Jucator/Competitie Sah

**1.**

Acest model real reprezinta o baza de date a unei competitii sportive de sah.

Utilitatea acesteia se justifica prin manageriuirea eficienta si corecta a intregii activitati, respective in cazul de fata, competitia de sah.

**2.** Constrangerile impuse asupra modelului sunt urmatoarele:

In cadrul entatatii Competitie :

* Numele competitiei nu poate fi NULL
* Ora inceperii competitiei nu poate fi NULL
* Data sfarsiri competitiei nu poate fi NULL
* Tara competitiei nu poate fi NULL

In cadrul entitatii Tara\_Comp:

* Numele tarii nu poate fi NULL

In cadrul entitatii Oras :

* Numele orasului nu poate fi NULL

In cadrul entitatii Locatie :

* Adresa nu poate fi NULL

In cadrul entitatii Jucator :

* Numele jucatorului nu poate fi NULL
* Prenumele jucatorului nu poate fi NULL
* Anul de nastele al jucatorului nu poate fi NULL
* Genul jucatorului poate fi Doar Masculin(M) sau Feminin(F)

In cadrul entitatii Sponsor :

* Numele sponsorului nu poate fi NULL

In cadrul entatii Antrenor :

* Numele antrenorului nu poate fi NULL
* Prenumele antrenorului nu poate fi NULL
* Anul nasterii antrenorului nu poate fi NULL
* Genul antrenorului poate fi doar Masculin(M) sau Feminin(F)

In cadrul entitatii Club :

* Numele clubului nu poate fi NULL

In cadrul entitatii Clasament:

* Se considera ca se pot afla maximum 100 de jucatori in clasament, asadar pozitia in clasament nu poate fi NULL sau >100

**3.** Descrierea entitatilor :

**Entitatea Competitie :**

Cheia primara a acestei entitati este **id\_competitie**

Avand urmatoarele attribute:

* Nume\_competitie (Numele competitiei)
* Data\_incep\_comp (Data de incepere a competitiei)
* Data\_sfarsit\_comp (Data de sfarsire a competitiei)
* Tara\_comp (Tara in care are loc competitia)
* Conditii\_part (Conditii de participare in competitie)

**Entitatea Premiu :**

Cheia primara a acestei entitati este **id\_premiu**

Avand urmatoarele attribute:

* Suma\_premiu (Suma totala de bani competitiei, exprimara in RON)
* puncte\_premiu (Totalul de puncte accumul ate pentru castigarea competitiei)

**Entitatea Tara:**

Cheia primara a acestei entitati este **id\_tara**

Avand urmatoarele attribute :

* Nume\_tara (Numele tarii in care are loc competitia)

**Entitatea Oras:**

Cheia primara a acestei entitati este **id\_oras**

Avand urmatoarele attribute :

* Nume\_oras (Numele orasului in care are loc competitia)

**Entitatea Locatie:**

Cheia primara a acestei entitati este **id\_locatie**

Avand urmatoarele attribute

* Nume\_adresa (Numele adresei unde are loc competitia)
* Numar\_adresa (Numarul adresei)
* Nr\_spectatori\_pos (Numarul de spectatori posibili la competitie)
* Nr\_spectatori\_prez (Numarul de spectator prezenti la competitie)

**Entitatea Jucator:**

Cheia primara a acestei entitati este **id\_jucator**

Avand urmatoarele atribute:

* nume\_juc (Numele jucatorului)
* prenume\_juc (Prenumele jucatorului)
* an\_nastere\_juc (Anul nasterii jucatorului)
* gen\_juc(Genul jucatorului.Acesta poate fi doar Masculin(M) sau Feminin(F)
* salariu\_juc (Salariul jucatorului )

**Entitatea Fani:**

Cheia primara a acestei entitati este **id\_fani**

Avand urmatoarele attribute:

* numar\_fani (Numarul total de fani ai jucatorului)

**Entitatea Clasament:**

Cheia primara a acestei entitati este **id\_clasement**

Avand urmatoarele attribute:

* pozitie\_clasament (Acesta este curpinsa intre 100 si 1)

**Entitatea Antrenor :**

Cheia primara a acestei entitati este **id\_clasament**

Avand urmatoarele attribute :

* nume\_ant (Numele antrenorului)
* prenume\_ant (Prenumele Antrenorului)
* an\_nastere\_ant (Anul de nastere al antrenorului)
* gen\_ant (Acesta poate fi doar Masculin(M) sau Feminin(F)
* experienta\_ant (Experienta antrenorului exprimata in ani)
* salariu\_ant (Salariul antrenorului exprimat in RON)

**Entitatea Club:**

Cheia primara a acestei entitati este **id\_club**

Avand urmatoarele attribute :

* nume\_club (Numele clubului)
* nr\_juc\_club (Numarul total de jucatori ai clubului)
* an\_ap\_club (Anul aparitiei clubului )

**Entitatea Sponsor:**

Cheia primara a acestei entitati este **id\_sponsor**

Avand urmatoarele attribute :

* nume\_sponsor (Numele sponsorului)
* suma\_sponsor (Suma de bani oferita de sponsor)
* domeniu\_sponsor (Domeniul in care activeaza Sponsorul)

**Entitatea Istoric\_Jucator:**

Cheia primara a acestei entitati este **id\_istoric\_jucator**

Avand urmatoarele attribute:

* experienta\_juc (Experienta jucatorului exprimata in ani)
* premii\_castigate\_juc (Numarul de premii castigate de jucator)
* victorii totale juc (Victoriile totale ale jucatorului)

**4.** Descrierea relațiilor, incluzând precizarea cardinalității acestora.

**Jucatorul** si **Antrenorul** participia la **Antrenament**(Many-to-Many)

* relatie care leaga entitatile Jucator, Antrenor si Antrenament

**Sponsorul** sponsorizeaza **jucatorul** (Many-to-Many)

* relatie care leaga entitatile Sponsor si Jucator

**Jucatorul** joaca la o **competitie(**Many-to-Many)

* relatie care leaga entitatile Jucator si Competitie

**Competitia** are loc intr-o **Tara**(Many-to-One)

- relatie care leaga entitatile Competitie si Tara

**5.** Descrierea atributelor, incluzând tipul de date și eventualele constrângeri, valori implicite, valori posibile ale atributelor.

**Pentru Entitatea Competitie :**

* Nume\_competitie (VARCHAR(15))
* Data\_incep\_comp (DATE)
* Data\_sfarsit\_comp (DATE)
* Tara\_comp (VARCHAR(15))
* Conditii\_part (este nevoie de un minim de puncte, astfel acesta va fi un NUMBER(5))

**Pentru Entitatea Premiu :**

* Suma\_premiu (NUMBER(8,2))
* puncte\_premiu (NUMBER(5))

**Pentru Entitatea Tara:**

* Nume\_tara (VARCHAR(20))

**Pentru Entitatea Oras:**

* Nume\_oras (VARCHAR(20))

**Pentru Entitatea Locatie:**

* Nume\_adresa (VARCHAR(20))
* Numar\_adresa (NUMBER(5))
* Nr\_spectatori\_pos (NUMBER(6))
* Nr\_spectatori\_prez (NUMBER(6))

**Pentru Entitatea Jucator:**

* nume\_juc (VARCHAR(20))
* prenume\_juc (VARCHAR(20))
* an\_nastere\_juc (NUMBER(5))
* gen\_juc(CHAR(1))
* salariu\_juc (NUMBER(6,2))

**Pentru Entitatea Fani:**

* numar\_fani (NUMBER(6))

**Pentru Entitatea Clasament:**

* pozitie\_clasament (NUMBER(3))

**Pentru Entitatea Antrenor :**

* nume\_ant (VARCHAR(20))
* prenume\_ant (VARCHAR(20))
* an\_nastere\_ant (NUMBER(4))
* gen\_ant (CHAR(1))
* experienta\_ant (NUMBER(2))
* salariu\_ant (NUMBER(6,2))

**Pentru Entitatea Club:**

* nume\_club (VARCHAR(20))
* nr\_juc\_club (NUMBER(4))
* an\_ap\_club (NUMBER(4))

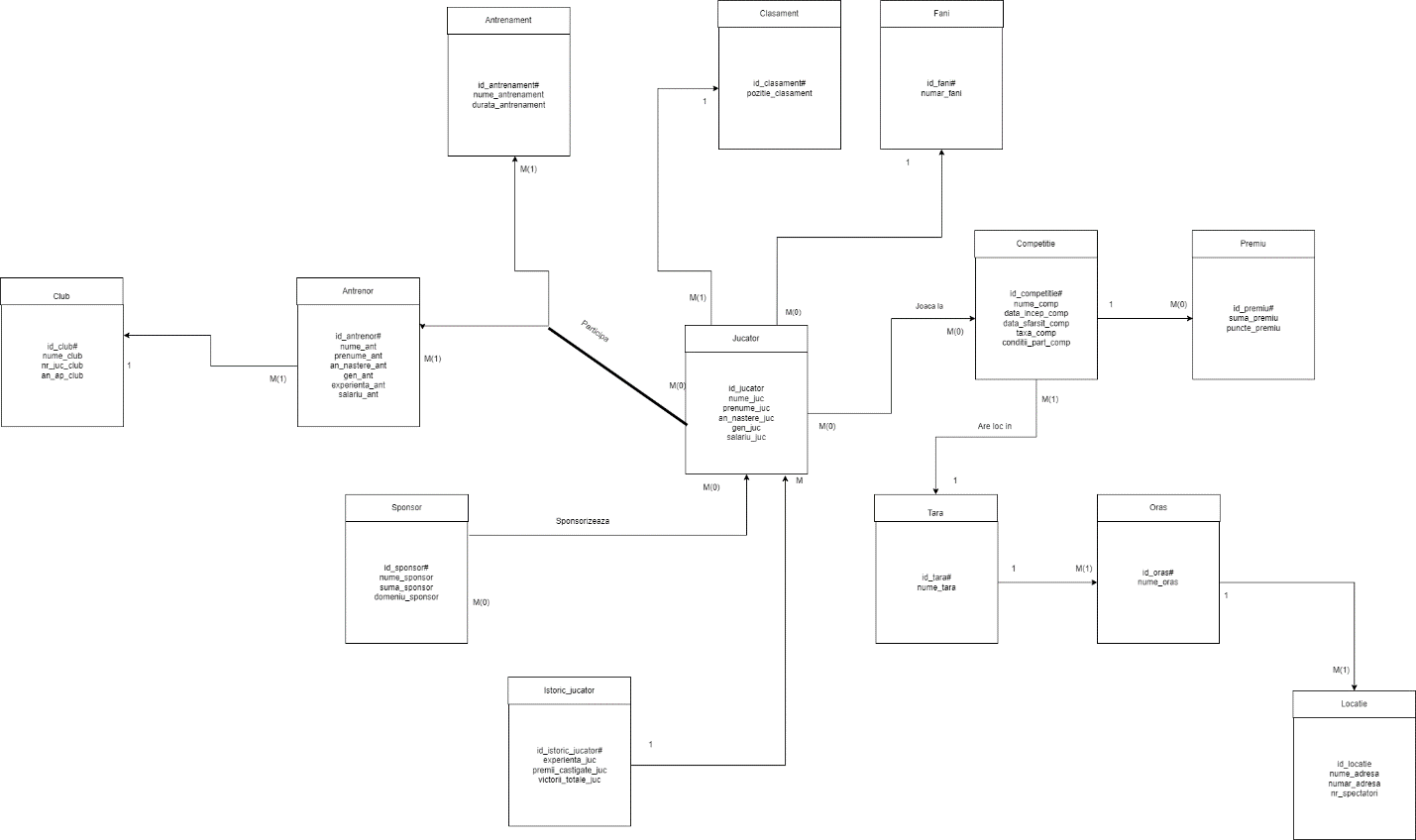
**Pentru Entitatea Sponsor:**

* nume\_sponsor (VARCHAR(20))
* suma\_sponsor (NUMBER(8,2))
* domeniu\_sponsor (VARCHAR(15))

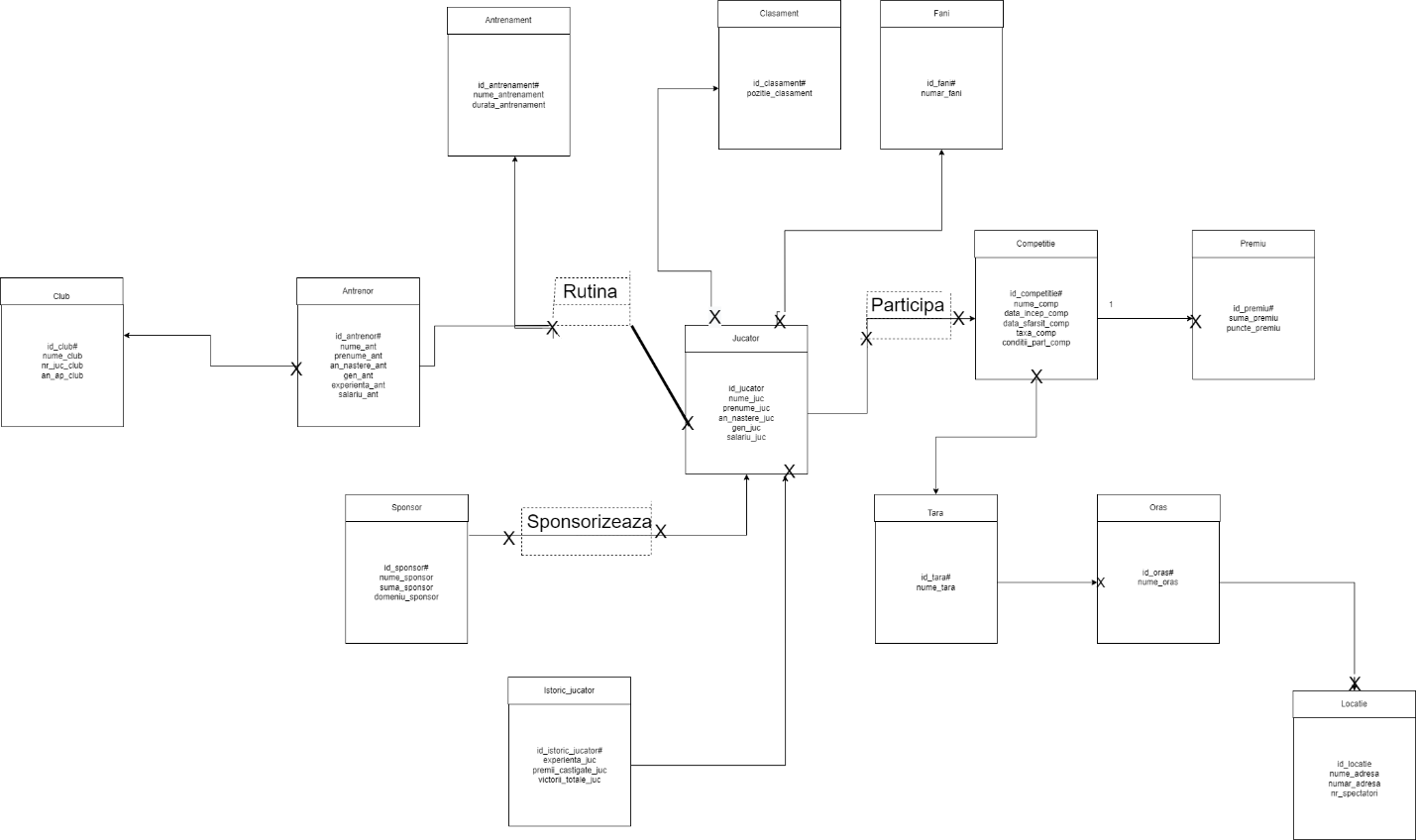
**Pentru Entitatea Istoric\_Jucator:**

* experienta\_juc (NUMBER(2))
* premii\_castigate\_juc (NUMBER(3))
* victorii totale juc (NUMBER(4))

6. Realizarea Diagramei Entitate-Relatie



7. Realizarea diagramei Conceptuale



**8. Enumerarea schemelor relationale corespunzatoare diagramei conceptuale**.

Jucator(id\_jucator#,nume\_juc,prenume\_juc,an\_nastere\_juc,gen\_juc,salariu\_juc)

Clasament(id\_clasament#,pozitie\_clasament)

Fani(id\_fani#,numar\_fani)

Competitie(id\_competitie#,nume\_comp,data\_incep\_comp,data\_sfarsit\_comp,taxa\_comp,conditii\_part\_comp)

Premiu(id\_premiu#,suma\_premiu,puncte\_premiu)

Tara(id\_tara#,nume\_tara)

Oras(id\_oras, nume\_oras)

Locatie(id\_locatie,nume\_adresa,numar\_adresa,nr\_spectatori)

Istoric\_jucator(id\_istoric\_jucator#,experienta\_juc,premii\_castigate\_juc,victorii\_totale\_juc)

Sponsor(id\_sponsor#,nume\_sponsor,suma\_sponsor,domeniu\_sponsor)

Antrenor(nume\_ant,prenume\_ant,an\_nastere\_ant,gen\_ant,experienta\_ant,salariu\_ant)

Club(id\_club#,nume\_club,nr\_juc\_club,an\_ap\_club)

Antrenament(id\_antrenament#,nume\_antrenament,durata\_antrenament)

**9.**

**Forma Normala 1 (FN1)**

O relatie se afla in FN1 daca fiecare atribut din care aceasta este alcatuita ii este asociata o valoare indivizibila. De asemenea forma normala 1 impune si cheia primara a fiecarei entitati.

