Proiect la Baze de Date in Economie

**Baza de date a unui Hotel**

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SCENARIUL BAZEI DE DATE:

Oriunde ai merge în vacanţă ai nevoie de un loc elegant şi primitor unde să te odihneşti aşa cum trebuie pentru a reveni la muncă cu forţe proaspete.

Un hotel este un stabiliment care oferă servicii de cazare contra cost, în general pentru perioade scurte de timp.

Pentru a te caza la un hotel,în general este nevoie de o rezervare făcută in prealabil,fie pe un site de călătorii,fie direct pe site-ul hotelului dorit. În momentul prezentării la hotel clientului i se vor solicita informaţii cu privire la identitatea sa (nume, prenume,data nașterii,adresa,etc..),iar mai apoi se va verifica rezervarea făcuta de acesta care cuprinde detaliile sederii precum data de check-in,check-out ,pentru a stabili camera în care va fi cazat.Camerele hotelului pot fi de mai multe tipuri(single,twin,apartamente,...) ,fiecare dintre ele la un pret diferit in functie de tipul acesteia.Pe lângă facilitățile pe care hotelul le pune la dispoziție , clienţii pot opta şi beneficia de o serie de servicii suplimentare (contra cost), cum ar fi: lectii de scubadiving, inchiriere teren de sport, turul oraşului cu un ghid,închirieri ATV,toate cu scopul de a-i crea un sejur exceptional.

Bineînteles,la finalul șederii clientului îi este acordată factura care conține suma tuturor costurilor de pe parcursul sejurului.

Diagrama ERD

**Camera\_Hotel**

#id\_camera

\*id\_tip

\*numar\_camera

\*etaj

**Clienti**

#id\_client

\*nume

\*prenume

\*data\_nasterii

\*adresa

\*email

telefon

**Factura**

#nr factura

\*id\_client

\*valoarea

**Rezervare**

#id\_rezervare

\*id\_camera

\*id\_client

\*data\_check-in

\*data\_check-out

**Tip\_Camere**

#id\_tip

\*tip\_camera

\*pret

**Servicii**

#id\_serviciu

\*nume\_serviciu

\*cost

observatii

**Rezervare\_Servicii**

\*id\_rezervare

\*id\_serviciu

\*data

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Factura*** | | | |  |
| Coloana | Tip | Tip cheie | Optionalitate | Observatii |
| nr\_factura | NUMBER(5) | PK | \* | - |
| id\_client | NUMBER(5) | FK | \* | Relatia cu Clienti |
| id\_rezervare | NUMBER(5) | FK | \* | R. cu Rez |
| valoarea | NUMBER(20) |  | \* | - |

Tabele de mapare:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Clienti*** | | | |  |
| Coloana | Tip | Tip cheie | Optionalitate | Observatii |
| id\_client | NUMBER(5) | PK | \* | - |
| nume | VARCHAR2(20) |  | \* | - |
| prenume | VARCHAR2(20) |  | \* | - |
| data\_nasterii | DATE |  | \* | - |
| adresa | VARCHAR2(100) |  | \* | - |
| email | VARCHAR2(20) |  | \* | - |
| telefon | NUMBER(15) |  |  | - |
| nr\_factura | NUMBER(5) | FK | \* | Relatia cu Facturi |
| id\_rezervare | NUMBER(5) | FK | \* | Relatia cu Rezervare |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Rezervare*** | | | |  |
| Coloana | Tip | Tip cheie | Optionalitate | Observatii |
| id\_rezervare | NUMBER(5) | PK | \* | - |
| id\_camera | NUMBER(5) | FK | \* | Relatia cu Camera\_Hotel |
| id\_client | NUMBER(5) | FK | \* | Relatia cu Clienti |
| data\_check\_in | DATE |  | \* | - |
| data\_check\_out | DATE |  | \* | - |
| nr\_factura | NUMBER(5) | FK | \* | Relatia cu Factura |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Tip\_Camere** | | | | |
| Coloana | Tip | Tip cheie | Optionalitate | Observatii |
| id\_tip | NUMBER(5) | PK | \* | - |
| tip\_camera | VARCHAR2(50) |  | \* | - |
| pret | NUMBER(10) |  | \* | - |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Camera\_Hotel*** | | | |  |
| Coloana | Tip | Tip cheie | Optionalitate | Observatii |
| id\_camera | NUMBER(5) | PK | \* | - |
| id\_tip | NUMBER(5) | FK | \* | Relatia cu Tip\_Camera |
| nr\_camera | NUMBER(10) |  | \* | - |
| etaj | NUMBER(10) |  | \* | - |
| id\_rezervare | NUMBER(5) | FK | \* | Relatia cu Rezervare |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| ***Servicii*** | | | |  |
| Coloana | Tip | Tip cheie | Optionalitate | Observatii |
| id\_serviciu | NUMBER(5) | PK | \* | - |
| nume\_serviciu | VARCHAR2(100) |  | \* | - |
| cost | NUMBER(10) |  | \* | - |
| observatii | VARCHAR2(20) |  |  | - |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Rezervare\_Servicii | | | | |
| Coloana | Tip | Tip\_cheie | Optionalitate | Observatii |
| id\_rezervare | NUMBER(5) | FK | \* | Relatia cu Rezervare |
| id\_serviciu | NUMBER(5) | FK | \* | Relatia cu Servicii |
| data\_inceput | DATE |  | \* | - |
| data\_final | DATE |  | \* | - |

SCHEMA BAZEI DE DATE NORMALIZATE:

**CLIENTI:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **NUMBER(5)** | **VARCHAR2(20)** | **VARCHAR2(20)** | **DATE** | **VARCHAR2(100)** | **NUMBER(5)** |
| **Id\_**  **client** | **nume** | **prenume** | **data\_nasterii** | **adresa** | **Nr\_**  **factura** |
| 1 | Pop | Elena | 27-Mar-1991 | Str.PrimaveriiNR 104 Cluj-Napoca Romania | 5 |
| 5 | Fritz | Richard | 02-Jul-1985 | Mariahilfer Str nr 5 Viena Austria | 10 |
| 10 | Ramos | Dolores | 21-Oct-1978 | La Rambla nr 102 Barcelona Spania | 3 |
| 21 | Madalin | George | 17-Aug-1997 | Str Teiului nr 1 Bucuresti Romania | 12 |
| 55 | Gorovetski | Aleksei | 11-Jan-1972 | Mjasnickajanr 20 Mosocw Russia | 6 |
| 78 | Orosz | Aliz | 24-Feb-1996 | Vacsi Ut nr 4 Budapest Hungary | 8 |
| 2 | Camberlain | Pierre | 08-Sep-1990 | Avenue Montaigne nr 41 Paris France | 14 |
| 15 | Scott | David | 01-Dec-2000 | Abbey Road nr 85 London England | 9 |
|  |  |  |  |  |  |

FACTURA

|  |  |  |  |
| --- | --- | --- | --- |
| **NUMBER(5)** | **NUMBER(5)** | **NUMBER(5)** | **NUMBER(20)** |
| **Nr\_factura** | **Id\_client** | **Id\_rezervare** | **valoarea** |
| 5 | 1 | 101 | 8550 |
| 10 | 5 | 140 | 6400 |
| 3 | 10 | 51 | 11250 |
| 12 | 21 | 2 | 1625 |
| 6 | 55 | 26 | 12100 |
| 8 | 78 | 95 | 11160 |
| 14 | 2 | 1 | 4950 |
| 9 | 15 | 13 | 9000 |

REZERVARE:

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **NUMBER(5)** | **NUMBER(5)** | **NUMBER(5)** | **DATE** | **DATE** | **NUMBER(5)** |
| **Id\_rezervare** | **Id\_camera** | **Id\_client** | **Data\_check\_in** | **Data\_check\_out** | **Nr\_factura** |
| 101 | 4 | 1 | 15-Jul-2021 | 22-Jul-2021 | 14 |
| 140 | 1 | 5 | 21-Aug-2021 | 28-Aug-2021 | 10 |
| 51 | 7 | 10 | 24-Jun-2021 | 01-Jul-2021 | 3 |
| 2 | 3 | 21 | 30-Jun-2021 | 04-Jul-2021 | 12 |
| 26 | 6 | 55 | 01-Aug-2021 | 12-Aug-2021 | 6 |
| 95 | 8 | 78 | 01-Aug-2021 | 12-Aug-2021 | 8 |
| 1 | 2 | 2 | 25-Jun-2021 | 02-Jul-2021 | 14 |
| 13 | 5 | 15 | 20-Jul-2021 | 01-Aug-2021 | 9 |

CAMERA\_HOTEL:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **NUMBER(5)** | **NUMBER(5)** | **NUMBER(10)** | **NUMBER(10)** | **NUMBER(5)** |
| **Id\_camera** | **Id\_tip** | **Numar\_camera** | **Etaj** | **Id\_rezervare** |
| 4 | 3 | 303 | 3 | 101 |
| 1 | 4 | 404 | 4 | 140 |
| 7 | 3 | 308 | 3 | 51 |
| 3 | 1 | 102 | 1 | 2 |
| 6 | 6 | 410 | 4 | 26 |
| 8 | 5 | 204 | 2 | 95 |
| 2 | 7 | 210 | 2 | 1 |

TIP\_CAMERA:

|  |  |  |
| --- | --- | --- |
| **NUMBER(5)** | **VARCHAR2(50)** | **NUMBER(10)** |
| **Id\_tip** | **Tip\_camera** | **Pret** |
| 1 | Single | 200 |
| 2 | Dubla | 400 |
| 3 | Tripla | 600 |
| 4 | Apartament | 700 |
| 5 | Twin | 380 |
| 6 | Apartament deluxe | 750 |
| 7 | Dubla matrimoniala | 450 |

