCHAR2(20),
nume_bd VARCHAR2(20),
eveniment VARCHAR2(30),
nume_obiect VARCHAR2(20) ,
data DATE);

CREATE OR REPLACE TRIGGER trig3
AFTER CREATE OR DROP OR ALTER ON SCHEMA
BEGIN
    INSERT INTO evenimente_dsi
    VALUES (SYS.LOGIN_USER, SYS.DATABASE_NAME, SYS.SYSEVENT,
            SYS.DICTIONARY_OBJ_NAME, SYSDATE);
END;
/

CREATE TABLE test(n NUMBER);
```



```
SELECT * FROM evenimente_dsi;
```

The screenshot shows the SQL Developer interface with a script window containing the following SQL code:

```
CREATE TABLE evenimente_dsi
(utilizator VARCHAR2(20),
nume_bd VARCHAR2(20),
eveniment VARCHAR2(30),
nume_obiect VARCHAR2(20) ,
data DATE);

CREATE OR REPLACE TRIGGER trig3
AFTER CREATE OR DROP OR ALTER ON SCHEMA
BEGIN
INSERT INTO evenimente_dsi
VALUES (SYS.LOGIN_USER, SYS.DATABASE_NAME, SYS.SYSEVENT,
SYS.DICTIONARY_OBJ_NAME, SYSDATE);
END;
/

CREATE TABLE test(n NUMBER);
```

The Script Output window at the bottom shows the following messages:

```
Table EVENIMENTE_DSI created.

Trigger TRIG3 compiled

Table TEST created.
```

The screenshot shows the SQL Developer interface with the same script window as above, but with the following SQL code added at the bottom:

```
SELECT * FROM evenimente_dsi;
```

The Script Output window at the bottom shows the following messages:

```
SQL | All Rows Fetched: 1 in 0.005 seconds
```

UTILIZATOR	NUME_BD	EVENIMENT	NUME_OBIECT	DATA
1 HOMEUSER XE	CREATE TEST			09-JAN-21

8. Definiti un pachet care sa contina toate obiectele definite in cadrul proiectului.

```
CREATE OR REPLACE PACKAGE pachet1 AS
  PROCEDURE salariile(V_ANGAJATI angajati_ids);
  PROCEDURE p2;
  FUNCTION f1 (v_defect defect_dsi.id_defect%TYPE)
    RETURN NUMBER;
  PROCEDURE p3 (v_brand colaborator_dsi.brand%TYPE);

END pachet1;
/

CREATE OR REPLACE PACKAGE BODY pachet1 AS
  FUNCTION f1
    (v_defect defect_dsi.id_defect%TYPE)
  RETURN NUMBER
  IS
    maxim NUMBER;
  BEGIN
    SELECT MAX(salariu) INTO maxim
    FROM angajat_dsi an
      JOIN asigneaza_dsi a ON (an.id_angajat = a.id_designer)
      JOIN defect_dsi d ON (a.id_defect = d.id_defect)
    WHERE d.id_defect = v_defect
    GROUP BY d.id_defect;
    RETURN maxim;
  EXCEPTION
    WHEN NO_DATA_FOUND THEN
      RAISE_APPLICATION_ERROR(-20000, 'Nu exista defecte cu acest id');
    WHEN OTHERS THEN
      RAISE_APPLICATION_ERROR(-20001, 'Alta eroare!');

  END f1;

  PROCEDURE salariile(V_ANGAJATI angajati_ids)
  AS
    TYPE SALARII IS TABLE OF NUMBER;
    V_SALARII SALARII := SALARII();
    J NUMBER :=1;
    V_TOTAL NUMBER :=0;
  BEGIN
    FOR I IN V_ANGAJATI.FIRST..V_ANGAJATI.LAST LOOP
      V_SALARII.EXTEND(1);
```

```

SELECT SALARIU
INTO V_SALARII(J)
FROM ANGAJAT_DSI
WHERE ID_ANGAJAT = V_ANGAJATI(I);

V_TOTAL := V_TOTAL + V_SALARII(J);
J := J+1;
END LOOP;
FOR I IN V_SALARII.FIRST..V_SALARII.LAST LOOP
    DBMS_OUTPUT.PUT_LINE('Angajatul cu id-ul ' || V_ANGAJATI(I) || ' are salariul ' ||
V_SALARII(I) || ' care reprezinta ' || 100*V_SALARII(I)/V_TOTAL || '% din totalul salariilor
angajatilor dati' );
END LOOP;

END salariile;