In acest caz, voi folosi un exemplu din baza mea de date pentru aducerea acesteia la forma normala 1.

Vom utiliza entitatile Club si Antrenor.

|  |  |
| --- | --- |
| Team1 | Popescu Andrei, Alexandra Nicolae |
| Team2 | Andreescu Mihai, Alexandra Nicolae |
| Team3 | Popescu Andrei, Andreescu Mihai |
| Team4 | Alexandra Nicolae, Mihaela Stan |

Din cate se poate vedea, aceluias club ii sunt asociati mai multi antrenori.Astfel daca ne ma dorii sa interogam si sa aflam la ce echipa se afla antrenorul Popescu Andrei, dar si Alexandra Nicolae, ar trebuii sa interogam fiecare raspuns si sa l delimitam prin subsiruri. O solutie a acestei probleme, ce ne va aduce in FN1 este separarea acestora, si adaugarea unei chei primare.

|  |  |  |
| --- | --- | --- |
| 1 | Team1 | Popescu Andrei |
| 2 | Team1 | Alexandra Nicolae |
| 3 | Team2 | Andreescu Mihai |
| 4 | Team2 | Alexandra Nicolae |
| 5 | Team3 | Popescu Andrei |
| 6 | Team3 | Andreescu Mihai |
| 7 | Team4 | Alexandra Nicolae |
| 8 | Team4 | Mihaela Stan |

**Forma normala 2 ( FN2 )**

Ne imaginam entitatea **Realizari**. In aceasta stocam realizarile jucatorului, considerand ca acelea sunt numarul de fani ai acestuia, dar si pozitia actuala in clasament. Pentru a ne incadra in forma normala 2, trebuie ca mai intai sa fim in forma normala 1, ceea ce este adevarat, iar apoi, fiecare atribut sa depinda in intregime de cheia primara. In cazul nostru, asta ar insemna ca atributul nr\_fani si atributul poz\_clasament sa depinda in intregime din cheia compusa id\_fani si id\_clasament. In mod evident se poate vedea ca nr\_fani este clar dependenta de id\_fani si doar atat, respective poz\_clasament cu id\_clasament. Pentru a aduce in forma normala 2, putem separa in 2 entitati. Entitatea Fani, si respective, entitatea Clasament.

**Realizari**

|  |  |  |  |
| --- | --- | --- | --- |
| **id\_fani#** | **Nr\_fani** | **id\_clasament#** | **Poz\_clasament** |
| 1 | 150 | 30 | 25 |
| 2 | 200 | 40 | 30 |
| 3 | 300 | 50 | 35 |

**Fani Clasament**

|  |  |
| --- | --- |
| **Id\_fani** | **Nr\_fani** |
| 1 | 150 |
| 2 | 200 |
| 3 | 300 |

|  |  |
| --- | --- |
| Id\_clasament | Poz\_clasament |
| 30 | 25 |
| 40 | 30 |
| 50 | 35 |

Astfel, in aceste cazuri, atributele fiecarei entitati depend de intreaga cheie primara. Respectiv nr\_fani depinde in intregime de cheia primara id\_fani, iar poz\_clasament depinde la randul ei in intregime de cheia primara id\_clasament.

**Forma Normala 3 (FN3)**

Pentru a putea ajunge la Forma normala 3 trebuie ca ma intai sa ne aflam in Forma Normala 2.

Vom lua drept exemplu entitatea Oras. Aici avem atributele urmatoare

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Id\_oras# | Nume\_oras | Nume\_adresa | Nr\_adresa | Nr\_spectatori |
| 23 | Bucuresti | Piata Obor | 20 | 20000 |
| 24 | Cluj | Piata Uniri | 25 | 10000 |

Se poate vedea ca atributele nr\_adresa si nr spectator depend de atributul nume\_adresa care la randul sau depinde de cheia primara id\_oras. Astfel, am putea crea o noua entitate numita Locatie, iar in entitatea Oras sa pastram un id al acestei locatii

**Oras**

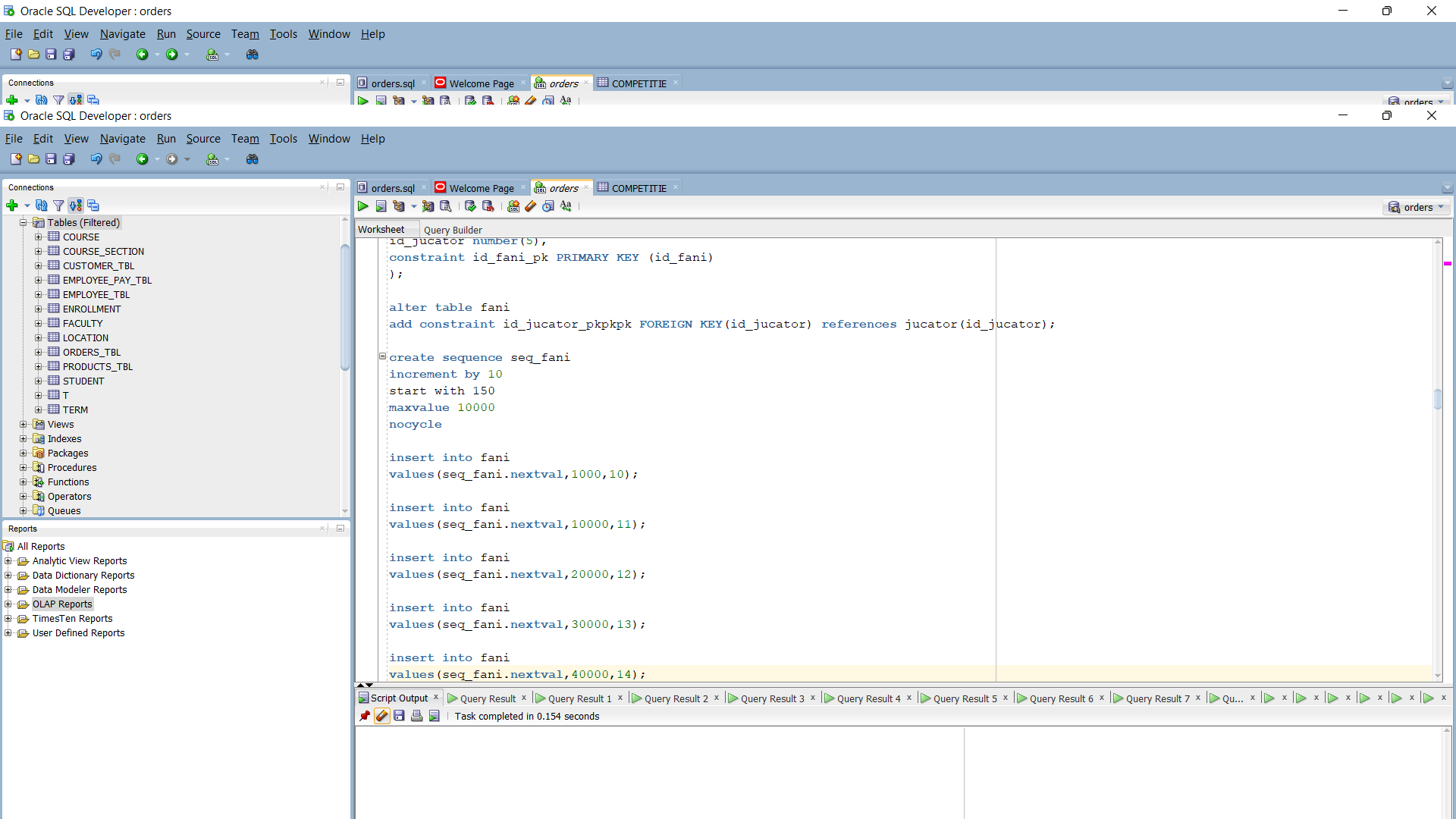
|  |  |  |
| --- | --- | --- |
| Id\_oras# | Nume\_oras | Id\_locatie# |
| 3 | Bucuresti | 4 |

**Locatie**

|  |  |  |  |
| --- | --- | --- | --- |
| **Id\_locatie** | **Nume\_adresa** | **Numar\_adresa** | **Nr\_spectatori** |
| **4** | **Piata Unirii** | **2** | **10000** |

Astfel, toate atributele depend direct de cheia primara, si de asemenea ne aflam in formala normala 2.