SERVICII:

|  |  |  |  |
| --- | --- | --- | --- |
| **NUMBER(5)** | **VARCHAR2(100)** | **NUMBER(10)** | **VARCHAR2(50)** |
| **Id\_serviciu** | **Nume\_serviciu** | **Cost** | **Observatii** |
| 1 | Inchiriere biciclete | 50 | Pret pe ora |
| 2 | Inchiriere ATV | 150 | Pret pe ora |
| 3 | Mic-dejun | 50 | Pret pe zi |
| 4 | Pranz | 100 | Pret pe zi |
| 5 | Cina | 150 | Pret pe zi |
| 6 | Picnic pe plaja | 100 | Pret pe zi |
| 7 | Cina speciala in balon cu aer cald | 300 | Pret pe zi |
| 8 | Turul orasului in trenulet | 25 | Pret pe persoana |
| 9 | Lectii de scubadiving | 150 | Pret pe lectie care include si echipament |
| 10 | Lectii de surfing | 150 | Pret pe lectie care include si echipament |
| 11 | Inchiriere teren golf | 200 | Pret pe ora care include si echipament |

REZERVARE\_SERVICII:

|  |  |  |  |
| --- | --- | --- | --- |
| **NUMBER(5)** | **NUMBER(5)** | **DATE** | **DATE** |
| **Id\_rezervare** | **Id\_serviciu** | **Data\_inceput** | **Data\_final** |
| 101 | 3 | 16-Jul-2021 | 22-Jul-2021 |
| 101 | 5 | 15-Jul-2021 | 21-Jul-2021 |
| 51 | 10 | 28-Jun-2021 | 28-Jun-2021 |
| 51 | 3 | 25-Jun-2021 | 01-Jul-2021 |
| 51 | 4 | 24-Jun-2021 | 30-Jun-2021 |
| 51 | 5 | 24-Jun-2021 | 30-Jun-2021 |
| 2 | 8 | 01-Jul-2021 | 01-Jul-2021 |
| 2 | 3 | 01-Jul-2021 | 04-Jul-2021 |
| 2 | 5 | 30-Jun-2021 | 03-Jul-2021 |
| 26 | 7 | 10-Aug-2021 | 10-Aug-2021 |
| 26 | 11 | 07-Aug-2021 | 07-Aug-2021 |
| 26 | 9 | 05-Aug-2021 | 05-Aug-2021 |
| 95 | 2 | 05-Aug-2021 | 05-Aug-2021 |
| 95 | 4 | 01-Aug-2021 | 11-Aug-2021 |
| 95 | 5 | 01-Aug-2021 | 11-Aug-2021 |
| 140 | 1 | 23-Aug-2021 | 23-Aug-2021 |
| 140 | 8 | 26-Aug-2021 | 26-Aug-2021 |
| 140 | 7 | 25- Aug-2021 | 25- Aug-2021 |
| 13 | 10 | 25-Jul-2021 | 25-Jul-2021 |
| 13 | 5 | 20-Jul-2021 | 31-Jul-2021 |
| 2 | 2 | 27-Jun-2021 | 27-Jun-2021 |
| 2 | 6 | 29-Jun-2021 | 29-Jun-2021 |
| 2 | 3 | 26-Jun-2021 | 02-Jul-2021 |

Implementare:

1.Crearea tabelelor

**\* Cream tabela Clienti conform specificatiilor din tabelele de mapare.**

CREATE TABLE Clienti (

id\_client NUMBER(5) PRIMARY KEY,

nume VARCHAR(20) NOT NULL,

prenume VARCHAR(20) NOT NULL,

data\_nasterii DATE NOT NULL,

adresa VARCHAR(100) NOT NULL,

email VARCHAR(20) NOT NULL,

telefon NUMBER(15) NOT NULL,

nr\_factura NUMBER(5) NOT NULL,

id\_rezervare NUMBER(5) NOT NULL

);

**\*Cream tabela Factura conform specificatiilor din tabelele de mapare.**

CREATE TABLE Factura (

nr\_factura NUMBER(5) PRIMARY KEY,

id\_client NUMBER(5) NOT NULL,

id\_rezervare NUMBER(5) NOT NULL,

valoarea NUMBER(20) NOT NULL

);

**\*Cream tabela Rezervare conform specificatiilor din tabelele de mapare.**

CREATE TABLE Rezervare (

id\_rezervare NUMBER(5) PRIMARY KEY,

id\_camera NUMBER(5) NOT NULL,

id\_client NUMBER(5) NOT NULL,

data\_check\_in DATE NOT NULL,

data\_check\_out DATE NOT NULL,

nr\_factura NUMBER(5) NOT NULL

);

**\*Cream tabela Camera\_Hotel conform specificatiilor din tabelele de mapare.**

CREATE TABLE Camera\_Hotel (

id\_camera NUMBER(5) PRIMARY KEY,

id\_tip NUMBER(5) NOT NULL,

numar\_camera NUMBER(10) NOT NULL,

etaj NUMBER(10) NOT NULL,

id\_rezervare NUMBER(5) NOT NULL

);

**\*Cream tabela Tip\_Camera conform specificatiilor din tabelele de mapare**

CREATE TABLE Tip\_Camera (

id\_tip NUMBER(5) PRIMARY KEY,

tip\_camera VARCHAR2(50)NOT NULL,

pret NUMBER(10) NOT NULL

);

**\*Cream tabela Rezervare\_Servicii conform specificatiilor din tabelele de mapare.**

CREATE TABLE Rezervare\_Servicii(

id\_rezervare NUMBER(5) NOT NULL,

id\_serviciu NUMBER(5) NOT NULL,

data\_inceput DATE NOT NULL,

data\_final DATE NOT NULL

);

**\*Cream tabela Servicii conform specificatiilor din tabelele de mapare.**

CREATE TABLE Servicii (

id\_serviciu NUMBER(5) PRIMARY KEY,

nume\_serviciu VARCHAR2(100) NOT NULL,

cost NUMBER(10) NOT NULL,

observatii VARCHAR2(50)

);

2.Adaugare constrangeri chei straine:

Dupa ce am creat toate tabelele,cream cheile straine pentru fiecare tabela prin comanda ALTER TABLE (numele tabelei) ADD CONSTRAINT(nume constrangere) FOREIGN KEY(nume proprietate tabela) REFERENCES(nume tabela de referinta[nume proprietate tabela de referinta])

*ALTER TABLE Clienti*

*ADD CONSTRAINT fk\_factura*

*FOREIGN KEY (nr\_factura) REFERENCES Factura(nr\_factura);*

*ALTER TABLE Clienti*

*ADD CONSTRAINT fk\_rezervare*

*FOREIGN KEY (id\_rezervare) REFERENCES Rezervare(id\_rezervare);*

*ALTER TABLE Factura*

*ADD CONSTRAINT fk\_clienti*

*FOREIGN KEY(id\_client) REFERENCES Clienti(id\_client);*

*ALTER TABLE Factura*

*ADD CONSTRAINT fk\_rezerv*

*FOREIGN KEY(id\_rezervare) REFERENCES Rezervare(id\_rezervare);*

*ALTER TABLE Rezervare*

*ADD CONSTRAINT fk\_camera*

*FOREIGN KEY(id\_camera) REFERENCES Camera\_Hotel(id\_camera);*

*ALTER TABLE Rezervare*

*ADD CONSTRAINT fk\_client*

*FOREIGN KEY(id\_client) REFERENCES Clienti(id\_client);*

*ALTER TABLE Rezervare*

*ADD CONSTRAINT fk\_fact*

*FOREIGN KEY(nr\_factura) REFERENCES Factura(nr\_factura);*

*ALTER TABLE Camera\_Hotel*

*ADD CONSTRAINT fk\_rezervarea*

*FOREIGN KEY(id\_rezervare) REFERENCES Rezervare(id\_rezervare);*

*ALTER TABLE Camera\_Hotel*

*ADD CONSTRAINT fk\_tip*

*FOREIGN KEY(id\_tip) REFERENCES Tip\_Camera(id\_tip)*

*ALTER TABLE Rezervare\_Servicii*

*ADD CONSTRAINT fk\_rezervari*

*FOREIGN KEY(id\_rezervare) REFERENCES Rezervare(id\_rezervare);*

*ALTER TABLE Rezervare\_Servicii*

*ADD CONSTRAINT fk\_serv*

*FOREIGN KEY(id\_serviciu) REFERENCES Servicii(id\_serviciu);*

2.Adaugarea altor constrangeri :

- Adaugam o constrangere in tabela Rezervari pentru a ne asigura ca data de check-in este mai mica sau cel putin egala cu cea de check-out.

*ALTER TABLE Rezervare*

*ADD CONSTRAINT inceput\_sfarsit*

*CHECK(data\_check\_in<=data\_check\_out);*

* Adaugam o constrangere in tabela Clienti pentru a verifica daca emailurile introduse sunt valide. Pentruaceasta ne folosim de expresii regulate care verifica daca valoarea introdusa incepe cu caractere alfa-numerice, urmate de “@”, urmat din nou de caractere alfa-numerice, urmate de un “.”, urmat de caractere alfa-numerice.

*ALTER TABLE Clienti*

*ADD CONSTRAINT valid\_email*

*CHECK (regexp\_like(email, &#39;[[:alnum:]] +@[[:alnum:]]+\.[[:alnum:]]&#39;) );*

3.Popularea tabelelor :

Populam pe rand fiecare tabela folosind comanda “INSERT INTO nume\_tabela VALUES(valori)”. Din cauza ca valorile sunte specificate in ordinea in care au fost declarate coloanele, nu este nevoie sa mentionam care valoare corespunde carei coloane.