PROCEDURE p2
AS
    CURSOR c IS
        (SELECT distinct problema, termen_limita, data_rezolvare
        from defect_dsi d, asigneaza_dsi a
        where d.id_defect = a.id_defect and id_rezolvat = 1
        );
    v_problema defect_dsi.problema%TYPE;
    v_termen_limita asigneaza_dsi.termen_limita%TYPE;
    v_data_rezolvare defect_dsi.data_rezolvare%TYPE;
    v_diferenta NUMBER;
    v_medie NUMBER := null;
    v_total NUMBER := 0;
    v_nr_elemente NUMBER :=0;
BEGIN
    OPEN c;
    loop
        fetch c into v_problema, v_termen_limita, v_data_rezolvare;
        exit when c%notfound;
        v_diferenta := v_data_rezolvare - v_termen_limita;
        if v_data_rezolvare > v_termen_limita then
            DBMS_OUTPUT.PUT_LINE('Designerii nu s-au descurcat si au intarziat cu ' ||
v_diferenta || ' zile in rezolvarea problemei: ' || v_problema );
            v_total := v_total - v_diferenta;
        elsif v_diferenta > 0 then
            DBMS_OUTPUT.PUT_LINE('Designerii s-au descurcat si au terminat cu ' ||
v_diferenta || ' zile mai devreme de limita in rezolvarea problemei: ' || v_problema );
            v_total := v_total + v_diferenta;
        else
            DBMS_OUTPUT.PUT_LINE('Designerii s-au descurcat si au terminat exact la timp
in rezolvarea problemei: ' || v_problema );
        end if;
    end loop;

```

```

        end loop;
        select count(*) into v_nr_elemente
        from defect_dsi where id_rezolvat = 1;
        v_medie := v_total / v_nr_elemente;
        DBMS_OUTPUT.PUT_LINE('Media eficientei designerilor este ' || v_medie);
        close c;
END p2;

PROCEDURE p3
(v_brand colaborator_dsi.brand%TYPE)
IS
    v_nume angajat_dsi.numename%TYPE;
BEGIN
    SELECT nume INTO v_nume
    FROM angajat_dsi a JOIN defect_dsi d ON (a.id_angajat = d.id_stylist)
        JOIN piesa_dsi p ON (p.id_piesa = d.id_piesa)
        JOIN colaborare_dsi c ON (p.id_colaborare = c.id_colaborare)
        JOIN colaborator_dsi co ON (c.id_colaborator = co.id_colaborator)
    WHERE co.brand = v_brand;

    DBMS_OUTPUT.PUT_LINE('Numele stilistului care lucreaza in colaborare cu ' || v_brand
|| ' este ' || v_nume);

EXCEPTION
    WHEN NO_DATA_FOUND THEN
        RAISE_APPLICATION_ERROR(-20000, 'Nu exista firma cu numele dat');
    WHEN OTHERS THEN
        RAISE_APPLICATION_ERROR(-20001, 'Alta eroare!');

END p3;

END pachet1;
/

BEGIN
    pachet1.p3('Zara');
END;
/

```

SQL Worksheet: History

Worksheet Query Builder

```
635 JOIN colaborator_dsi co ON (c.id_colaborator = co.id_colaborator)
636 WHERE co.brand = v_brand;
637
638 DBMS_OUTPUT.PUT_LINE('Numele stilistului care lucreaza in colaborare cu ' || v_brand || ' este ' || v_nume);
639
640 EXCEPTION
641 WHEN NO_DATA_FOUND THEN
642 RAISE_APPLICATION_ERROR(-20000, 'Nu exista firma cu numele dat');
643 WHEN OTHERS THEN
644 RAISE_APPLICATION_ERROR(-20001, 'Alta eroare!');
645
646 END p3;
647
```

Script Output x

Task completed in 0.061 seconds

Package PACHET1 compiled

Package Body PACHET1 compiled

Numele stilistului care lucreaza in colaborare cu Zara este Trifan

PL/SQL procedure successfully completed.

Connections

- Oracle Connections
 - exam01
 - g741
 - grape41_011g
 - project_sghd
 - recap_011g
- Oracle NoSQL Connections
- Database Schema Service Connections

project_sghd_exercitiu.sql | project_sghd_tabela.sql | project_sghd.sql | project_sghd.sql | Welcome Page

SQL Worksheet: History

Worksheet Query Builder

```
643 WHEN OTHERS THEN
644 RAISE_APPLICATION_ERROR(-20001, 'Alta eroare!');
645
646 END p3;
647
648 END pachet1;
649 /
650
651 BEGIN
652 pachet1.p3('Zara');
653 END;
654 /
655
```

Script Output x

Task completed in 0.061 seconds

Package PACHET1 compiled

Package Body PACHET1 compiled

Numele stilistului care lucreaza in colaborare cu Zara este Trifan

PL/SQL procedure successfully completed.

Compiler - Log

Messages | Status Messages | Log Output