10. Crearea unei secvente



Create sequence seq\_fani

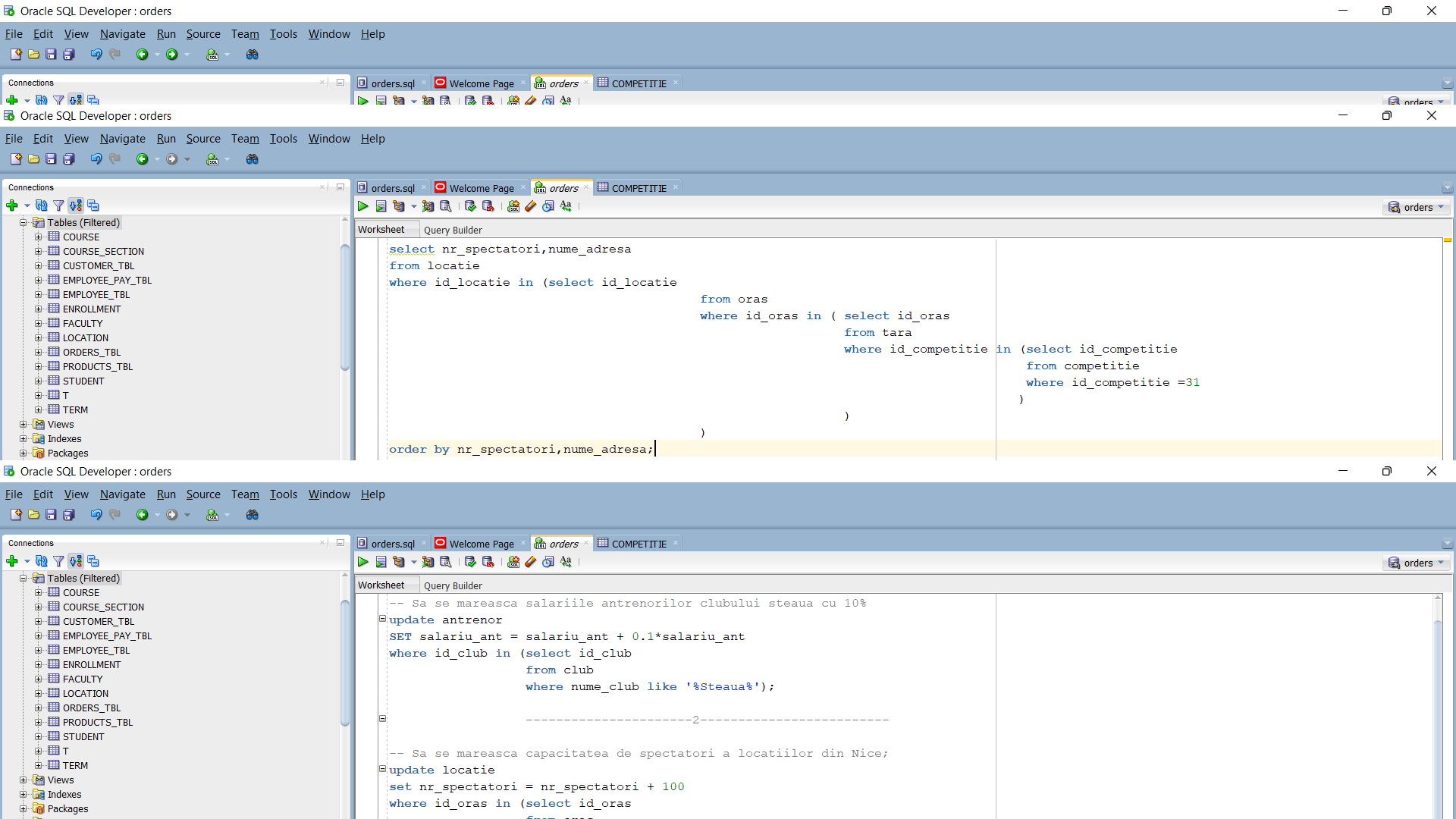
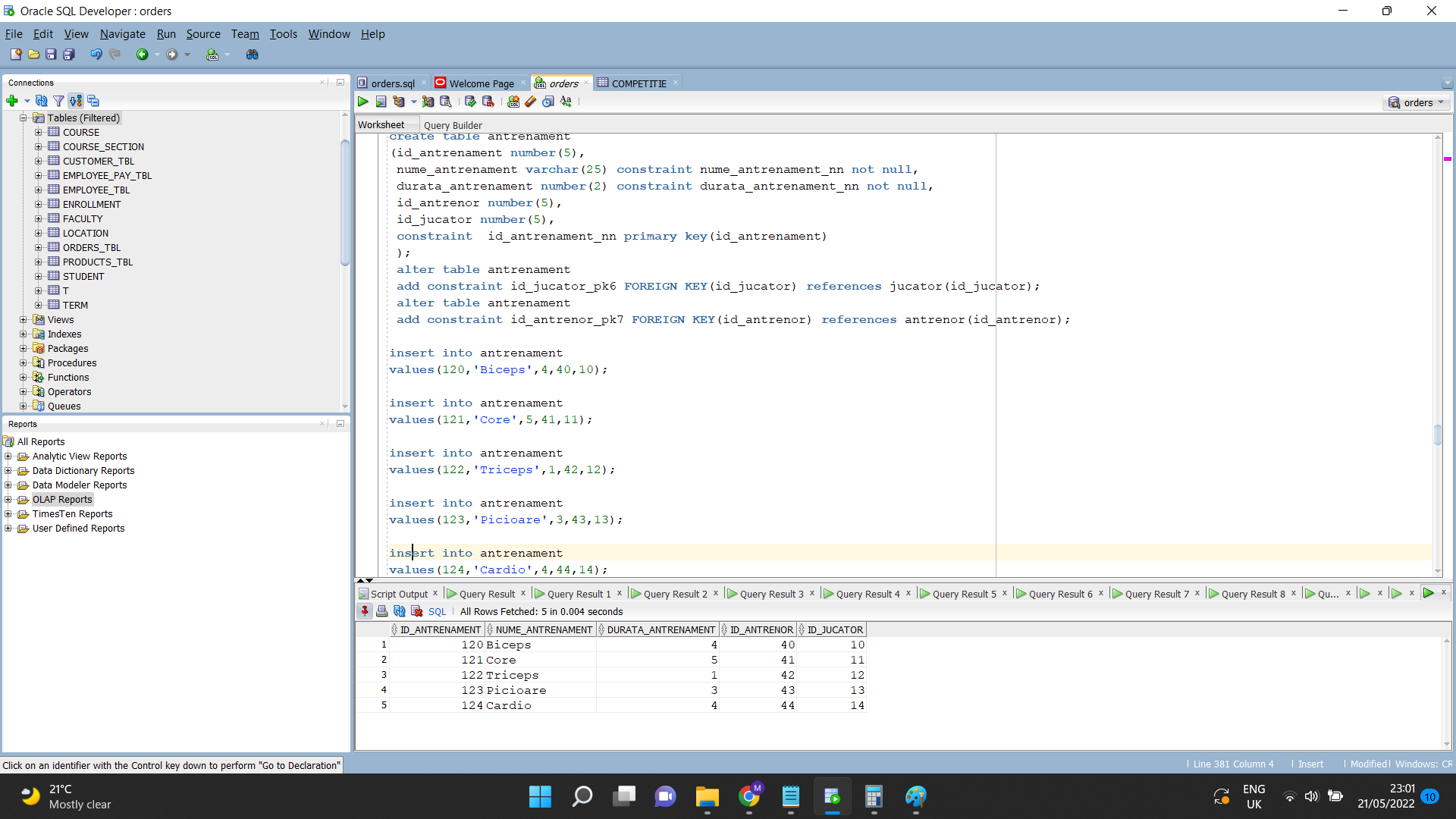
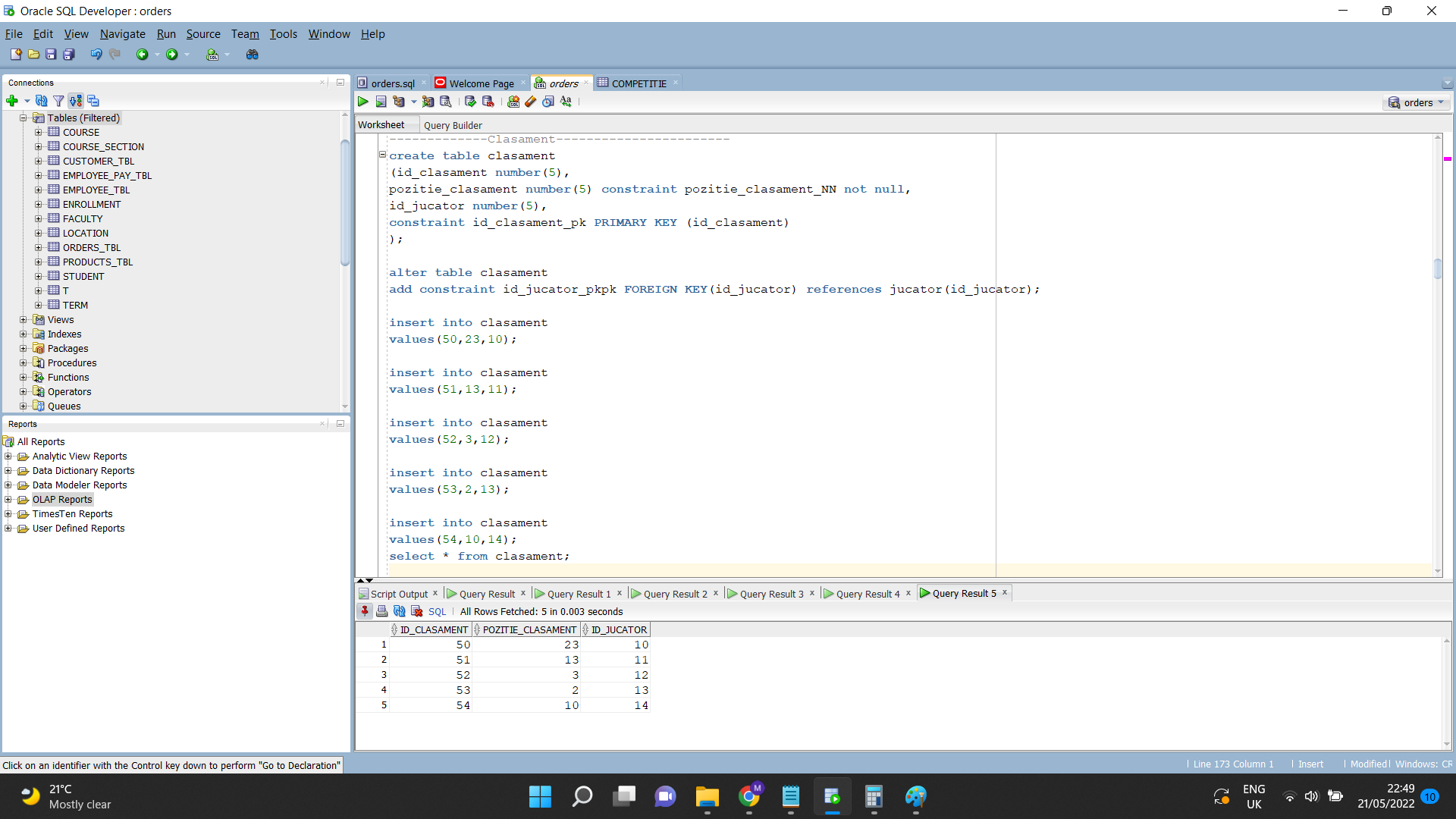
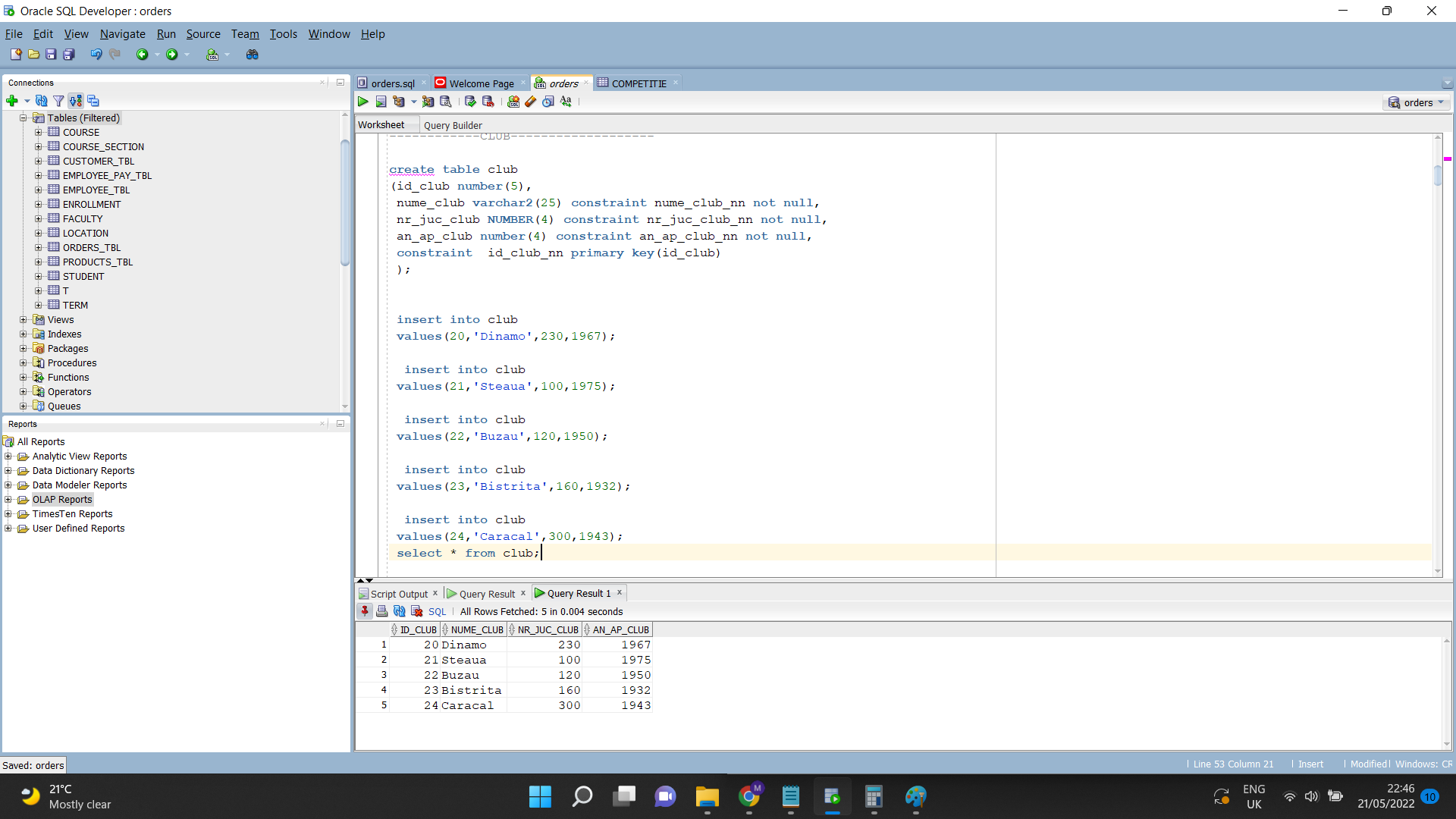
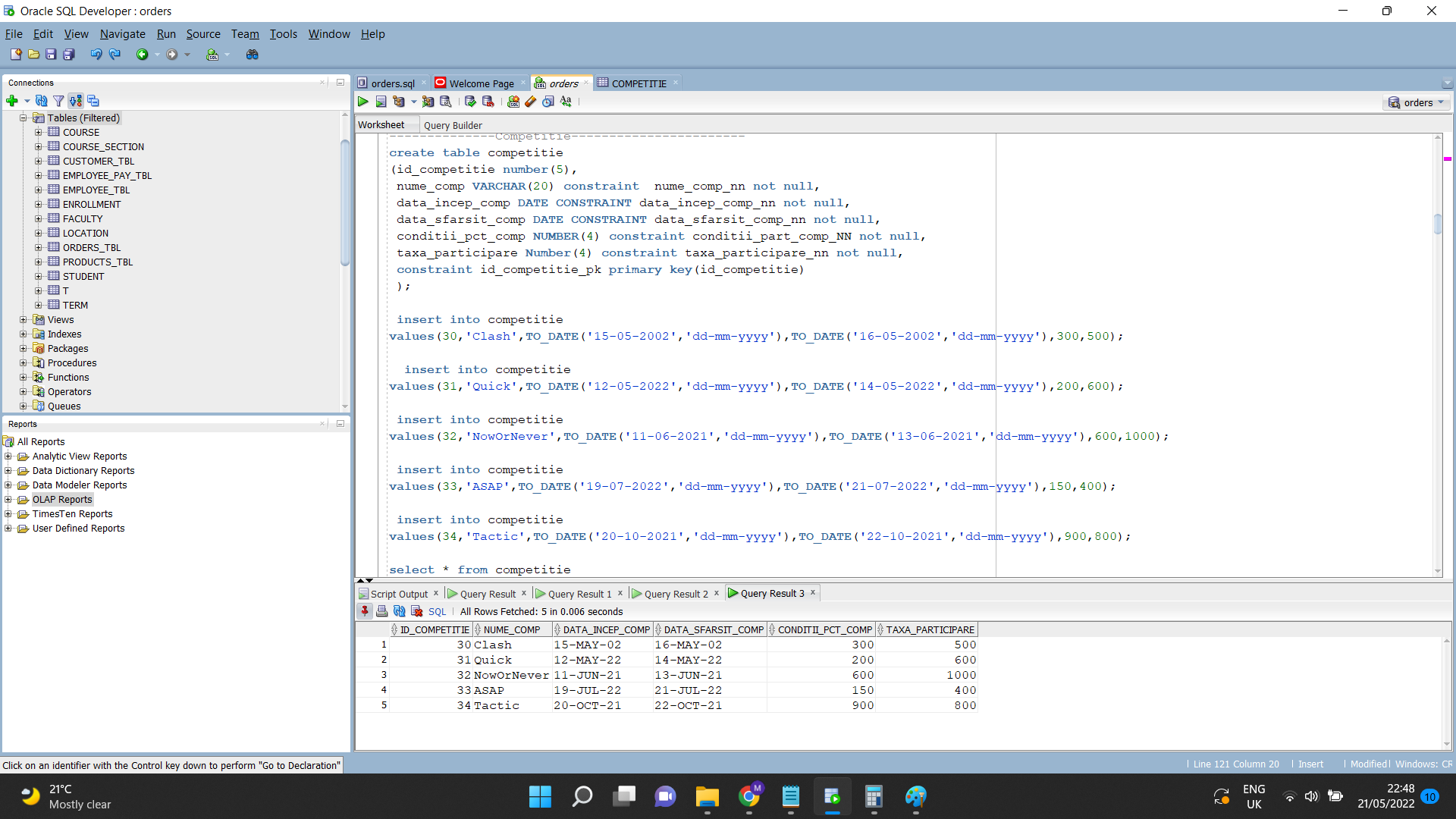