**TABELA CLIENTI**

INSERT INTO Clienti VALUES(1,'Pop','Elena','27-MAR-1991','Str.Primaverii nr.104 Cluj-Napoca Romania','elenapop@yahoo.com','0744885511',5,101)

INSERT INTO Clienti VALUES(5,'Fritz','Richard','2-JUL-1985','Mariahilfer Str. nr.5 Viena Austria','fritzr@gmail.com','0788996600',10,140)

INSERT INTO Clienti VALUES(10,'Ramos','Dolores','21-OCT-1978','La Rambla nr.102 Barcelona Spain','dolores21@gmail.com','0712567411',3,51)

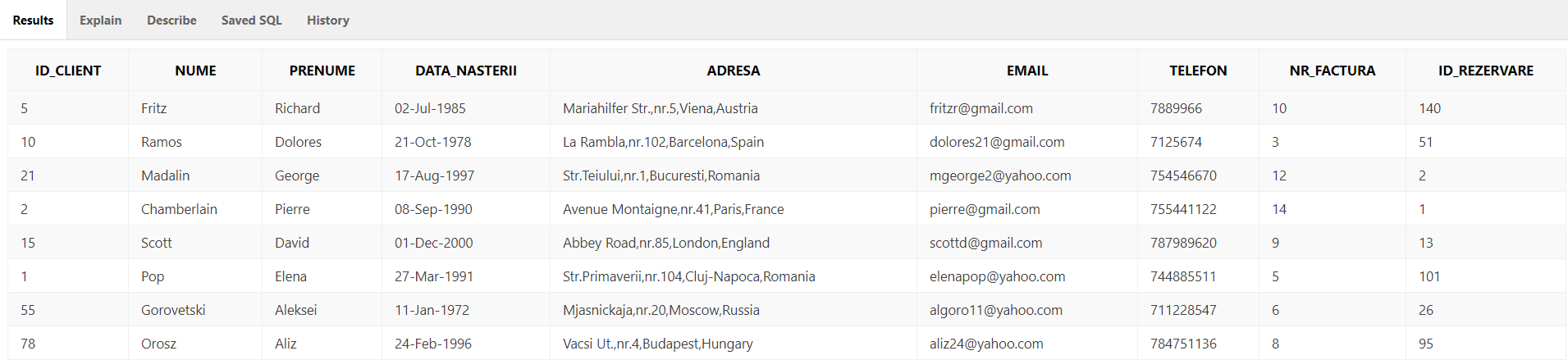
INSERT INTO Clienti VALUES(21,'Madalin','George','17-AUG-1997','Str.Teiului nr.1 Bucuresti Romania','mgeorge2@yahoo.com','0754546670',12,2)

INSERT INTO Clienti VALUES(55,'Gorovetski','Aleksei','11-JAN-1972','Mjasnickaja nr.20 Moscow Russia','algoro11@yahoo.com','0711228547',6,26)

INSERT INTO Clienti VALUES(78,'Orosz','Aliz','24-FEB-1996','Vacsi Ut. nr.4 Budapest Hungary','aliz24@yahoo.com','0784751136',8,95)

INSERT INTO Clienti VALUES(2,'Chamberlain','Pierre','08-SEP-1990','Avenue Montaigne nr.41 Paris France','pierre@gmail.com','0755441122',14,1)

INSERT INTO Clienti VALUES(15,'Scott','David','01-DEC-2000','Abbey Road nr.85 London England','scottd@gmail.com','0787989620',9,13)



**TABELA FACTURA**

INSERT INTO Factura VALUES(5,1,101,8550)

INSERT INTO Factura VALUES(10,5,140,6400)

INSERT INTO Factura VALUES(3,10,51,11250)

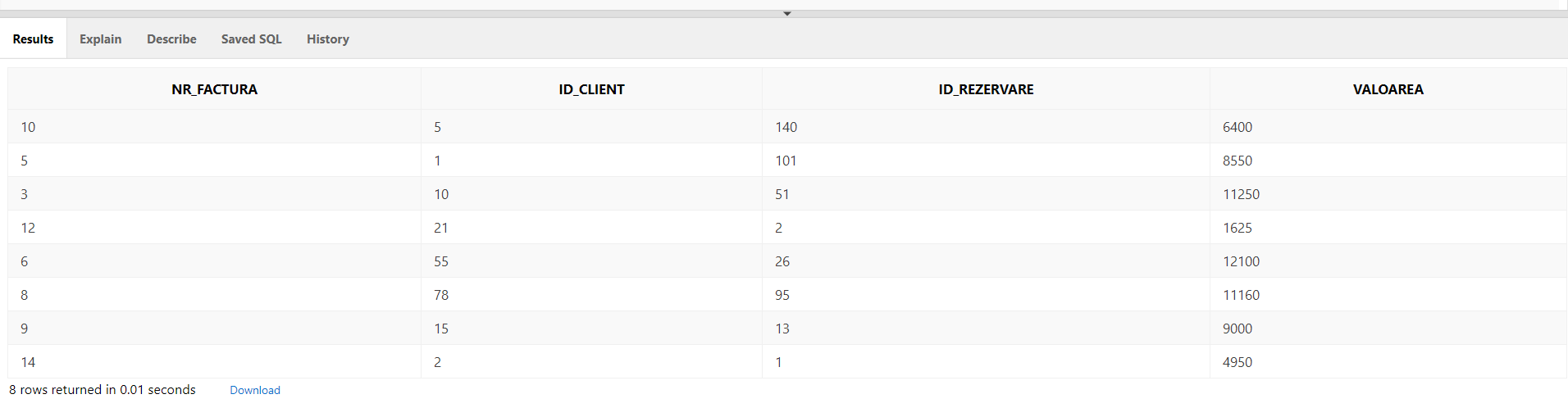
INSERT INTO Factura VALUES(12,21,2,1625)

INSERT INTO Factura VALUES(6,55,26,12100)

INSERT INTO Factura VALUES(8,78,95,11160)

INSERT INTO Factura VALUES(14,2,1,4950)

INSERT INTO Factura VALUES(9,15,13,9000)



**TABELA REZERVARE**

INSERT INTO Rezervare VALUES(101,4,1,'15-JUL-2021','22-JUL-2021',14)

INSERT INTO Rezervare VALUES(140,1,5,'21-AUG-2021','28-AUG-2021',10)

INSERT INTO Rezervare VALUES(51,7,10,'24-JUN-2021','1-JUL-2021',3)

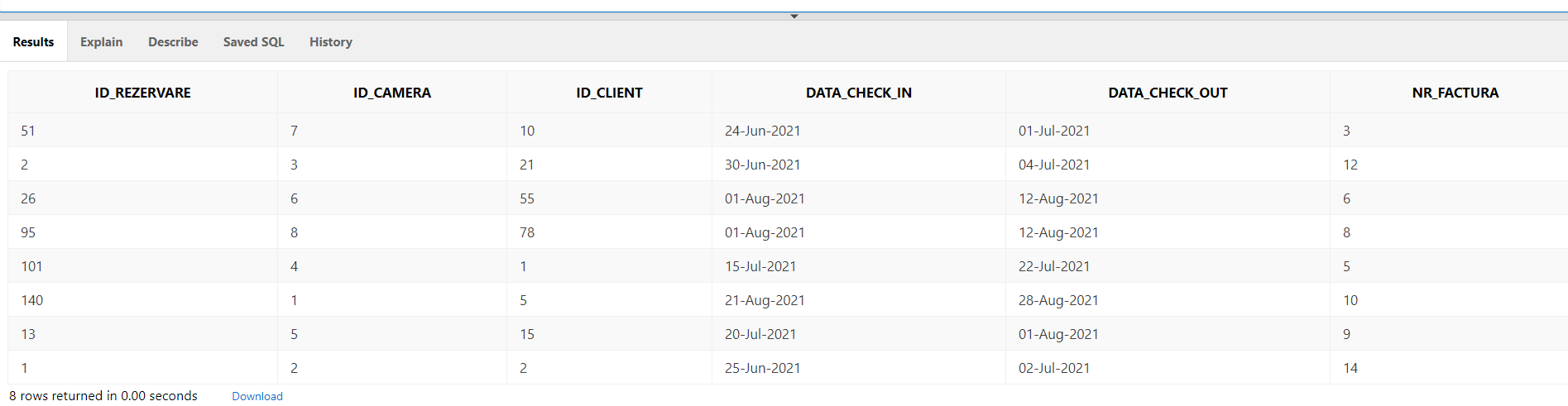
INSERT INTO Rezervare VALUES(2,3,21,'30-JUN-2021','4-JUL-2021',12)

INSERT INTO Rezervare VALUES(26,6,55,'1-AUG-2021','12-AUG-2021',6)

INSERT INTO Rezervare VALUES(95,8,78,'1-AUG-2021','12-AUG-2021',8)

INSERT INTO Rezervare VALUES(1,2,2,'25-JUN-2021','2-JUL-2021',14)

INSERT INTO Rezervare VALUES(13,5,15,'20-JUL-2021','1-AUG-2021',9)



**TABELA CAMERA\_HOTEL**

INSERT INTO Camera\_Hotel VALUES(4,3,303,3,101)

INSERT INTO Camera\_Hotel VALUES(1,4,404,4,140)

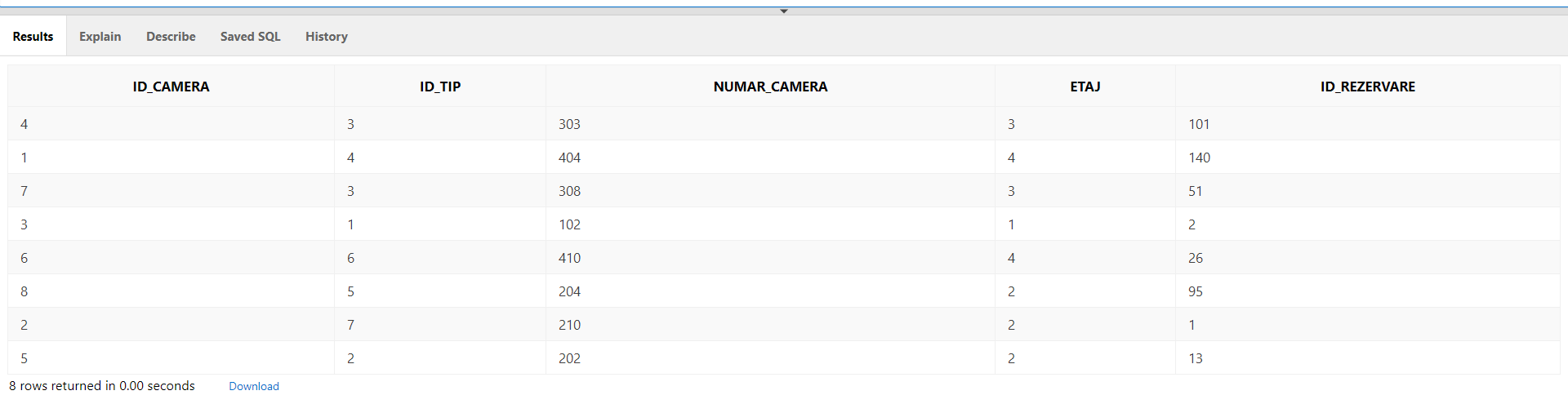
INSERT INTO Camera\_Hotel VALUES(7,3,308,3,51)