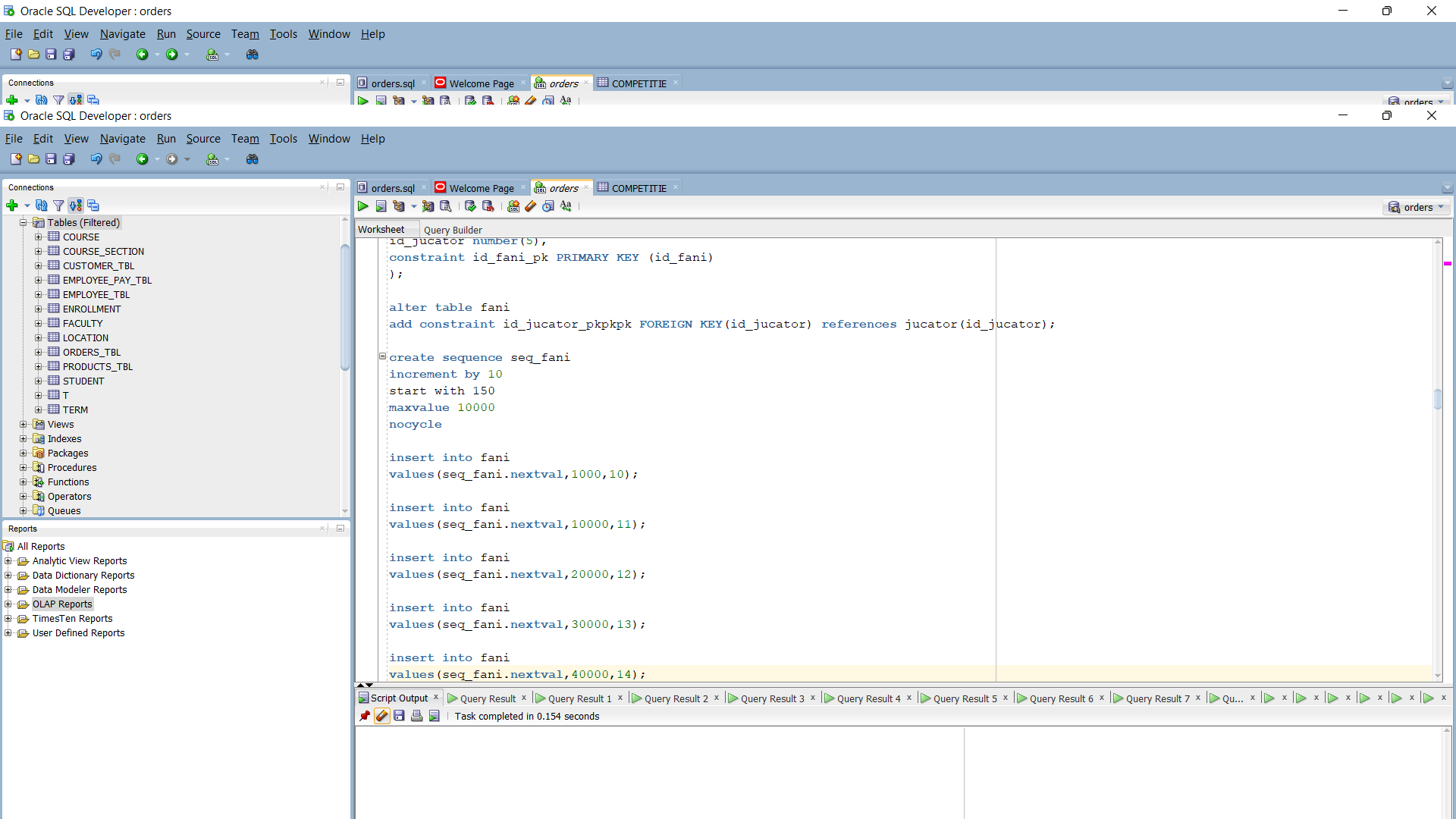
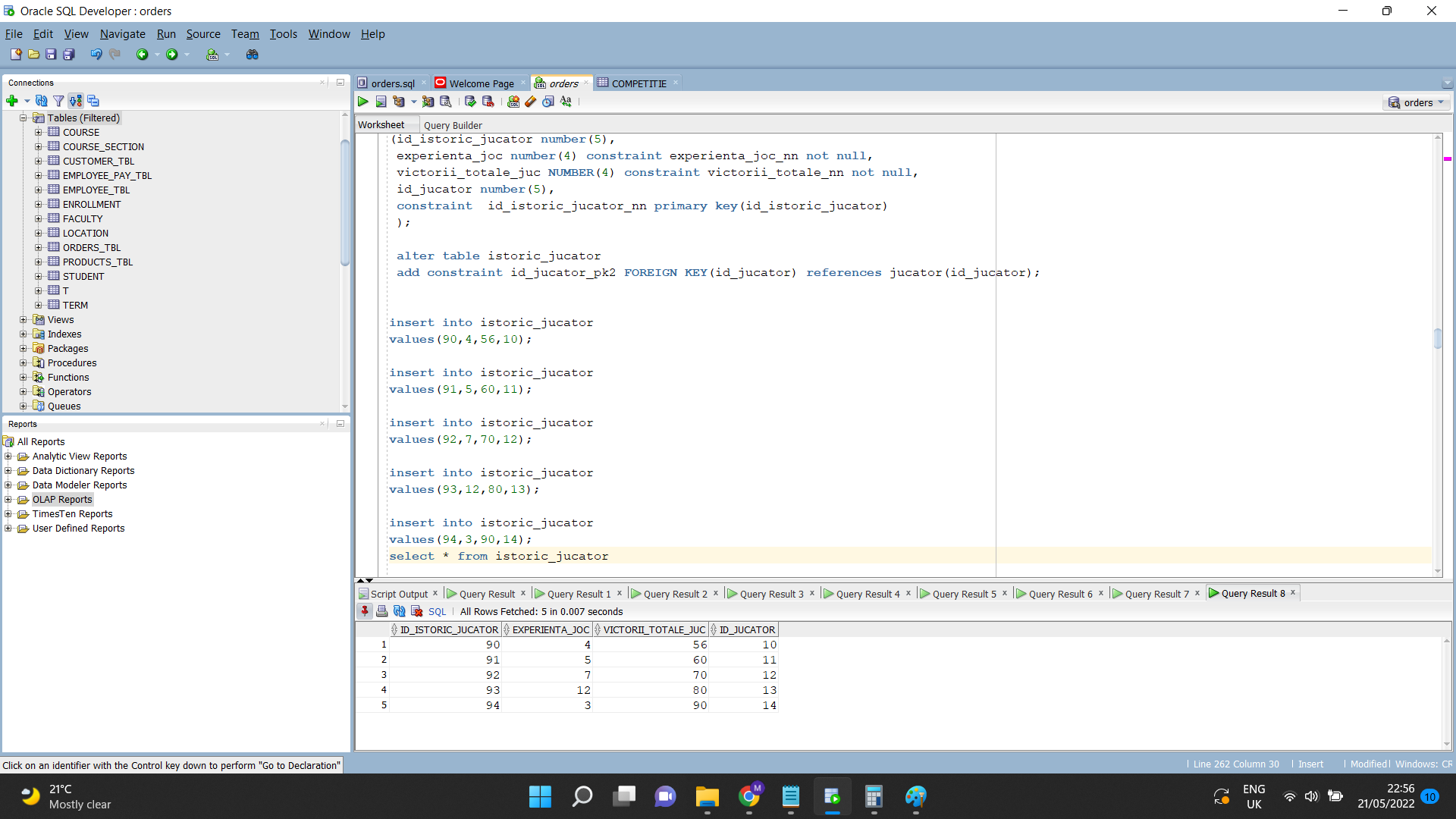
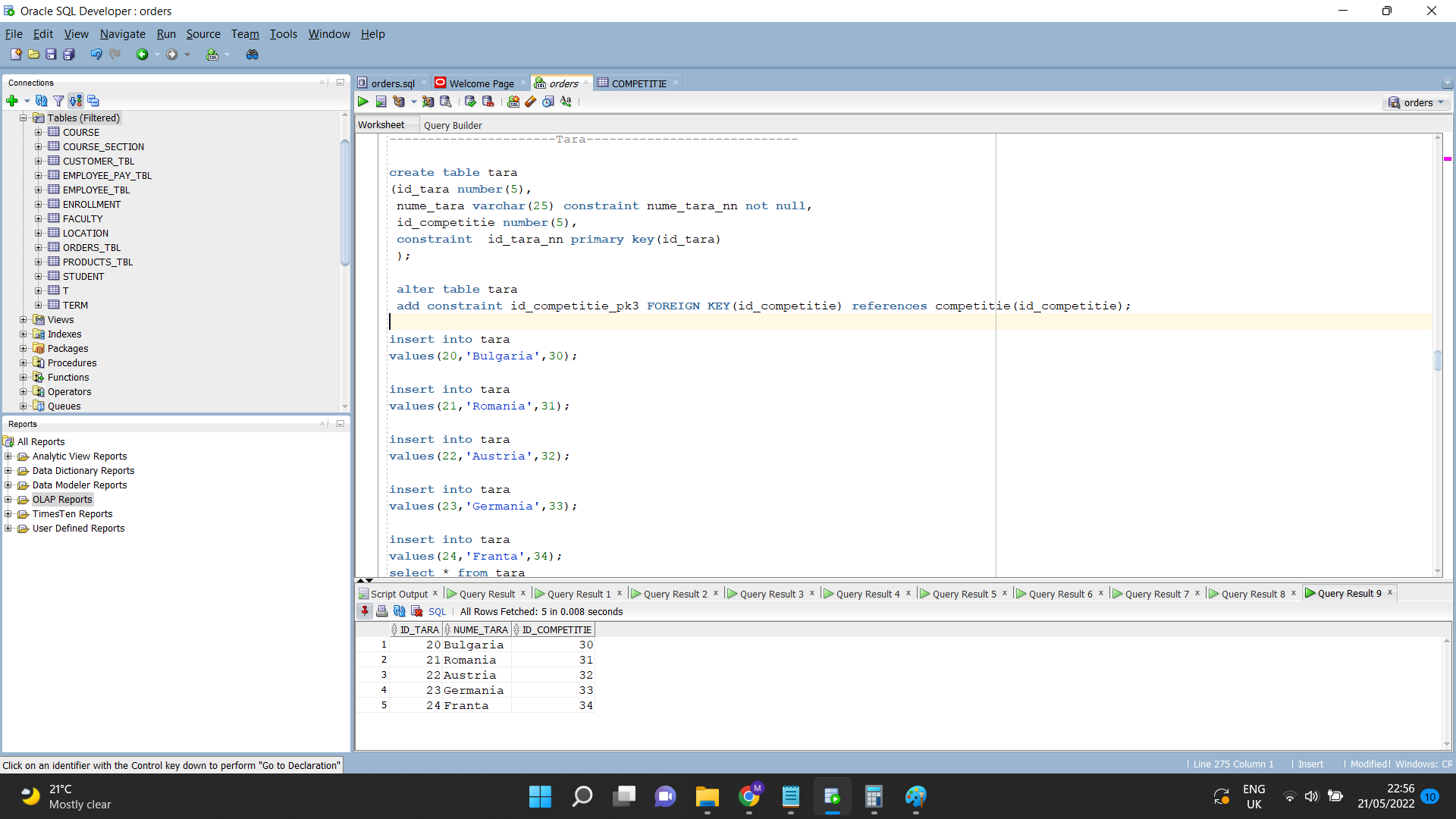
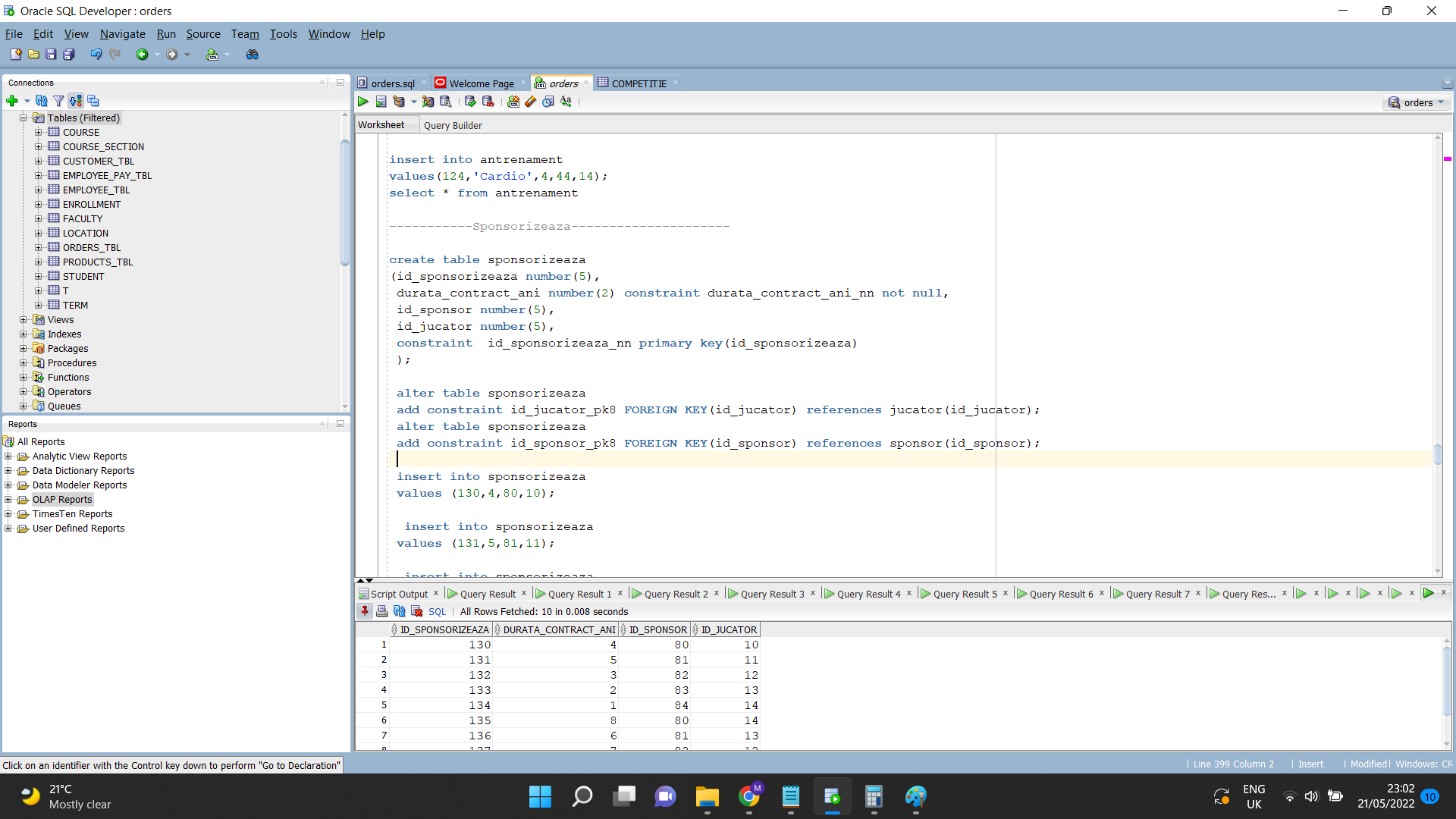
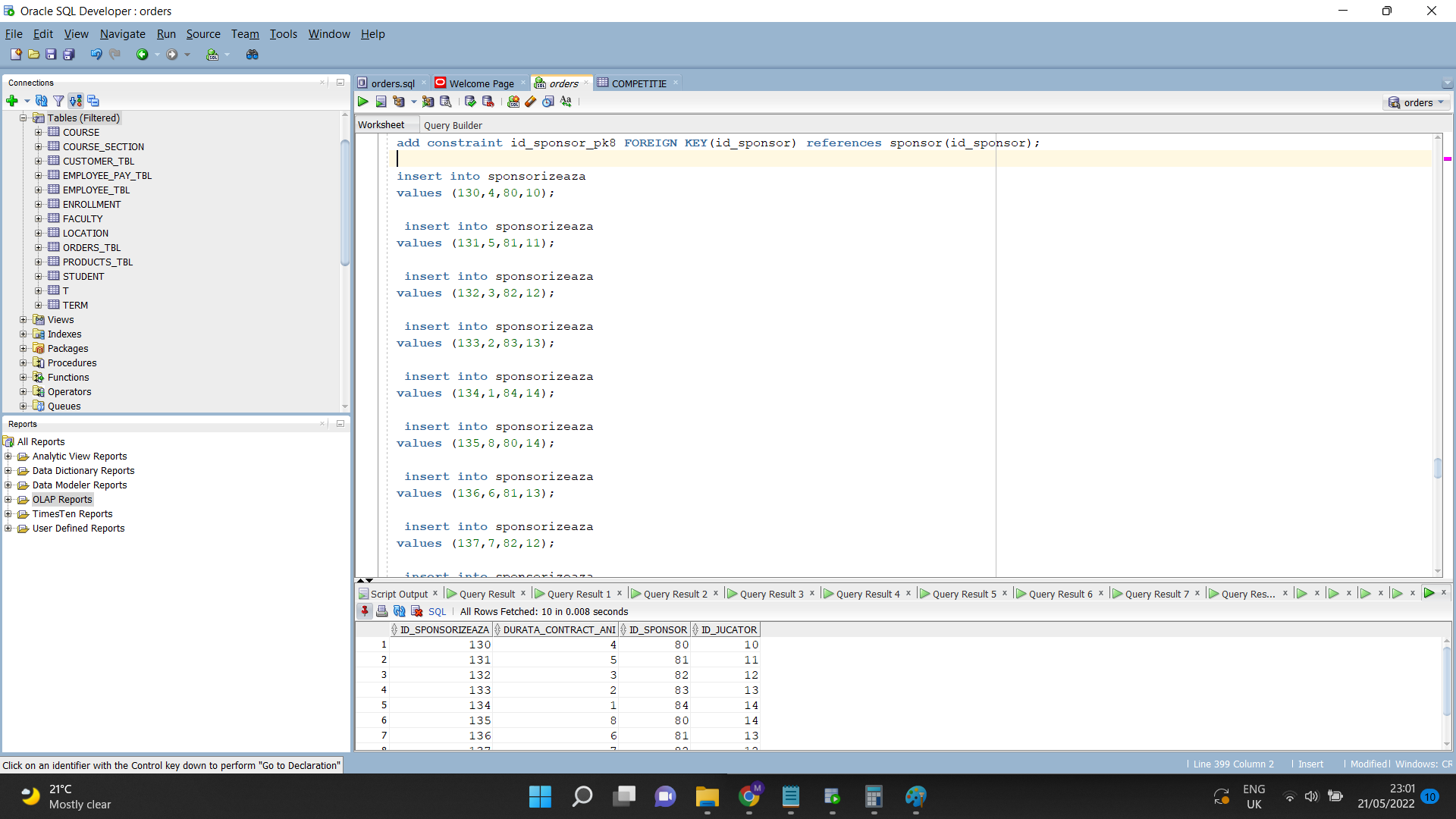
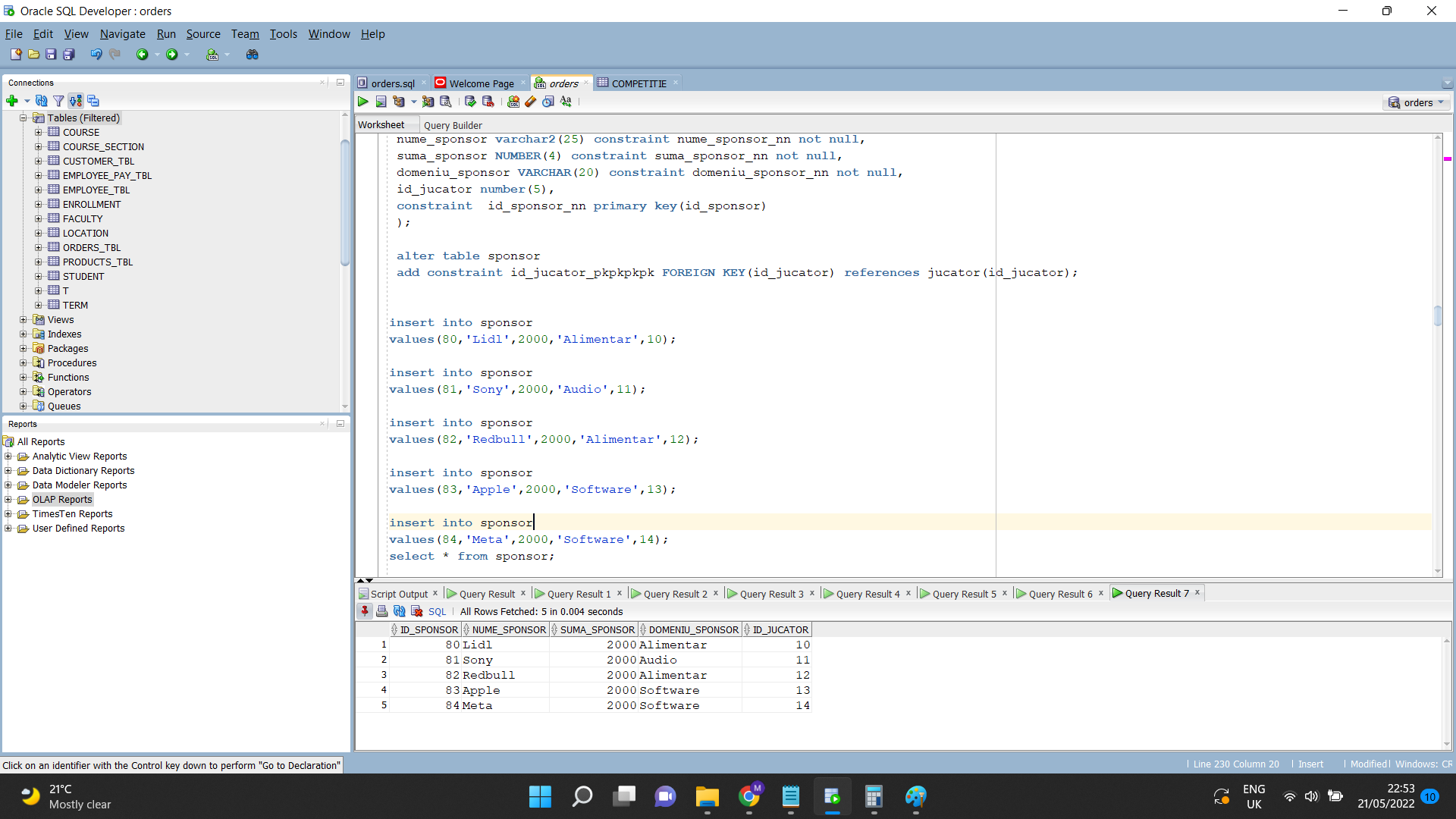
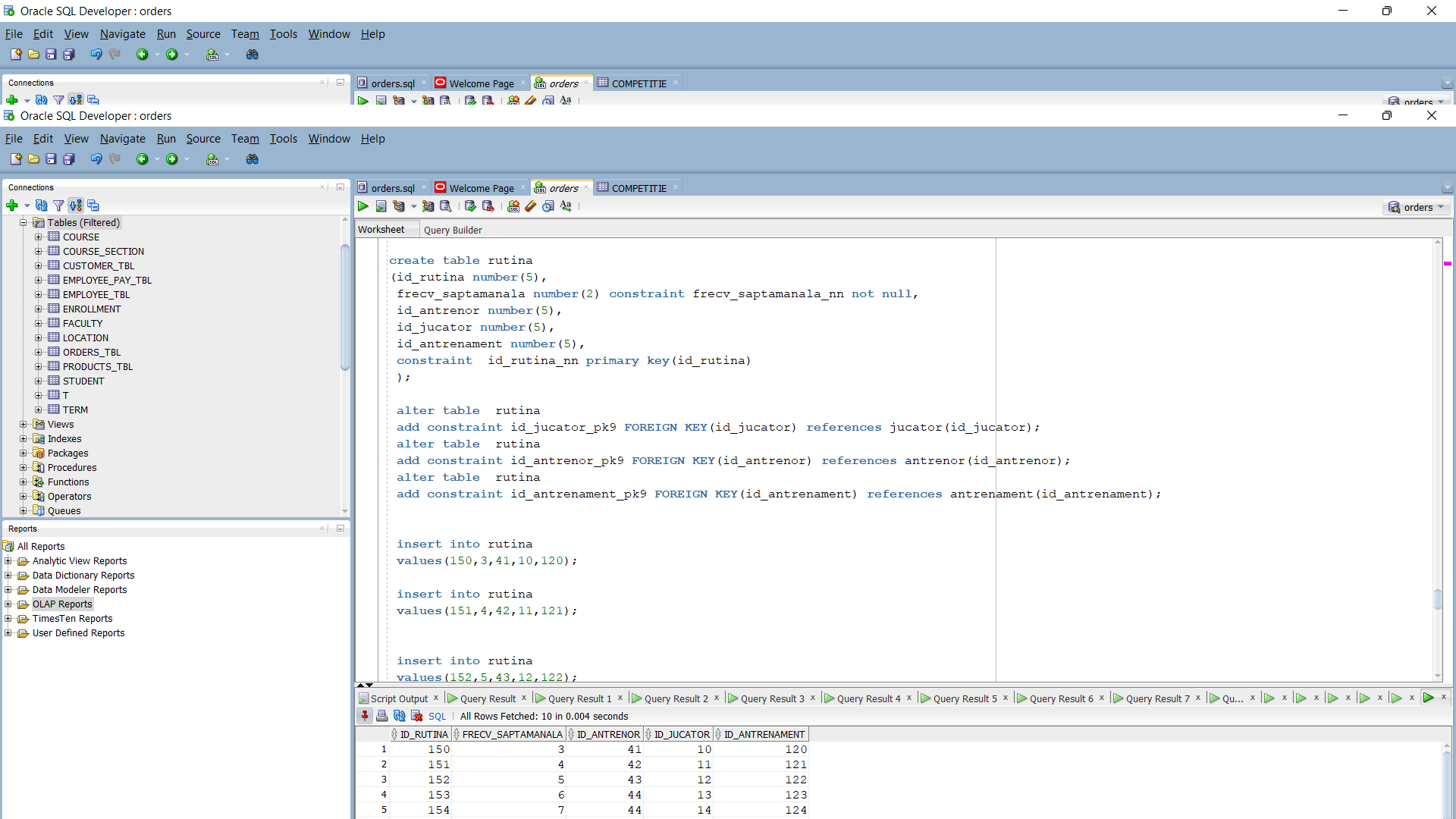
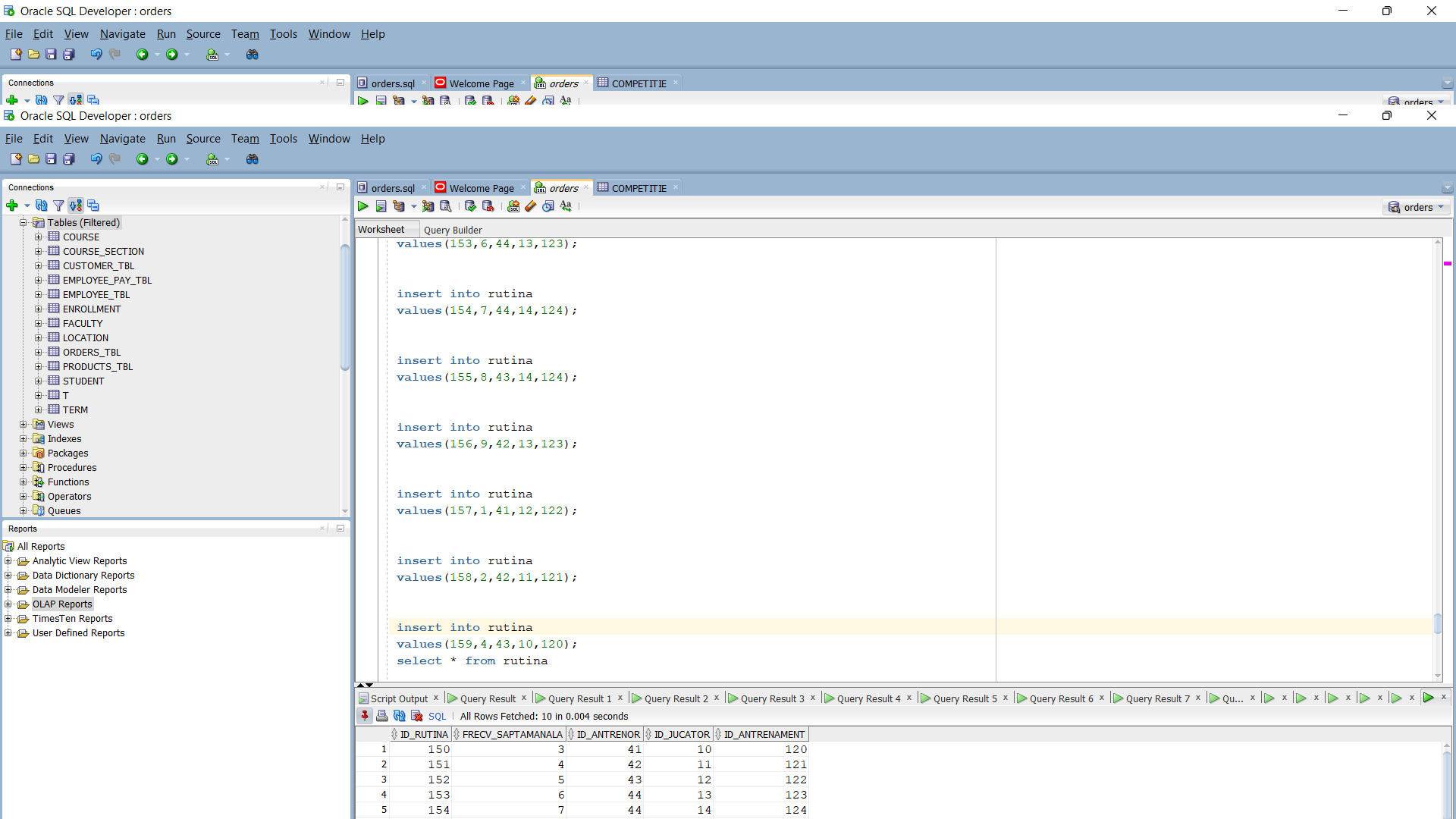
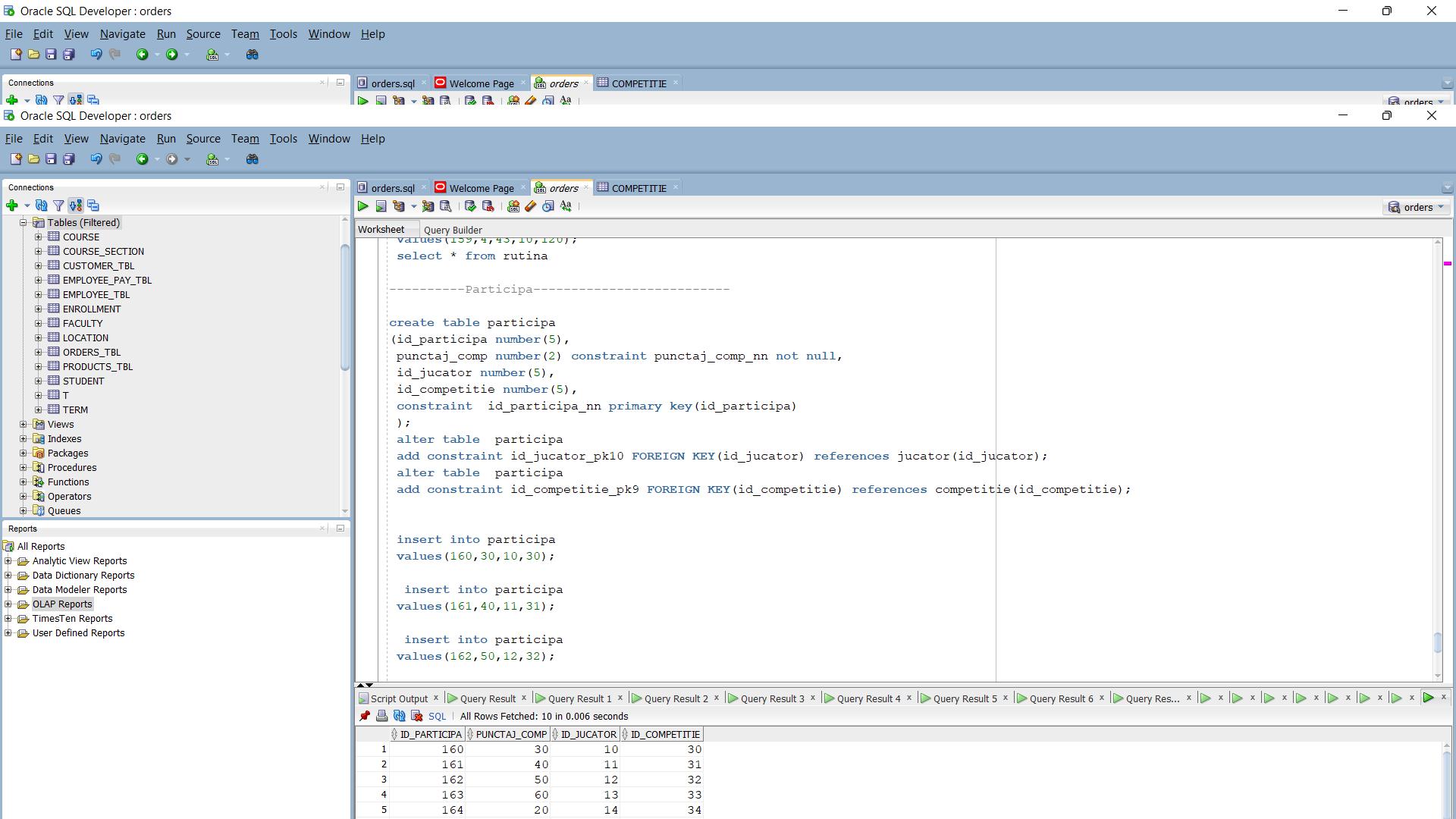
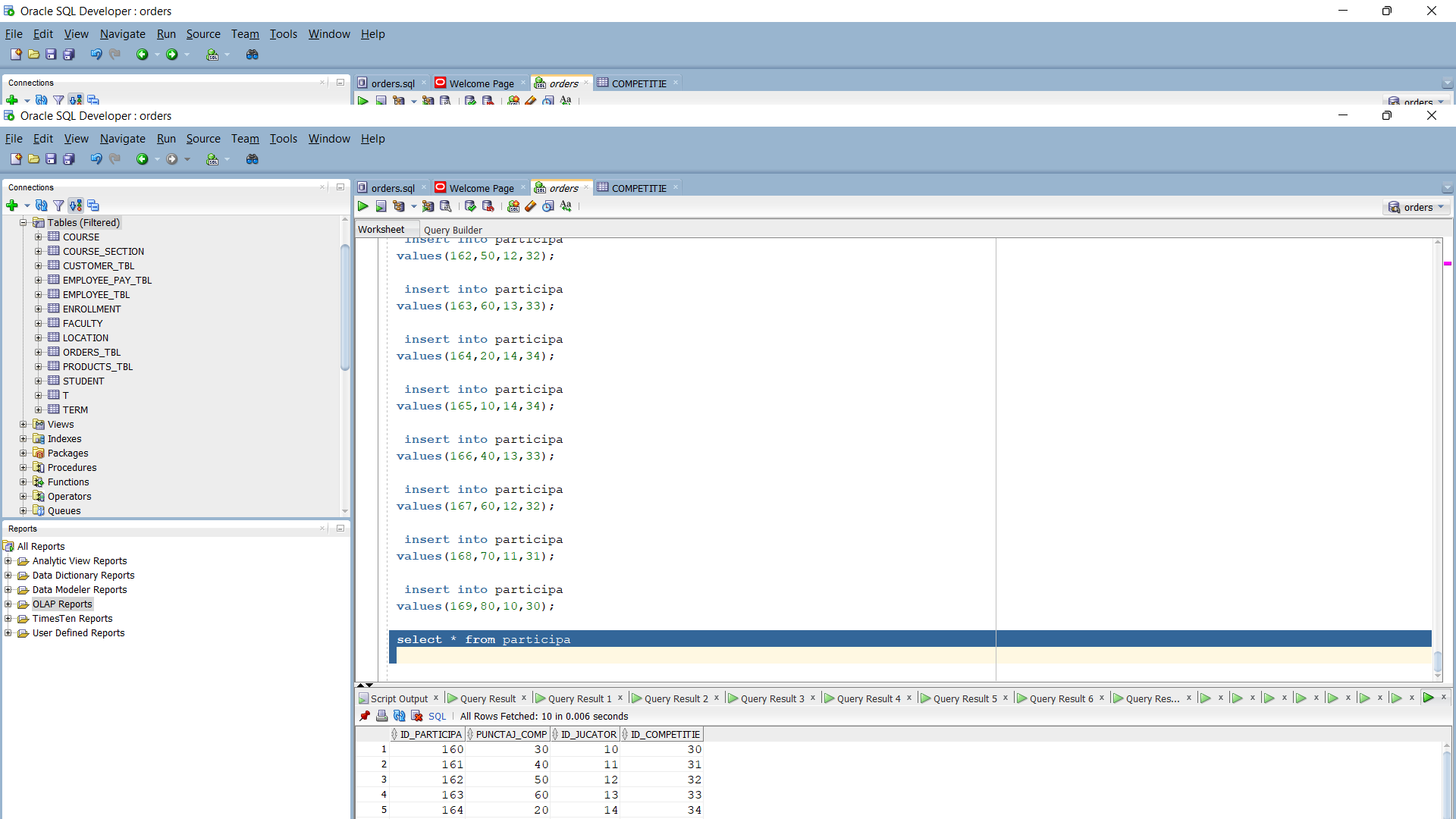
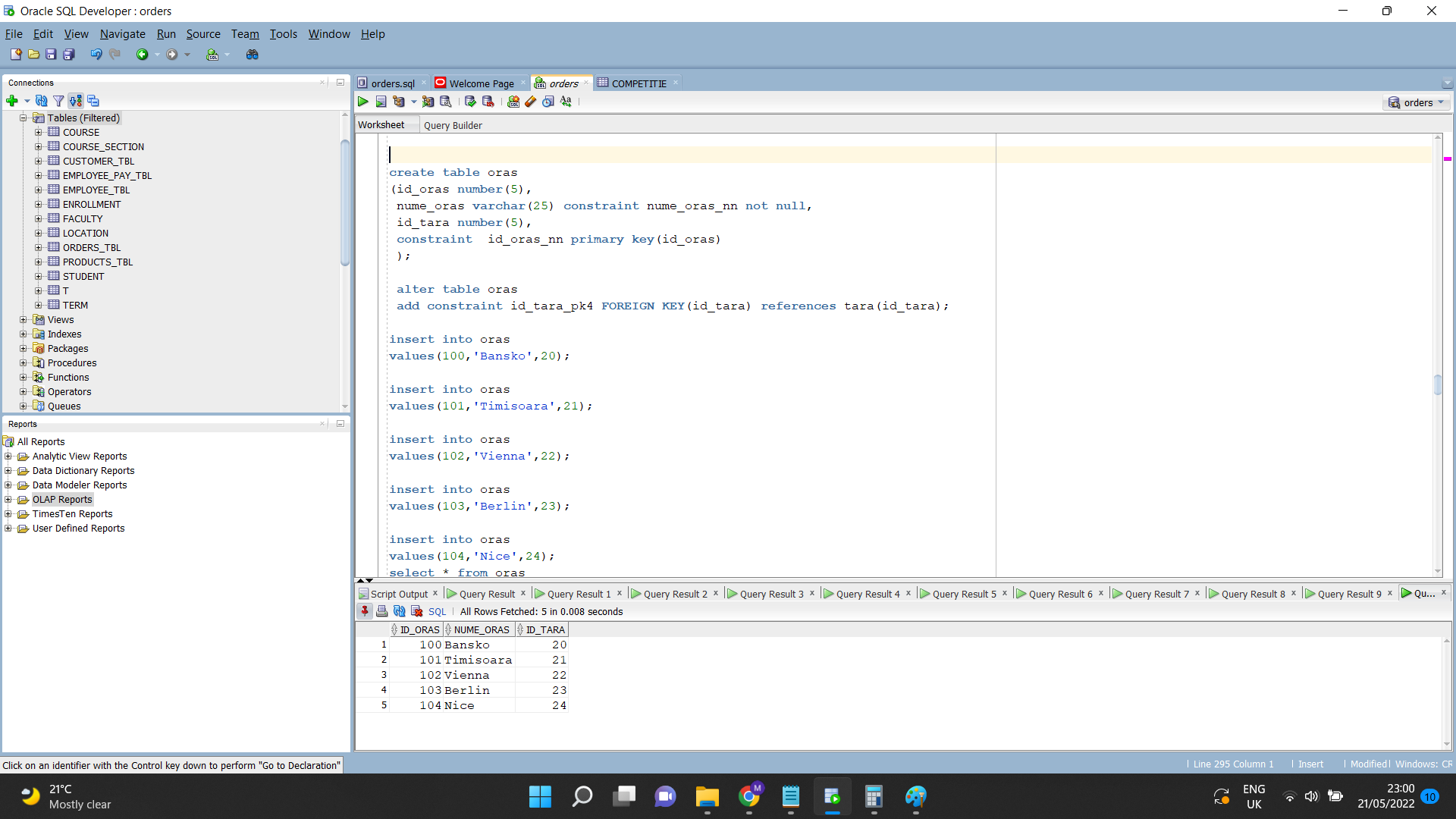
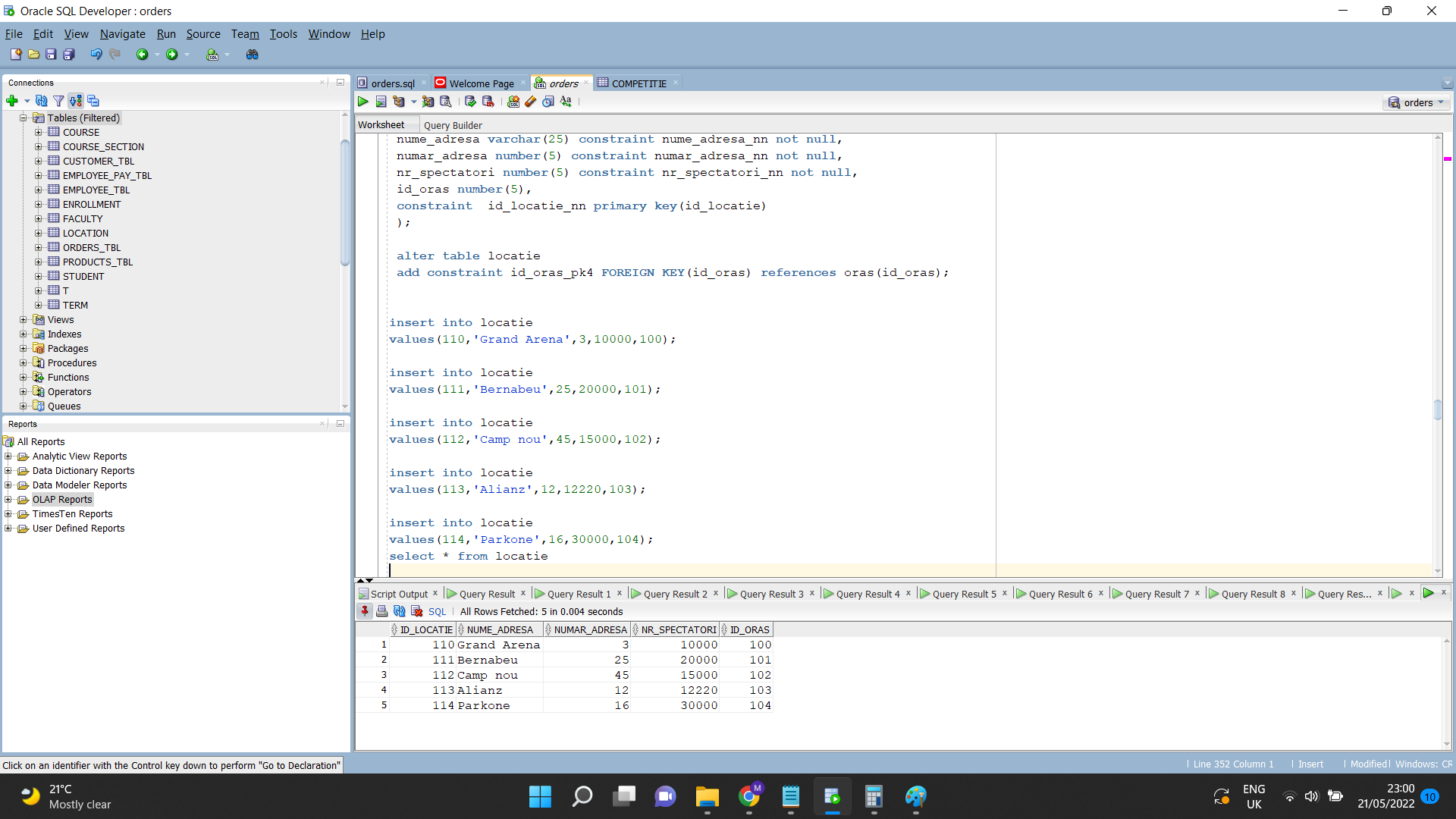
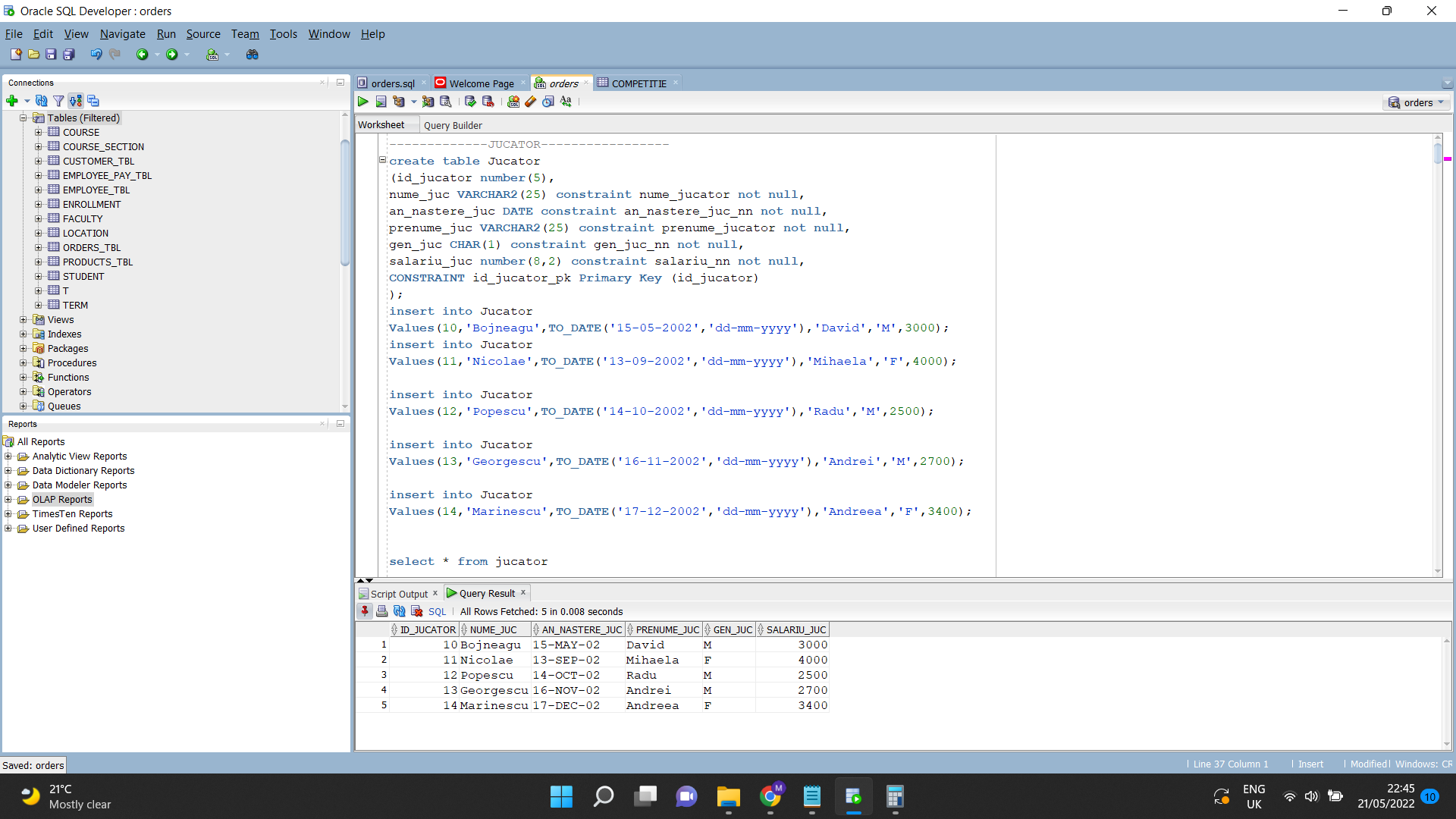
Increment by 10