INSERT INTO Camera\_Hotel VALUES(3,1,102,1,2)

INSERT INTO Camera\_Hotel VALUES(6,6,410,4,26)

INSERT INTO Camera\_Hotel VALUES(8,5,204,2,95)

INSERT INTO Camera\_Hotel VALUES(2,7,210,2,1)

INSERT INTO Camera\_Hotel VALUES(5,2,202,2,13) 

**TABELA TIP\_CAMERA**

INSERT INTO Tip\_Camera VALUES(1,'single',200)

INSERT INTO Tip\_Camera VALUES(2,'dubla',400)

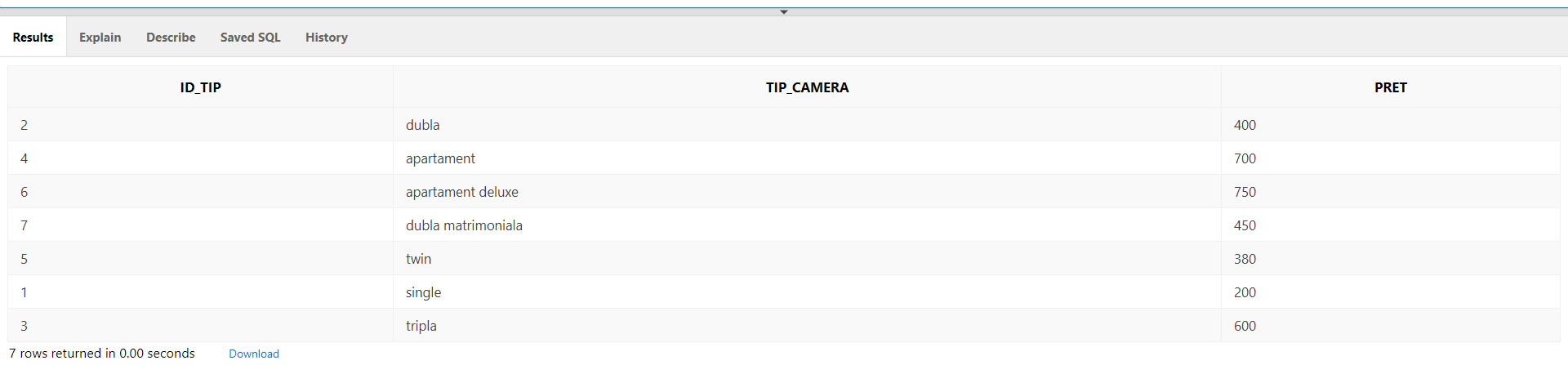
INSERT INTO Tip\_Camera VALUES(3,'tripla',600)

INSERT INTO Tip\_Camera VALUES(4,'apartament',700)

INSERT INTO Tip\_Camera VALUES(5,'twin',380)

INSERT INTO Tip\_Camera VALUES(6,'apartament deluxe',750)

INSERT INTO Tip\_Camera VALUES(7,'dubla matrimoniala',450)



**TABELA SERVICII**

INSERT INTO Servicii VALUES(1,'inchiriere biciclete',50,'pret pe ora')

INSERT INTO Servicii VALUES(2,'inchiriere ATV',150,'pret pe ora')

INSERT INTO Servicii VALUES(3,'mic-dejun',50,'pret pe zi')

INSERT INTO Servicii VALUES(4,'pranz',100,'pret pe zi')

INSERT INTO Servicii VALUES(5,'cina',150,'pret pe zi')

INSERT INTO Servicii VALUES(6,'picnic pe plaja',100,'pret pe zi')

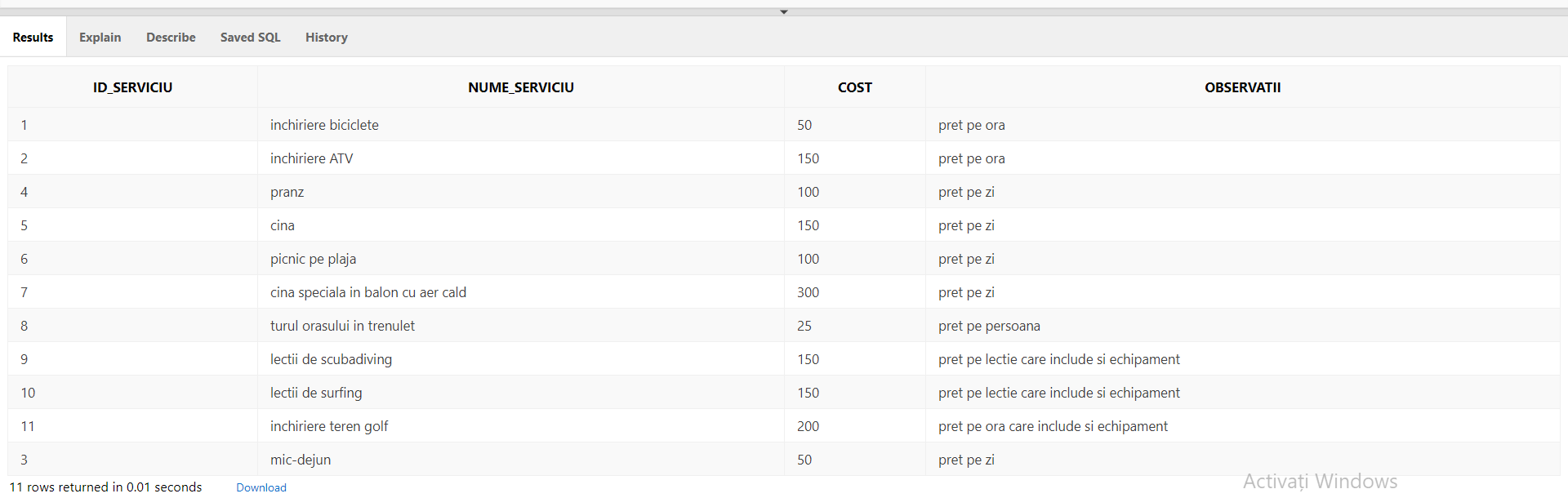
INSERT INTO Servicii VALUES(7,'cina speciala in balon cu aer cald',300,'pret pe zi')

INSERT INTO Servicii VALUES(8,'turul orasului in trenulet',25,'pret pe persoana')

INSERT INTO Servicii VALUES(9,'lectii de scubadiving',150,'pret pe lectie care include si echipament')

INSERT INTO Servicii VALUES(10,'lectii de surfing',150,'pret pe lectie care include si echipament')

INSERT INTO Servicii VALUES(11,'inchiriere teren golf',200,'pret pe ora care include si echipament')



**TABELA REZERVARE\_SERVICII**

INSERT INTO Rezervare\_Servicii VALUES(101,3,'16-JUL-2021','22-Jul-2021')

INSERT INTO Rezervare\_Servicii VALUES(101,5,'15-JUL-2021','21-Jul-2021')

INSERT INTO Rezervare\_Servicii VALUES(51,10,'28-JUN-2021','28-JUN-2021')

INSERT INTO Rezervare\_Servicii VALUES(51,2,'25-JUN-2021','01-JUL-2021')

INSERT INTO Rezervare\_Servicii VALUES(51,3,'24-JUN-2021','30-JUN-2021')

INSERT INTO Rezervare\_Servicii VALUES(51,5,'24-JUN-2021','30-JUN-2021')

INSERT INTO Rezervare\_Servicii VALUES(2,8,'01-JUL-2021','01-JUL-2021')

INSERT INTO Rezervare\_Servicii VALUES(2,3,'01-JUL-2021','04-JUL-2021')

INSERT INTO Rezervare\_Servicii VALUES(2,5,'30-JUN-2021','03-JUL-2021')

INSERT INTO Rezervare\_Servicii VALUES(26,7,'10-AUG-2021','10-AUG-2021')

INSERT INTO Rezervare\_Servicii VALUES(26,11,'07-AUG-2021','07-AUG-2021')

INSERT INTO Rezervare\_Servicii VALUES(26,9,'05-AUG-2021','05-AUG-2021')

INSERT INTO Rezervare\_Servicii VALUES(95,2,'05-AUG-2021','05-AUG-2021')

INSERT INTO Rezervare\_Servicii VALUES(95,4,'01-AUG-2021','11-AUG-2021')

INSERT INTO Rezervare\_Servicii VALUES(95,5,'01-AUG-2021','11-AUG-2021')

INSERT INTO Rezervare\_Servicii VALUES(140,1,'23-AUG-2021','23-AUG-2021')

INSERT INTO Rezervare\_Servicii VALUES(140,8,'26-AUG-2021','26-AUG-2021')

INSERT INTO Rezervare\_Servicii VALUES(140,7,'25-AUG-2021','25-AUG-2021')