Start with 150

Maxvalue 10000

Nocycle;

11. Inserarea tabelelor



-------------JUCATOR-----------------

create table Jucator

(id\_jucator number(5),

nume\_juc VARCHAR2(25) constraint nume\_jucator not null,

an\_nastere\_juc DATE constraint an\_nastere\_juc\_nn not null,

prenume\_juc VARCHAR2(25) constraint prenume\_jucator not null,

gen\_juc CHAR(1) constraint gen\_juc\_nn not null,

salariu\_juc number(8,2) constraint salariu\_nn not null,

CONSTRAINT id\_jucator\_pk Primary Key (id\_jucator)

);

insert into Jucator

Values(10,'Bojneagu',TO\_DATE('15-05-2002','dd-mm-yyyy'),'David','M',3000);

insert into Jucator

Values(11,'Nicolae',TO\_DATE('13-09-2002','dd-mm-yyyy'),'Mihaela','F',4000);

insert into Jucator

Values(12,'Popescu',TO\_DATE('14-10-2002','dd-mm-yyyy'),'Radu','M',2500);

insert into Jucator

Values(13,'Georgescu',TO\_DATE('16-11-2002','dd-mm-yyyy'),'Andrei','M',2700);

insert into Jucator

Values(14,'Marinescu',TO\_DATE('17-12-2002','dd-mm-yyyy'),'Andreea','F',3400);

------------CLUB-------------------

create table club

(id\_club number(5),

nume\_club varchar2(25) constraint nume\_club\_nn not null,

nr\_juc\_club NUMBER(4) constraint nr\_juc\_club\_nn not null,

an\_ap\_club number(4) constraint an\_ap\_club\_nn not null,

constraint id\_club\_nn primary key(id\_club)

);

insert into club

values(20,'Dinamo',230,1967);

insert into club

values(21,'Steaua',100,1975);

insert into club

values(22,'Buzau',120,1950);

insert into club

values(23,'Bistrita',160,1932);

insert into club

values(24,'Caracal',300,1943);

-------------ANTRENOR----------------------

create table antrenor

(id\_antrenor Number(5),

nume\_ant VARCHAR2(20) constraint nume\_ant\_nn not null,

prenume\_ant VARCHAR2(20) constraint prenume\_ant\_nn not null,

anul\_nastere\_ant DATE CONSTRAINT an\_nastere\_ant NOT NULL,

gen\_ant CHAR(1) constraint gen\_ant\_nn not null,

experienta\_ant number(2),

salariu\_ant NUMBER(6,2) constraint salariu\_ant\_nn not null,

id\_club NUMBER(5),

CONSTRAINT gen\_antnn check ( gen\_ant = 'M' OR gen\_ant = 'F')

);

alter table antrenor

add constraint id\_antrenor\_pk primary key(id\_antrenor);

alter table antrenor

add constraint id\_club\_pkpk FOREIGN KEY (id\_club) REFERENCES club(id\_club);

insert into antrenor

values (40,'Andrei','Ciobanu',TO\_DATE('20-10-1990','dd-mm-yyyy'),'M',4,2500,21);

insert into antrenor

values (41,'Andreea','Nicula',TO\_DATE('26-10-1990','dd-mm-yyyy'),'F',5,5500,22);

insert into antrenor

values (42,'Luca','Andreescu',TO\_DATE('20-07-1990','dd-mm-yyyy'),'M',2,2200,21);

insert into antrenor

values (43,'Matei','Popovici',TO\_DATE('26-05-1990','dd-mm-yyyy'),'M',4,3300,24);

insert into antrenor

values (44,'Miruna','Gherman',TO\_DATE('24-07-1990','dd-mm-yyyy'),'F',4,2620,22);

--------------Competitie-----------------------

create table competitie

(id\_competitie number(5),

nume\_comp VARCHAR(20) constraint nume\_comp\_nn not null,

data\_incep\_comp DATE CONSTRAINT data\_incep\_comp\_nn not null,

data\_sfarsit\_comp DATE CONSTRAINT data\_sfarsit\_comp\_nn not null,

conditii\_pct\_comp NUMBER(4) constraint conditii\_part\_comp\_NN not null,

taxa\_participare Number(4) constraint taxa\_participare\_nn not null,

constraint id\_competitie\_pk primary key(id\_competitie)

);

insert into competitie

values(30,'Clash',TO\_DATE('15-05-2002','dd-mm-yyyy'),TO\_DATE('16-05-2002','dd-mm-yyyy'),300,500);

insert into competitie

values(31,'Quick',TO\_DATE('12-05-2022','dd-mm-yyyy'),TO\_DATE('14-05-2022','dd-mm-yyyy'),200,600);

insert into competitie

values(32,'NowOrNever',TO\_DATE('11-06-2021','dd-mm-yyyy'),TO\_DATE('13-06-2021','dd-mm-yyyy'),600,1000);

insert into competitie

values(33,'ASAP',TO\_DATE('19-07-2022','dd-mm-yyyy'),TO\_DATE('21-07-2022','dd-mm-yyyy'),150,400);

insert into competitie

values(34,'Tactic',TO\_DATE('20-10-2021','dd-mm-yyyy'),TO\_DATE('22-10-2021','dd-mm-yyyy'),900,800);

-------------Premiu-----------------------

create table premiu

(id\_premiu number(5),

suma\_premiu number(8,2) constraint suma\_premiu\_NN not null,

puncte\_premiu number(4) constraint puncte\_premiu\_nn not null,

id\_competitie number(5),

constraint id\_premiu\_pk PRIMARY KEY (id\_premiu)

);

alter table premiu

add constraint id\_comp\_pkpk FOREIGN KEY(id\_competitie) references competitie(id\_competitie);

insert into premiu

values(20,3000,100,30);

insert into premiu

values(21,4000,500,31);

insert into premiu

values(22,5000,400,31);

insert into premiu

values(23,6000,330,33);

insert into premiu

values(24,7000,250,30);

-------------Clasament-----------------------

create table clasament

(id\_clasament number(5),

pozitie\_clasament number(5) constraint pozitie\_clasament\_NN not null,

id\_jucator number(5),

constraint id\_clasament\_pk PRIMARY KEY (id\_clasament)

);

alter table clasament

add constraint id\_jucator\_pkpk FOREIGN KEY(id\_jucator) references jucator(id\_jucator);

insert into clasament

values(50,23,10);

insert into clasament

values(51,13,11);

insert into clasament

values(52,3,12);

insert into clasament

values(53,2,13);

insert into clasament

values(54,10,14);

--------------Fani----------------------

create table fani

(id\_fani number(5),

numar\_fani number(6) constraint numar\_fani\_NN not null,

id\_jucator number(5),

constraint id\_fani\_pk PRIMARY KEY (id\_fani)

);

alter table fani

add constraint id\_jucator\_pkpkpk FOREIGN KEY(id\_jucator) references jucator(id\_jucator);

create sequence seq\_fani

increment by 10

start with 150

maxvalue 10000

nocycle;

insert into fani

values(seq\_fani.nextval,1000,10);

insert into fani

values(seq\_fani.nextval,10000,11);

insert into fani

values(seq\_fani.nextval,20000,12);

insert into fani

values(seq\_fani.nextval,30000,13);

insert into fani

values(seq\_fani.nextval,40000,14);

----------------Sponsori--------------------------

create table sponsor

(id\_sponsor number(5),

nume\_sponsor varchar2(25) constraint nume\_sponsor\_nn not null,

suma\_sponsor NUMBER(4) constraint suma\_sponsor\_nn not null,

domeniu\_sponsor VARCHAR(20) constraint domeniu\_sponsor\_nn not null,

id\_jucator number(5),

constraint id\_sponsor\_nn primary key(id\_sponsor)

);

alter table sponsor

add constraint id\_jucator\_pkpkpkpk FOREIGN KEY(id\_jucator) references jucator(id\_jucator);

insert into sponsor

values(80,'Lidl',2000,'Alimentar',10);

insert into sponsor

values(81,'Sony',2000,'Audio',11);

insert into sponsor

values(82,'Redbull',2000,'Alimentar',12);

insert into sponsor

values(83,'Apple',2000,'Software',13);

insert into sponsor

values(84,'Meta',2000,'Software',14);

------------Istoric\_jucator----------------------

create table istoric\_jucator

(id\_istoric\_jucator number(5),

experienta\_joc number(4) constraint experienta\_joc\_nn not null,

victorii\_totale\_juc NUMBER(4) constraint victorii\_totale\_nn not null,

id\_jucator number(5),

constraint id\_istoric\_jucator\_nn primary key(id\_istoric\_jucator)

);

alter table istoric\_jucator

add constraint id\_jucator\_pk2 FOREIGN KEY(id\_jucator) references jucator(id\_jucator);

insert into istoric\_jucator

values(90,4,56,10);

insert into istoric\_jucator

values(91,5,60,11);

insert into istoric\_jucator

values(92,7,70,12);

insert into istoric\_jucator

values(93,12,80,13);

insert into istoric\_jucator

values(94,3,90,14);

----------------------Tara----------------------------

create table tara

(id\_tara number(5),

nume\_tara varchar(25) constraint nume\_tara\_nn not null,

id\_competitie number(5),

constraint id\_tara\_nn primary key(id\_tara)

);

alter table tara

add constraint id\_competitie\_pk3 FOREIGN KEY(id\_competitie) references competitie(id\_competitie);

insert into tara

values(20,'Bulgaria',30);

insert into tara

values(21,'Romania',31);

insert into tara

values(22,'Austria',32);

insert into tara

values(23,'Germania',33);

insert into tara

values(24,'Franta',34);

-----------------------Oras--------------------------

create table oras

(id\_oras number(5),

nume\_oras varchar(25) constraint nume\_oras\_nn not null,

id\_tara number(5),

constraint id\_oras\_nn primary key(id\_oras)

);

alter table oras

add constraint id\_tara\_pk4 FOREIGN KEY(id\_tara) references tara(id\_tara);

insert into oras

values(100,'Bansko',20);

insert into oras

values(101,'Timisoara',21);

insert into oras

values(102,'Vienna',22);

insert into oras

values(103,'Berlin',23);

insert into oras

values(104,'Nice',24);

---------------------Locatie-------------------------

create table locatie

(id\_locatie number(5),

nume\_adresa varchar(25) constraint nume\_adresa\_nn not null,

numar\_adresa number(5) constraint numar\_adresa\_nn not null,

nr\_spectatori number(5) constraint nr\_spectatori\_nn not null,

id\_oras number(5),

constraint id\_locatie\_nn primary key(id\_locatie)

);

alter table locatie

add constraint id\_oras\_pk4 FOREIGN KEY(id\_oras) references oras(id\_oras);

insert into locatie

values(110,'Grand Arena',3,10000,100);

insert into locatie

values(111,'Bernabeu',25,20000,101);

insert into locatie

values(112,'Camp nou',45,15000,102);

insert into locatie

values(113,'Alianz',12,12220,103);

insert into locatie

values(114,'Parkone',16,30000,104);

--------------------Antrenament---------------------------------

create table antrenament

(id\_antrenament number(5),

nume\_antrenament varchar(25) constraint nume\_antrenament\_nn not null,

durata\_antrenament number(2) constraint durata\_antrenament\_nn not null,

id\_antrenor number(5),

id\_jucator number(5),

constraint id\_antrenament\_nn primary key(id\_antrenament)

);

alter table antrenament

add constraint id\_jucator\_pk6 FOREIGN KEY(id\_jucator) references jucator(id\_jucator);

alter table antrenament

add constraint id\_antrenor\_pk7 FOREIGN KEY(id\_antrenor) references antrenor(id\_antrenor);

insert into antrenament

values(120,'Biceps',4,40,10);

insert into antrenament

values(121,'Core',5,41,11);

insert into antrenament

values(122,'Triceps',1,42,12);

insert into antrenament

values(123,'Picioare',3,43,13);

insert into antrenament

values(124,'Cardio',4,44,14);

-----------Sponsorizeaza---------------------

create table sponsorizeaza

(id\_sponsorizeaza number(5),

durata\_contract\_ani number(2) constraint durata\_contract\_ani\_nn not null,

id\_sponsor number(5),

id\_jucator number(5),

constraint id\_sponsorizeaza\_nn primary key(id\_sponsorizeaza)

);

alter table sponsorizeaza

add constraint id\_jucator\_pk8 FOREIGN KEY(id\_jucator) references jucator(id\_jucator);

alter table sponsorizeaza

add constraint id\_sponsor\_pk8 FOREIGN KEY(id\_sponsor) references sponsor(id\_sponsor);

insert into sponsorizeaza

values (130,4,80,10);

insert into sponsorizeaza

values (131,5,81,11);

insert into sponsorizeaza

values (132,3,82,12);

insert into sponsorizeaza

values (133,2,83,13);

insert into sponsorizeaza

values (134,1,84,14);

insert into sponsorizeaza

values (135,8,80,14);

insert into sponsorizeaza

values (136,6,81,13);

insert into sponsorizeaza

values (137,7,82,12);

insert into sponsorizeaza

values (138,3,83,11);

insert into sponsorizeaza

values (139,5,84,10);

-----------Rutina----------------------------

create table rutina

(id\_rutina number(5),

frecv\_saptamanala number(2) constraint frecv\_saptamanala\_nn not null,

id\_antrenor number(5),

id\_jucator number(5),

id\_antrenament number(5),

constraint id\_rutina\_nn primary key(id\_rutina)

);

alter table rutina

add constraint id\_jucator\_pk9 FOREIGN KEY(id\_jucator) references jucator(id\_jucator);

alter table rutina

add constraint id\_antrenor\_pk9 FOREIGN KEY(id\_antrenor) references antrenor(id\_antrenor);

alter table rutina

add constraint id\_antrenament\_pk9 FOREIGN KEY(id\_antrenament) references antrenament(id\_antrenament);

insert into rutina

values(150,3,41,10,120);

insert into rutina

values(151,4,42,11,121);

insert into rutina

values(152,5,43,12,122);

insert into rutina

values(153,6,44,13,123);

insert into rutina

values(154,7,44,14,124);

insert into rutina

values(155,8,43,14,124);

insert into rutina

values(156,9,42,13,123);

insert into rutina

values(157,1,41,12,122);

insert into rutina

values(158,2,42,11,121);

insert into rutina

values(159,4,43,10,120);

----------Participa--------------------------

create table participa

(id\_participa number(5),

punctaj\_comp number(2) constraint punctaj\_comp\_nn not null,

id\_jucator number(5),

id\_competitie number(5),

constraint id\_participa\_nn primary key(id\_participa)

);

alter table participa

add constraint id\_jucator\_pk10 FOREIGN KEY(id\_jucator) references jucator(id\_jucator);

alter table participa

add constraint id\_competitie\_pk9 FOREIGN KEY(id\_competitie) references competitie(id\_competitie);

insert into participa

values(160,30,10,30);

insert into participa

values(161,40,11,31);

insert into participa

values(162,50,12,32);

insert into participa

values(163,60,13,33);

insert into participa

values(164,20,14,34);

insert into participa

values(165,10,14,34);

insert into participa

values(166,40,13,33);

insert into participa

values(167,60,12,32);

insert into participa

values(168,70,11,31);

insert into participa

values(169,80,10,30);

12. Exercitiile

----------------------------------------EX1---------------------------------

--Sa e afiseze toate competitiile ce sunt organizate de cei de la CLASH.si diferenta de luni dintre ele, dar in acelasi timp acelea care incep dupa data de 01-06-2000

select c.nume\_comp, MONTHS\_BETWEEN(c.data\_sfarsit\_comp, c.data\_incep\_comp)

from competitie c, tara t, oras o, locatie l

where c.id\_competitie = t.id\_competitie

and t.id\_tara = o.id\_tara

and o.id\_oras = l.id\_oras

and upper(nume\_comp) like '%CLASH%'

and c.data\_incep\_comp > TO\_DATE('01-06-2000','dd-mm-yyyy')

and c.conditii\_pct\_comp = (select conditii\_pct\_comp

from competitie

where conditii\_pct\_comp = c.conditii\_pct\_comp)

and c.taxa\_participare = (select taxa\_participare

from competitie

where taxa\_participare = c.taxa\_participare)

and c.data\_sfarsit\_comp = (select data\_sfarsit\_comp

from competitie

where data\_sfarsit\_comp = c.data\_sfarsit\_comp)

------------------------------------------EX2-------------------------------

-- Sa se afiseze pentru fiecare antrenor care are mai mult de 0 ani experienta, nivelul acestuia de experienta, folosind case.

select nume\_ant,prenume\_ant,gen\_ant,experienta\_ant,

case

when experienta\_ant>= 5 then 'Senior'

when experienta\_ant>=4 then 'Experimentat'

else 'Junior'

end as NIVEL\_EXPERIENTA

from antrenor

where experienta\_ant > 0

order by nume\_ant,prenume\_ant,gen\_ant,experienta\_ant;

----------------------------Ex3-------------------------------

--Sa se afiseze numarul de fani de la competitia cu id-ul 31

select nr\_spectatori,nume\_adresa

from locatie

where id\_locatie in (select id\_locatie

from oras

where id\_oras in ( select id\_oras

from tara

where id\_competitie in (select id\_competitie

from competitie

where id\_competitie =31

)

)

)

order by nr\_spectatori,nume\_adresa;

-------------------------------Ex4----------------------

--Sa se afiseze in ordine descrescatoare numele, prenumele ,

--salariile antrenorilor si experienta antrenorilor ce au prenumele mai mare de 6 caractere,

-- si diferenta minima intre anul de nastere al lor

select nume\_ant, prenume\_ant,salariu\_ant, NVL(gen\_ant,'Nu are declarat genul')

from antrenor

where length(prenume\_ant) >= 7

order by DECODE('S','F',nume\_ant,'L',prenume\_ant,'S',salariu\_ant,'G',NVL(gen\_ant,'Nu are declarat genul'));

---------------------------Ex5---------------------------

-- Sa se afiseze numele cluburilor si valoarea totala a salariilor din cadrul acestora.

--Se vor considera cluburile a caror valoare totala a salariilor este mai mare decat media valorilor totale a salariilor tuturor antrenorilor

with val\_club AS (select nume\_club,sum(salariu\_ant) total

from antrenor join club using (id\_club)

group by id\_club,nume\_club),

val\_medie AS ( select avg(total) medie

from val\_club )