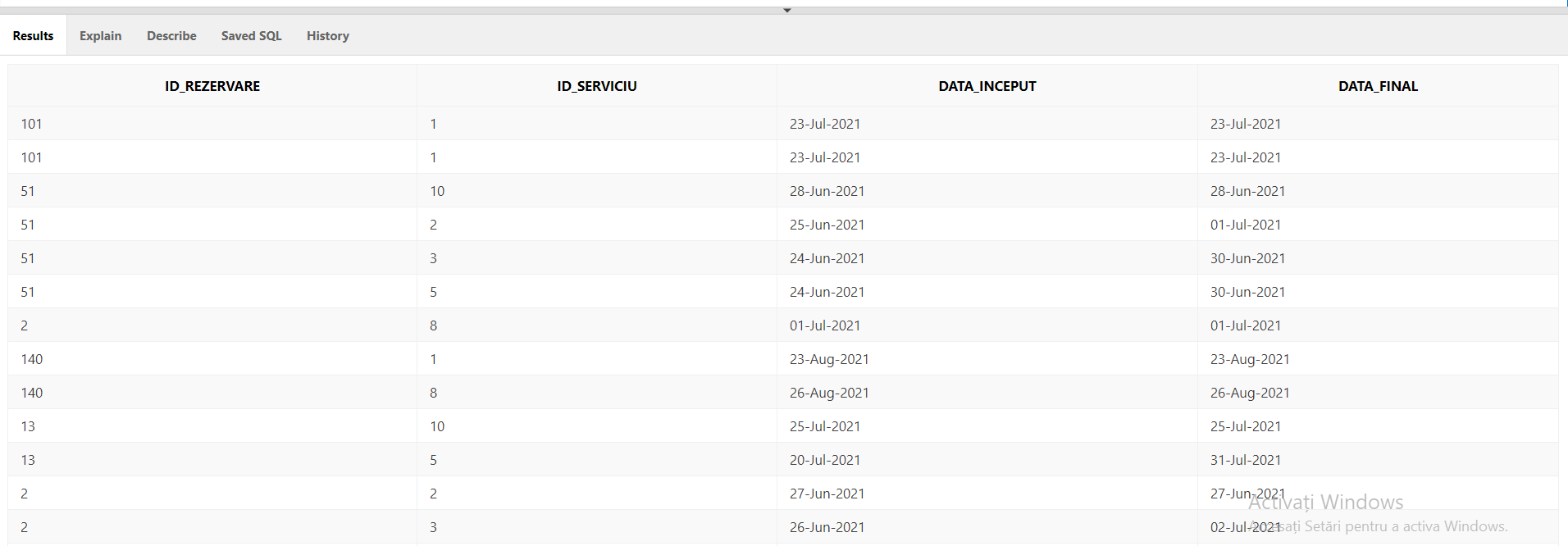
INSERT INTO Rezervare\_Servicii VALUES(13,10,'25-JUL-2021','25-JUL-2021')

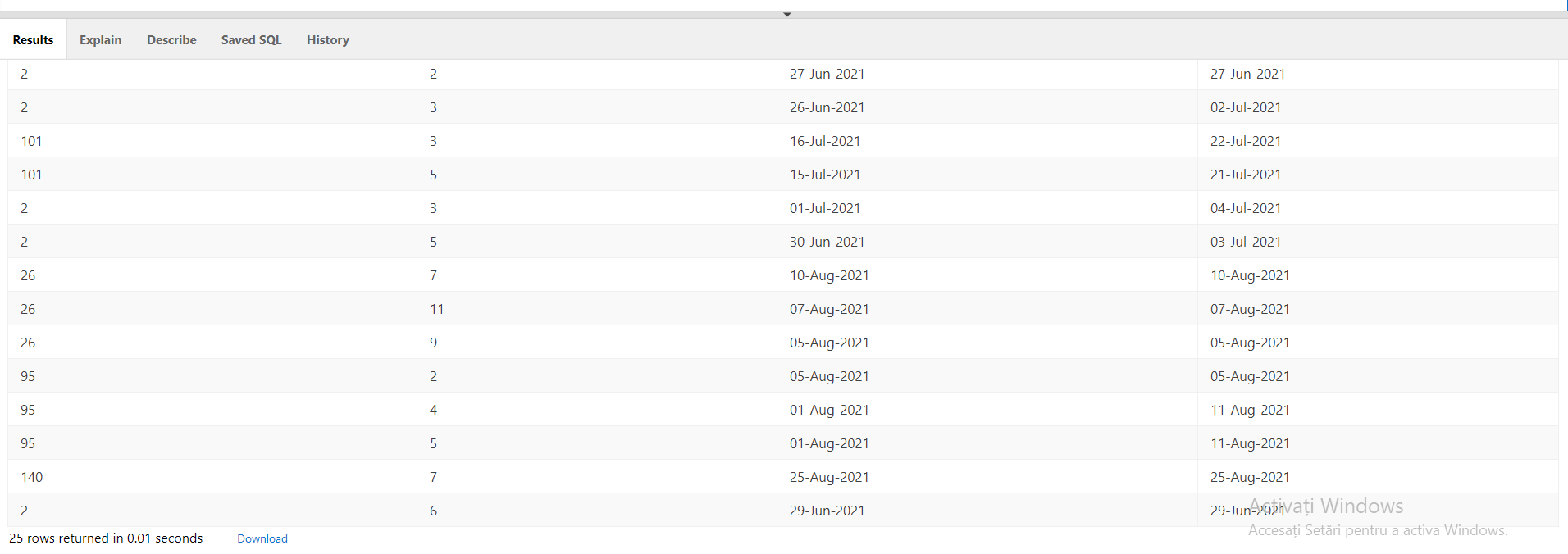
INSERT INTO Rezervare\_Servicii VALUES(13,5,'20-JUL-2021','31-JUL-2021')

INSERT INTO Rezervare\_Servicii VALUES(2,2,'27-JUN-2021','27-JUN-2021')

INSERT INTO Rezervare\_Servicii VALUES(2,6,'29-JUN-2021','29-JUN-2021')

INSERT INTO Rezervare\_Servicii VALUES(2,3,'26-JUN-2021','02-JUL-2021')





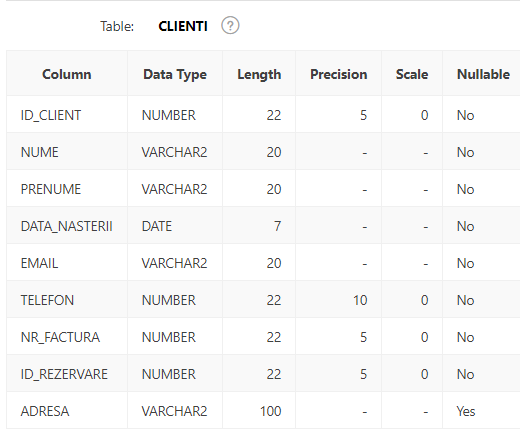
4.Modificari de structura si actualizari de continut

**Stergem campul adresa din tabelul Clienti**

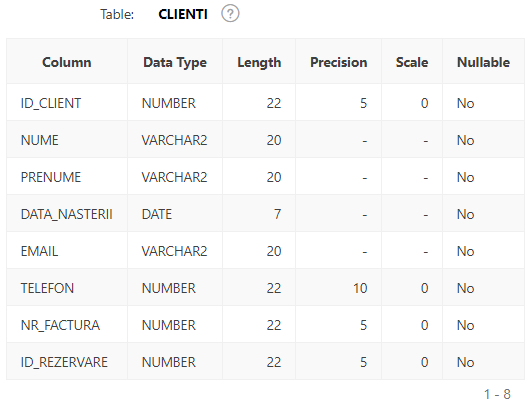
ALTER TABLE Clienti

DROP COLUMN adresa

INAINTE:



DUPA:

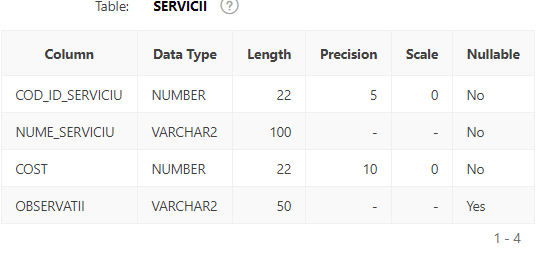


**Modificam lungimea campului nume\_serviciu din tabela Servicii din 100 in 50**

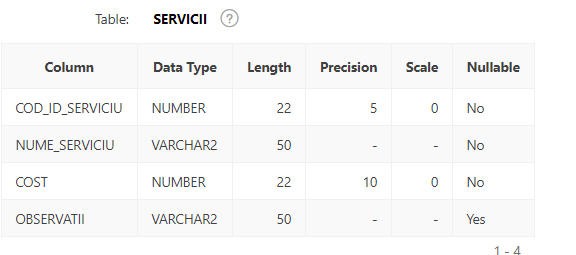
ALTER TABLE Servicii

MODIFY(nume\_serviciu VARCHAR2(50))

INAINTE:



DUPA:

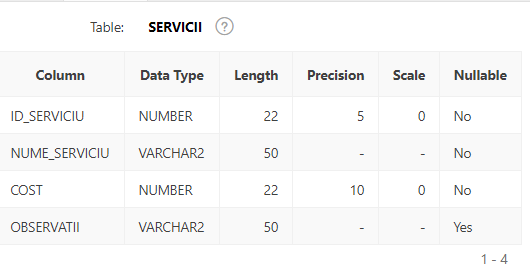


**Redenumim id\_serviciu din tabela Servicii din id\_serviciu in cod\_serviciu**

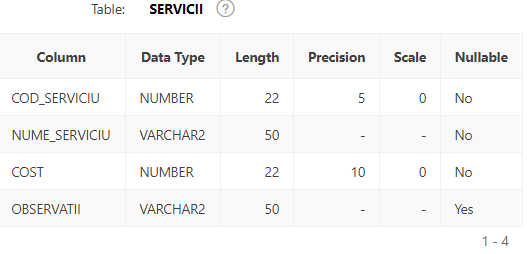
ALTER TABLE Servicii

RENAME COLUMN id\_serviciu TO cod\_serviciu

INAINTE:



DUPA:

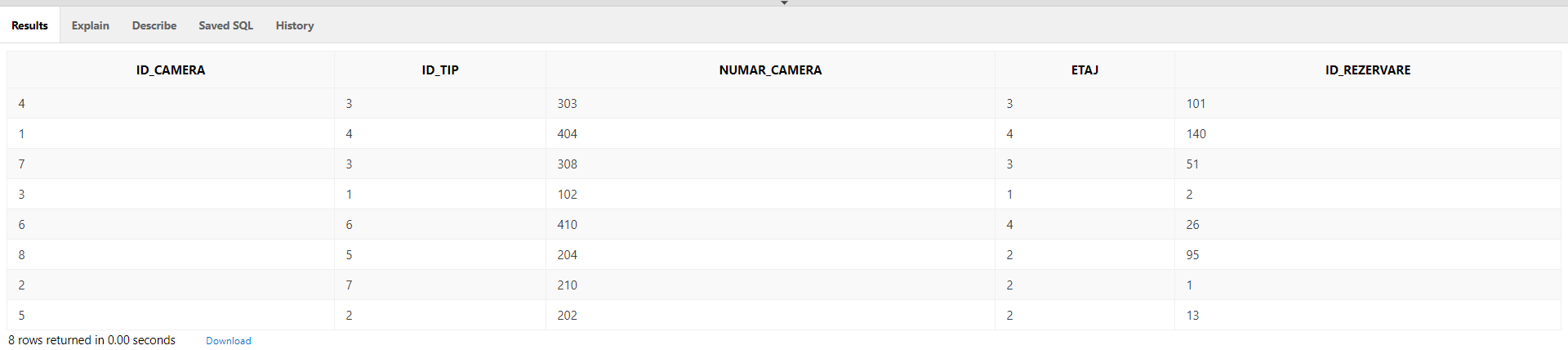


**Se va modifica etajul camerei cu id\_camera =4 din 3 in 2**

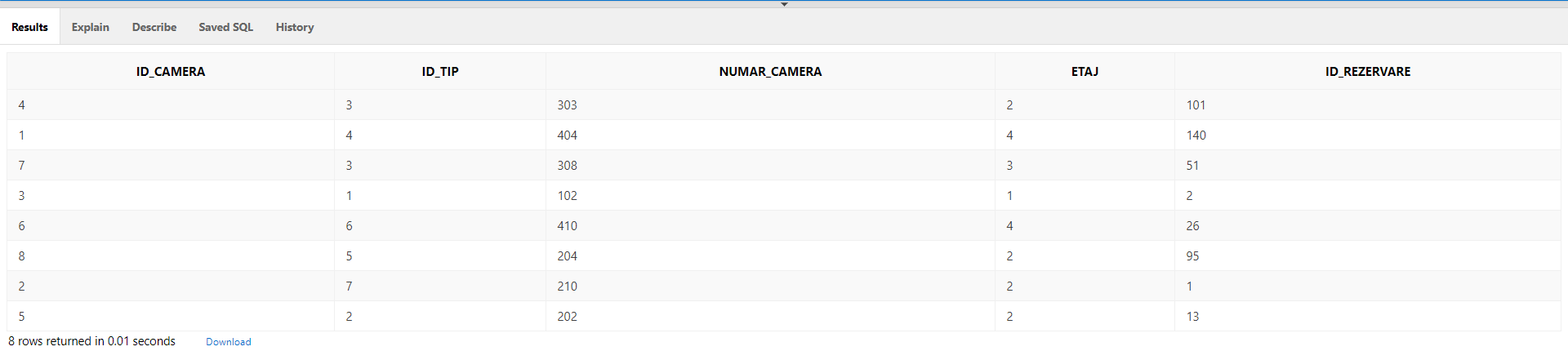
UPDATE Camera\_Hotel

SET etaj=2 WHERE id\_camera=4

INAINTE:



DUPA:

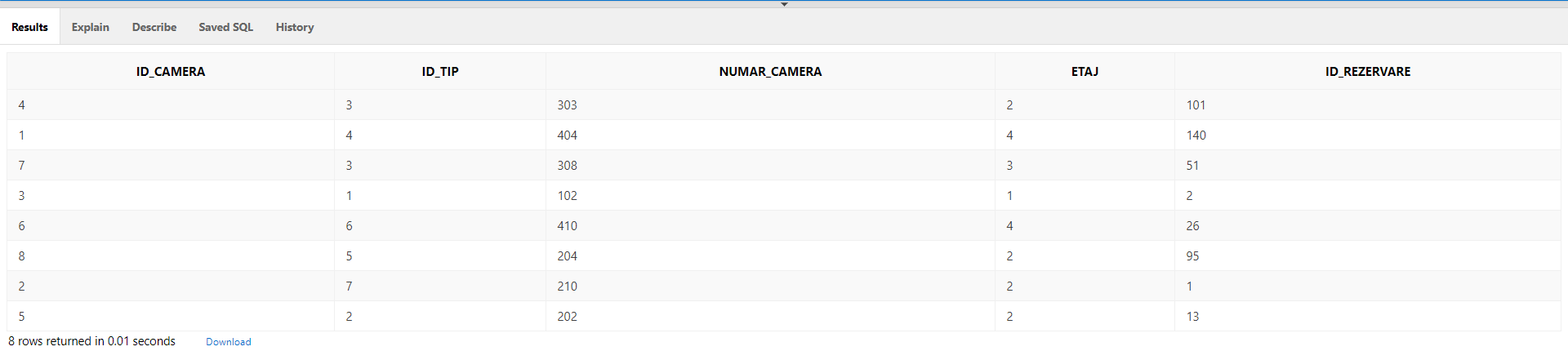


**Se va modifica numarul camerei cu id\_camera=5 din 303 in 205**

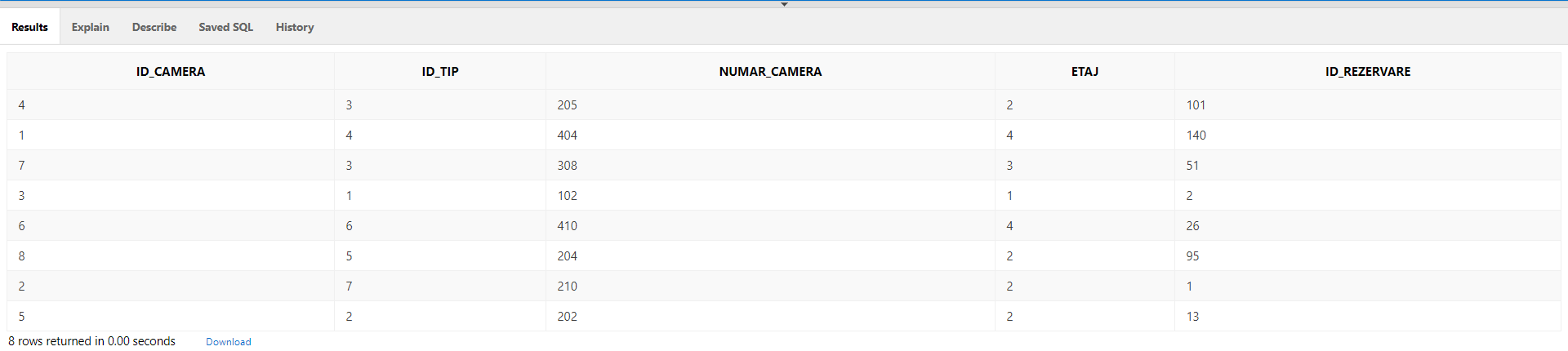
UPDATE Camera\_Hotel

SET numar\_camera=205 WHERE id\_camera=4

INAINTE:



DUPA:

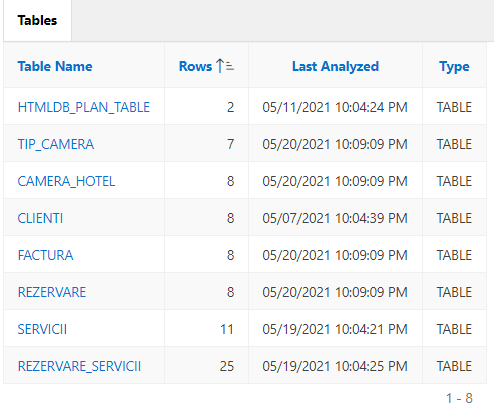


**Vom redenumi tabela Rezervare\_Servicii**

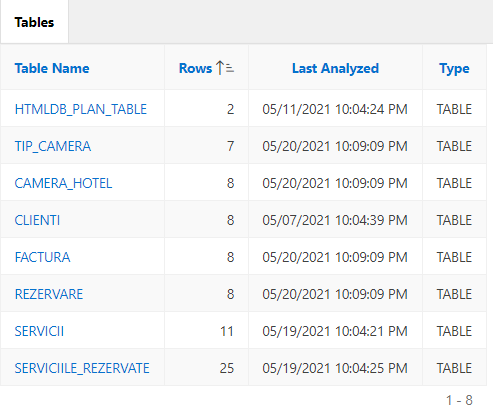
ALTER TABLE Rezervare\_Servicii

RENAME TO Serviciile\_Rezervate

INAINTE:



DUPA:

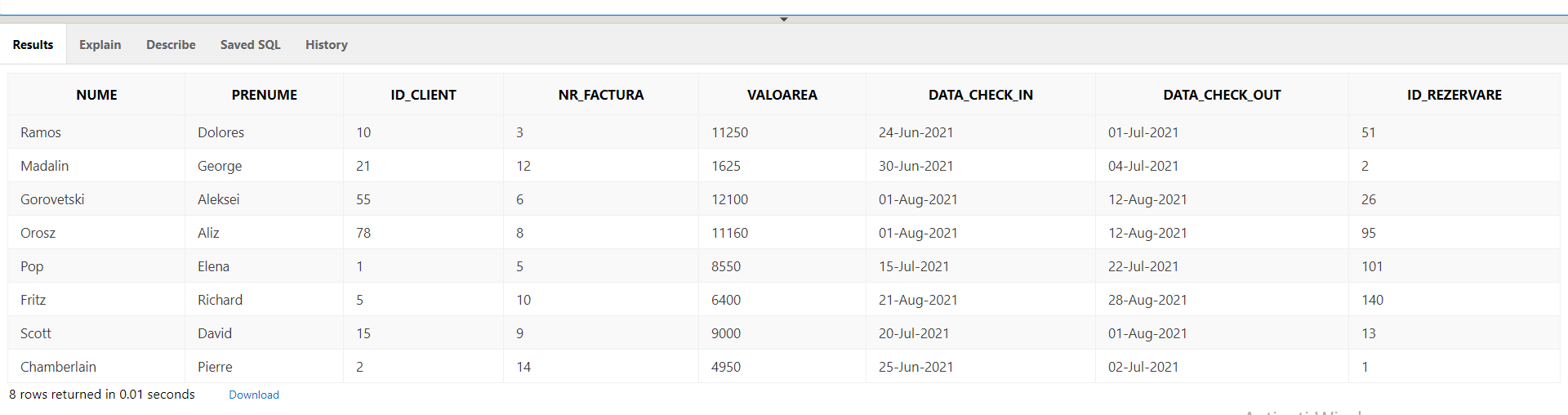


4.Creare vederi

**Sa se creeze o vedere denumita Sejur in care sa ne apara numele,prenumele si id-ul clientului impreuna cu numarul facturii ,valoare acesteia si data de check-in/check-out impreuna cu id\_ul rezervarii.**

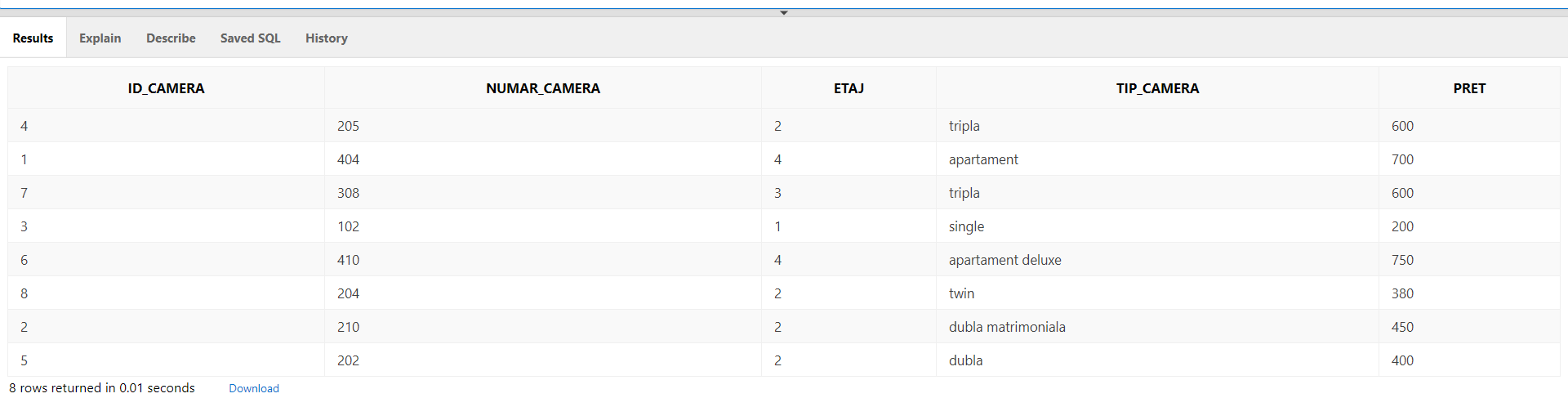
CREATE VIEW Sejur AS SELECT Clienti.nume,Clienti.prenume,Clienti.id\_client,Factura.nr\_factura,Factura.valoarea,Rezervare.data\_check\_in,rezervare.data\_check\_out,Rezervare.id\_rezervare FROM Clienti,Factura,Rezervare

WHERE Clienti.id\_client=Factura.id\_client AND Clienti.id\_client=Rezervare.id\_client



**Sa se creeze o vedere denumita Camere care sa cuprinda id-ul camerei,tipul camerei,numarul camerei,etajul la care se afla si pretul acesteia.**

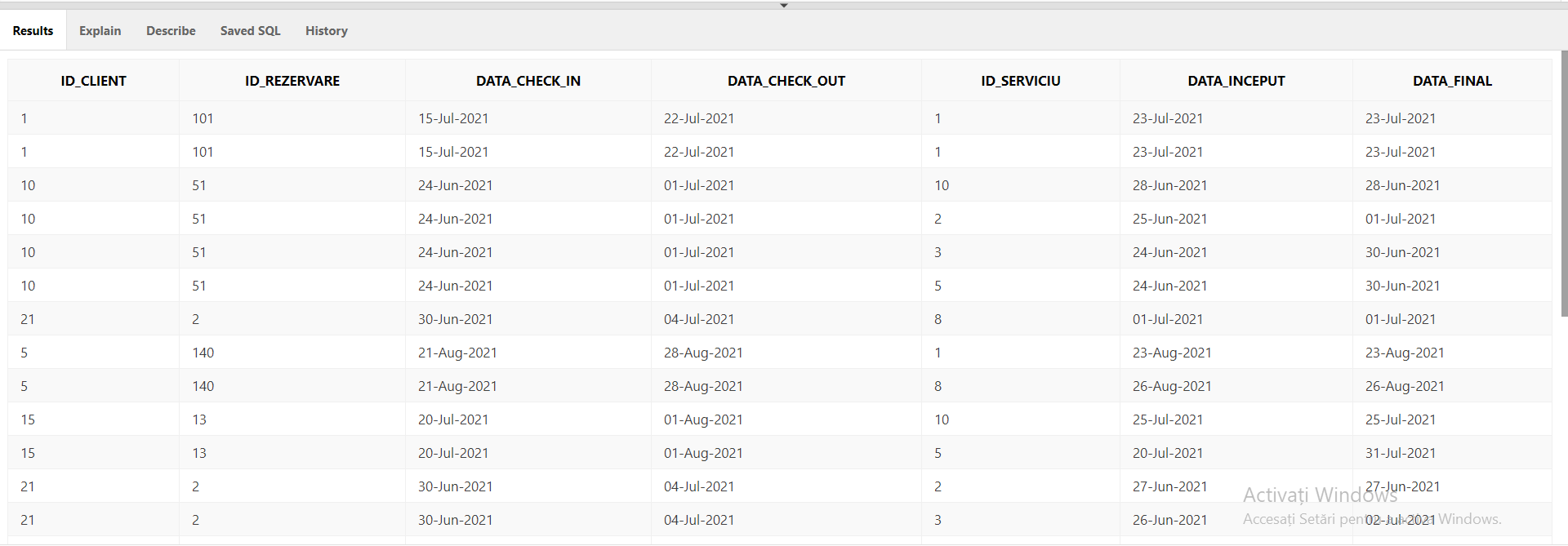
CREATE VIEW Camere AS SELECT Camera\_Hotel.id\_camera,Camera\_Hotel.numar\_camera,Camera\_Hotel.etaj,Tip\_Camera.tip\_camera,Tip\_Camera.pret FROM Camera\_Hotel,Tip\_Camera

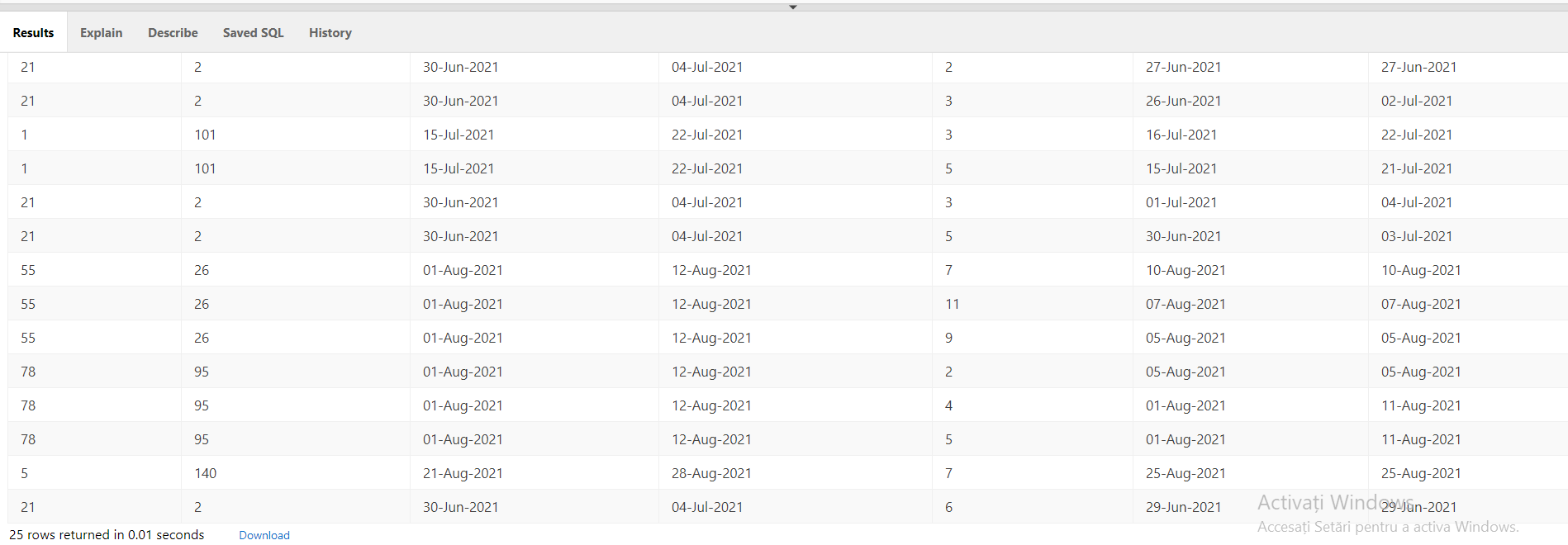
WHERE Camera\_Hotel.id\_tip=Tip\_Camera.id\_tip