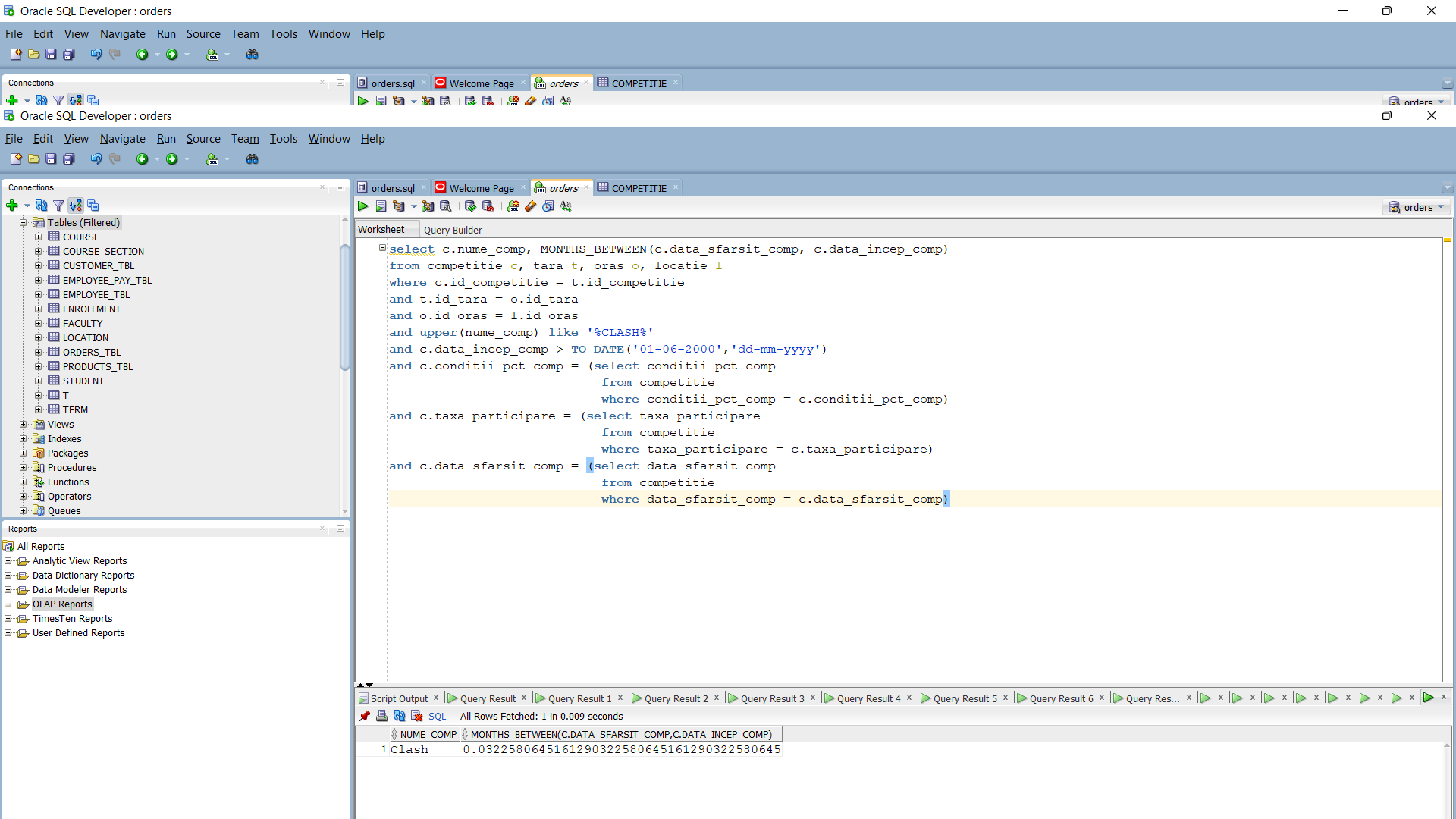
select \*

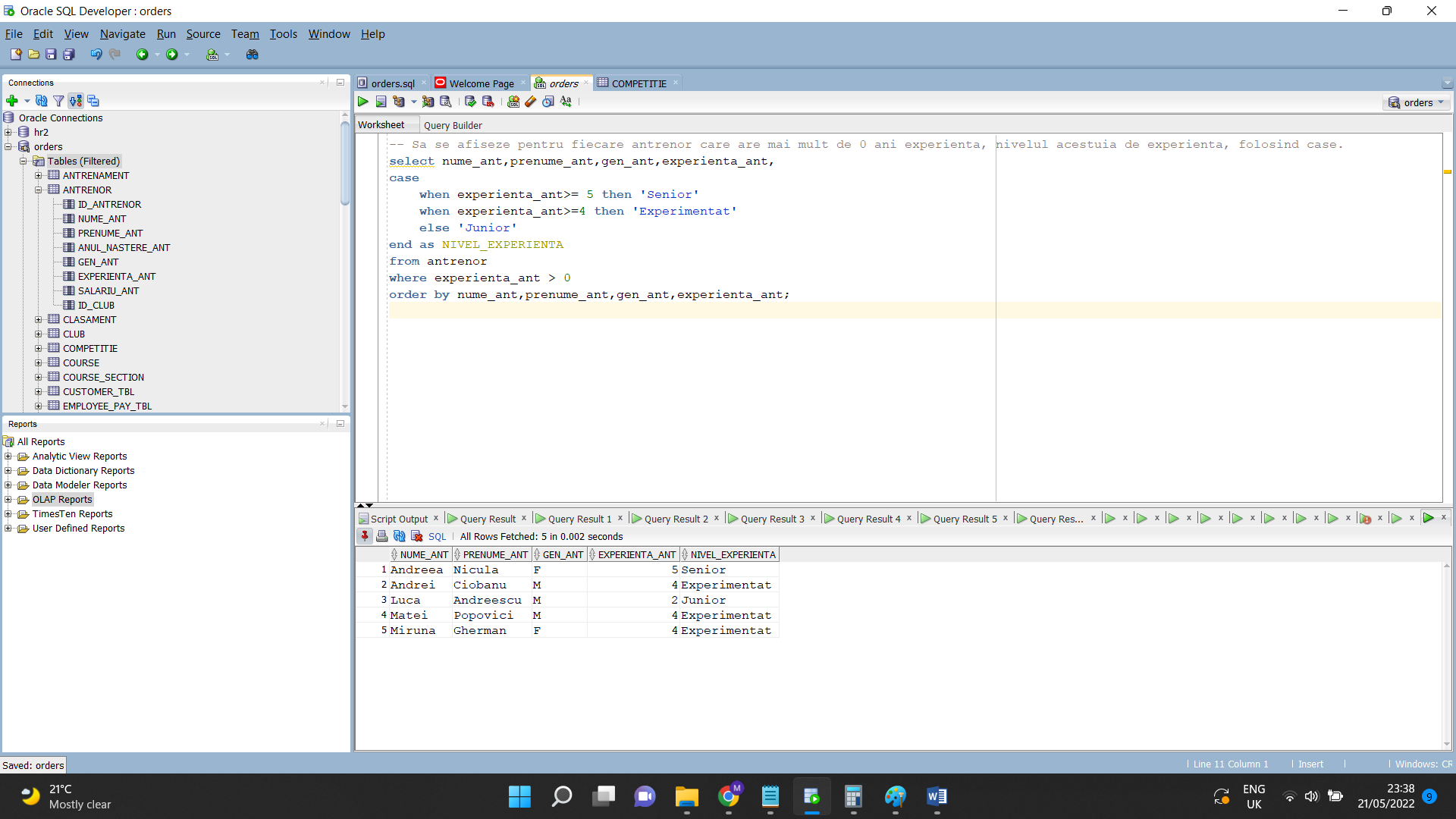
from val\_club

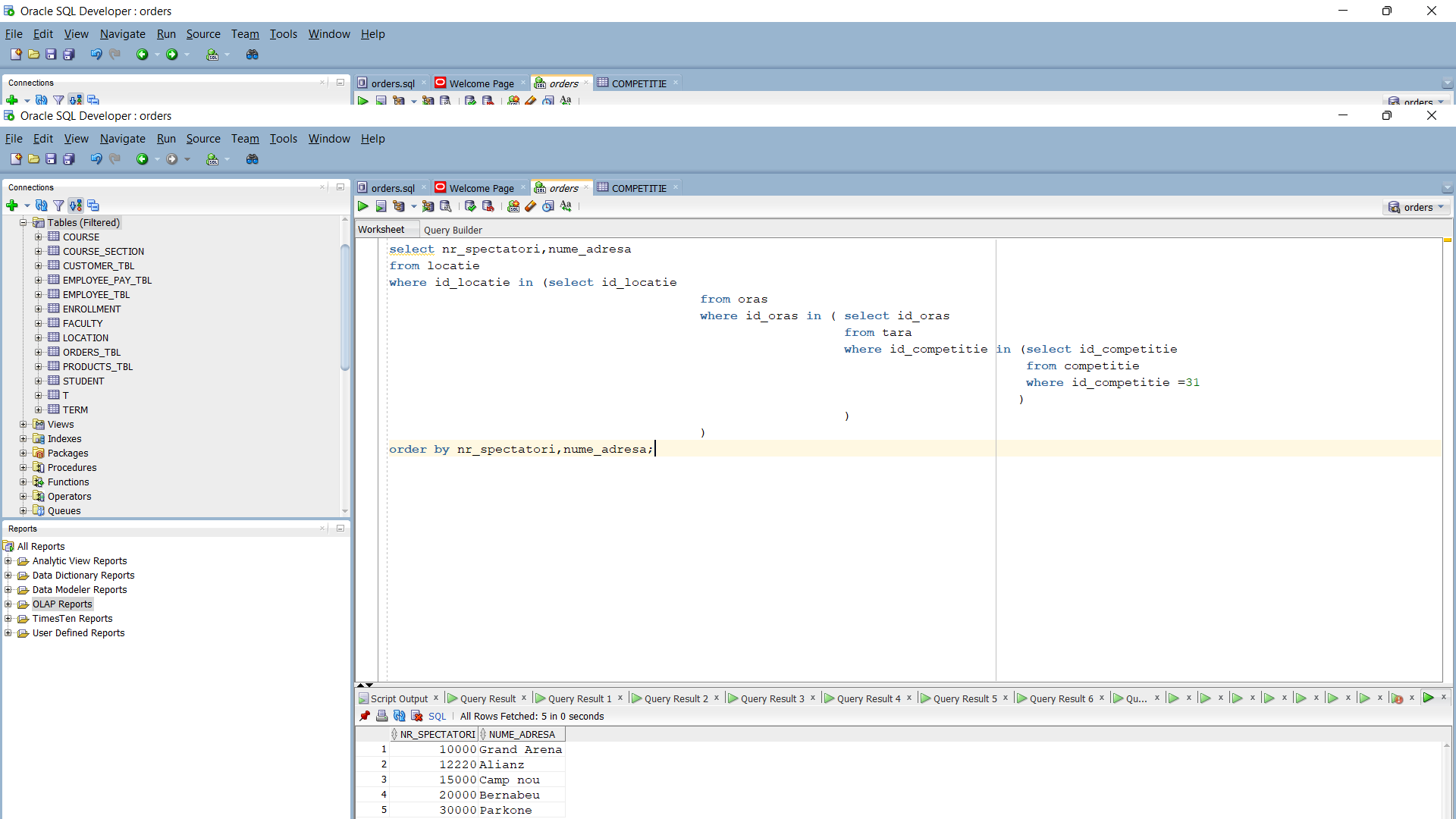
where total > (select medie

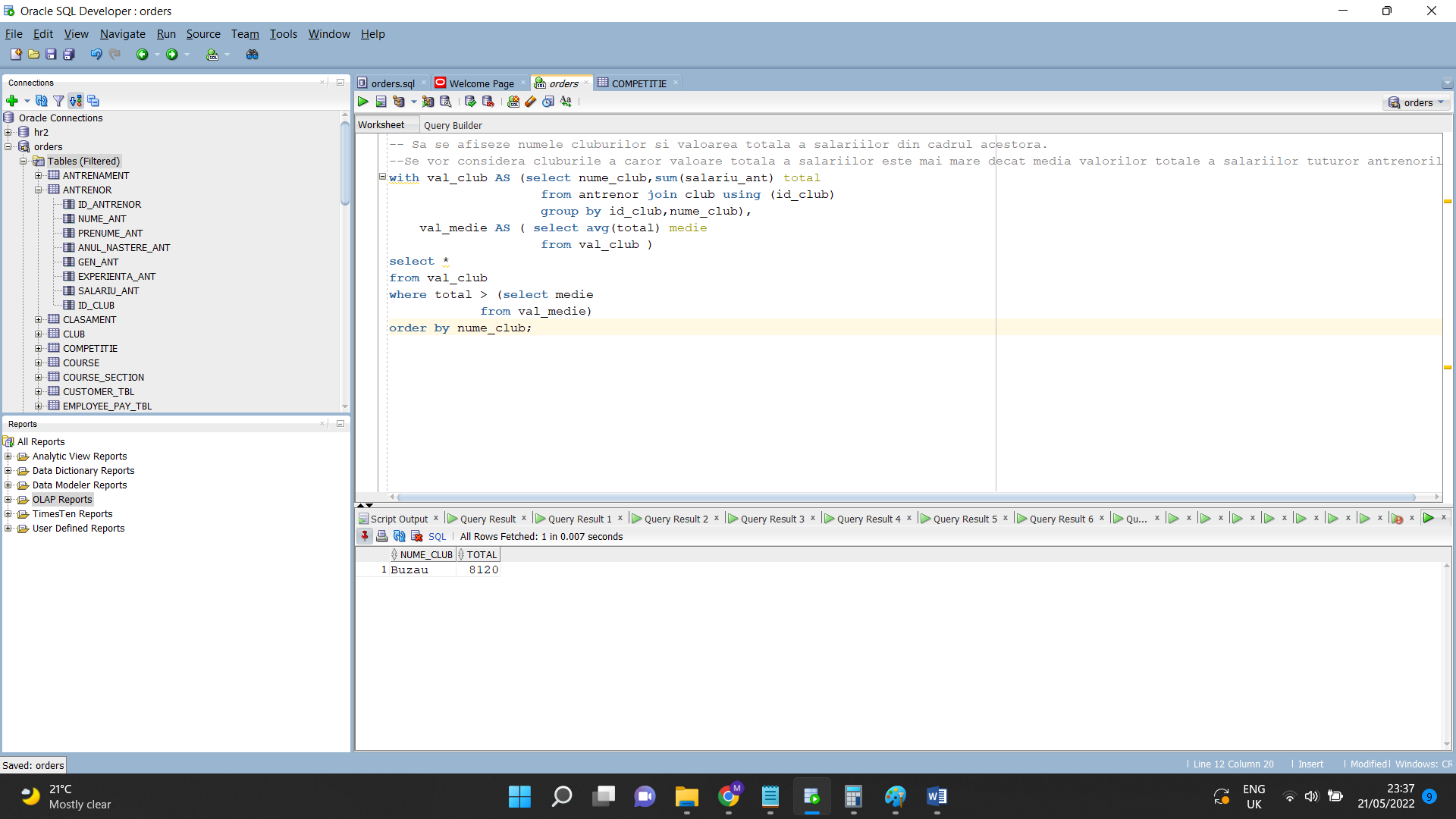
from val\_medie)

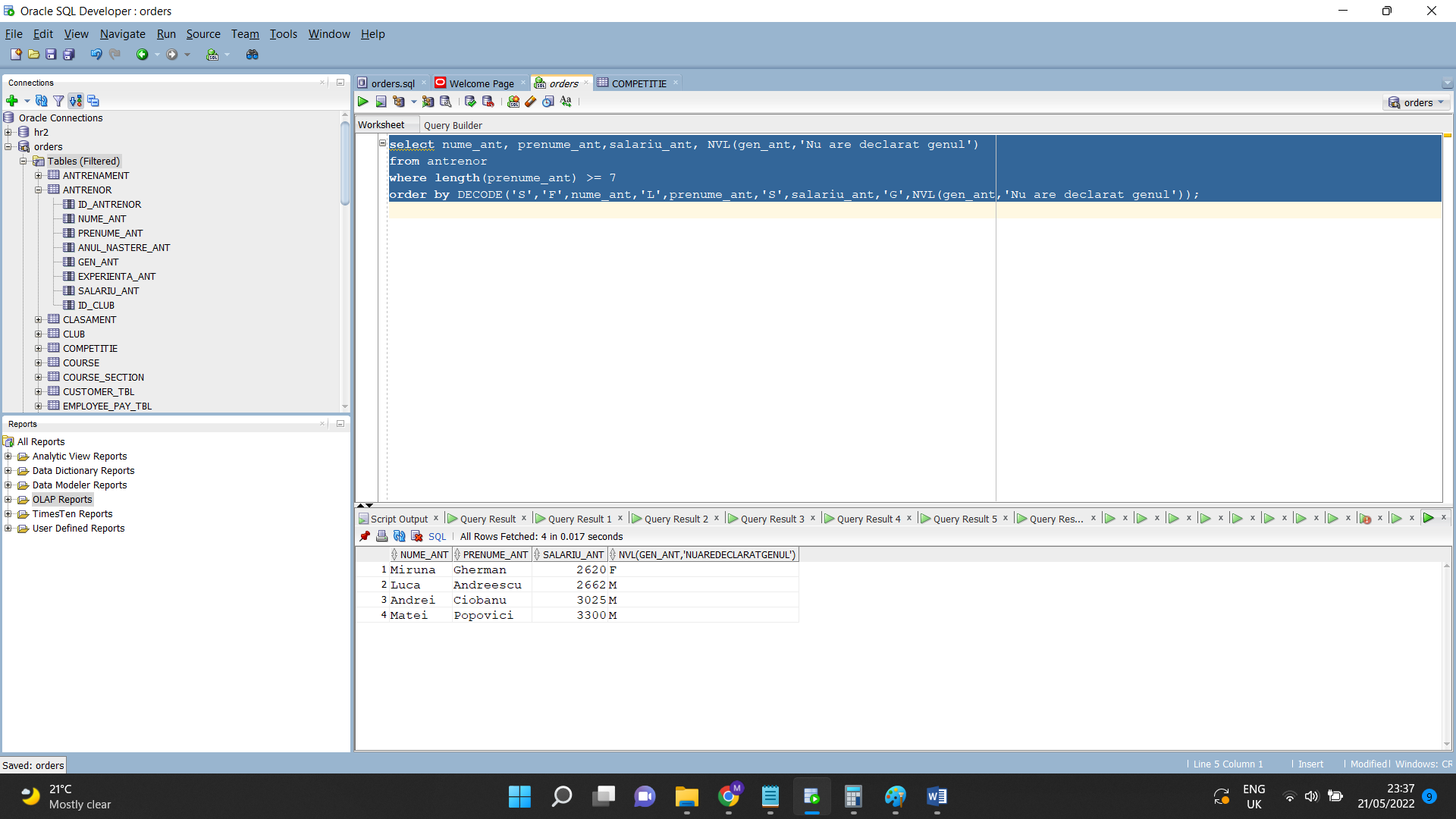
order by nume\_club;











13. Actualizarile

-----------------------1-------------------------

-- Sa se mareasca salariile antrenorilor clubului steaua cu 10%

update antrenor

SET salariu\_ant = salariu\_ant + 0.1\*salariu\_ant

where id\_club in (select id\_club

from club

where nume\_club like '%Steaua%');

----------------------2-------------------------

-- Sa se mareasca capacitatea de spectatori a locatiilor din Nice;

update locatie

set nr\_spectatori = nr\_spectatori + 100

where id\_oras in (select id\_oras

from oras

where nume\_oras like '%Nice%');

------------------Sa se mareasca salariul jucatorilor care sunt sponsorizati de o firma software--------------------

update jucator

set salariu\_juc = salariu\_juc + 0.2\*salariu\_juc

where id\_jucator in (select id\_jucator

from sponsor

where domeniu\_sponsor like '%Software%');