**Sa se creeze o vedere denumita Serviciile\_Clientului care sa cuprinda id-ul clientului si al rezervarii,data de ckeck-in/check-out,id\_ul serviciului,data de inceput si data de final in care se consuma serviciul respective**

CREATE VIEW Serviciile\_Clientului AS SELECT Rezervare.id\_client,Rezervare.id\_rezervare,Rezervare.data\_check\_in,Rezervare.data\_check\_out,Serviciile\_Rezervate.id\_serviciu,Serviciile\_Rezervate.data\_inceput,Serviciile\_Rezervate.data\_final FROM Rezervare,Serviciile\_Rezervate

WHERE Rezervare.id\_rezervare=Serviciile\_Rezervate.id\_rezervare

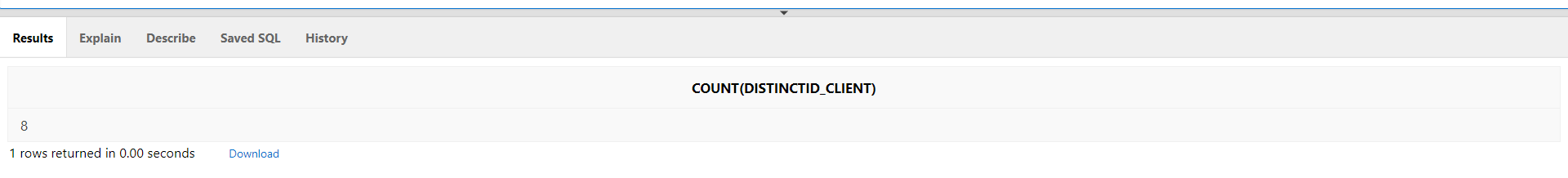




**6.Interogari**

**1. Dorim sa aflam cati Clienti diferiti au facut rezervare la hotel in perioada iunie- septembrie 2021**

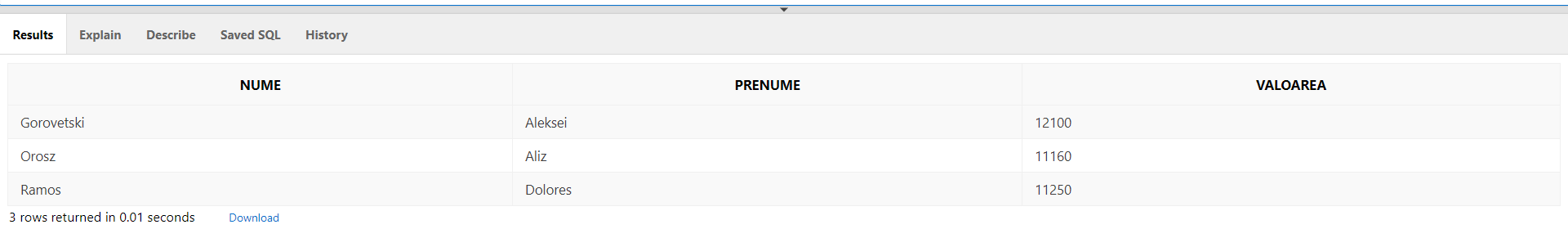
SELECT COUNT( DISTINCT id\_client) FROM Clienti WHERE id\_client IN(SELECT id\_client FROM Rezervare WHERE data\_check\_in >='1-Jun-2021' and

data\_check\_out<='1\_Sep-2021')

**2.Se doreste aflarea clientilor care au valoarea facturii peste 10000 lei.**

SELECT Clienti.nume,Clienti.prenume,Factura.valoarea FROM Clienti JOIN Factura ON(Clienti.id\_client=Factura.id\_client)

WHERE Factura.valoarea >10000

ORDER BY Clienti.nume ASC

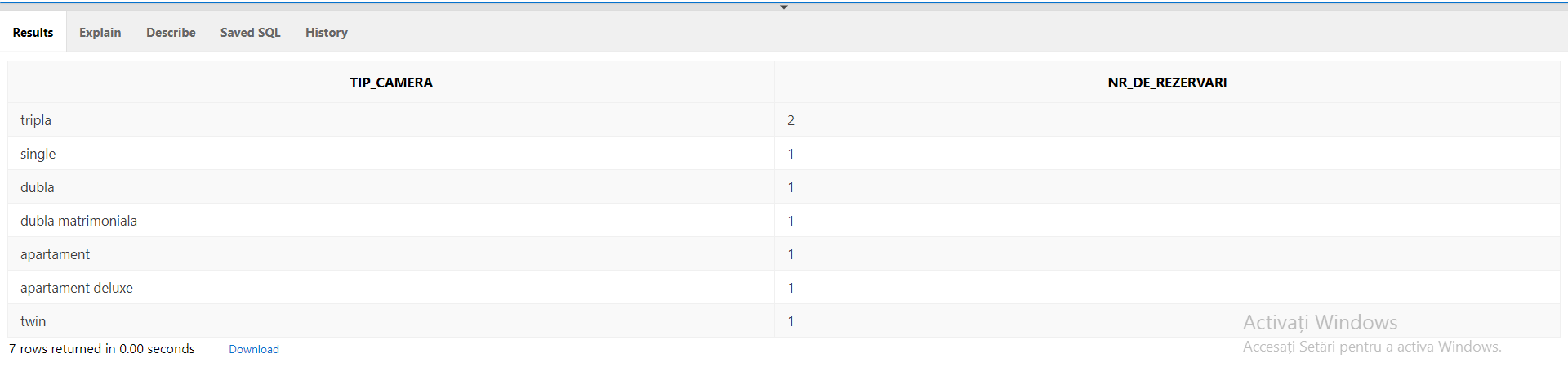
**3.Se doreste aflarea celui mai rezervat tip de camera**

SELECT tip\_camera, COUNT(\*) AS Nr\_de\_rezervari

FROM Tip\_Camera H, Camera\_Hotel R

WHERE H.id\_tip=R.id\_tip

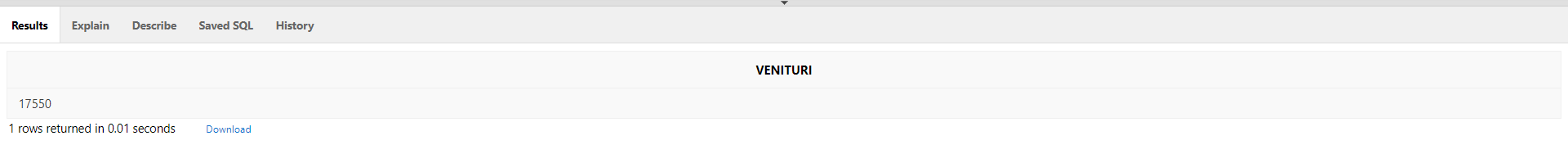
GROUP BY tip\_camera

ORDER BY Nr\_de\_rezervari DESC; 

**4.Se doreste aflarea venitului hotelului pe luna iulie**

SELECT SUM(valoarea) AS Venituri FROM Factura JOIN Clienti ON(Factura.nr\_factura=Clienti.nr\_factura) JOIN Rezervare ON(Factura.nr\_factura=Rezervare.nr\_factura)

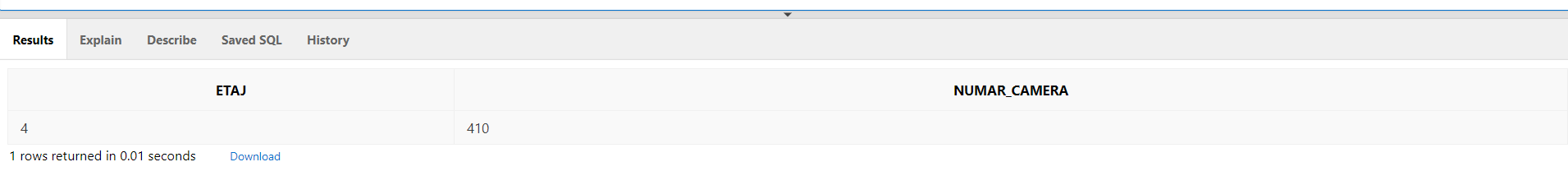
WHERE Rezervare.data\_check\_in BETWEEN '01-Jul-2021' AND '31-Jul-2021'



**5.Sa se afiseze etajul si numarul camerei in care este cazat clientul cu id\_ul 55**

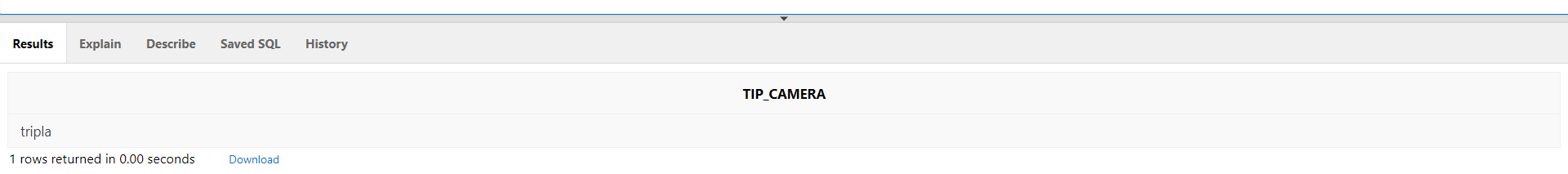
SELECT etaj,numar\_camera FROM Camera\_Hotel

WHERE id\_camera =(SELECT id\_camera FROM Rezervare WHERE id\_client =55)



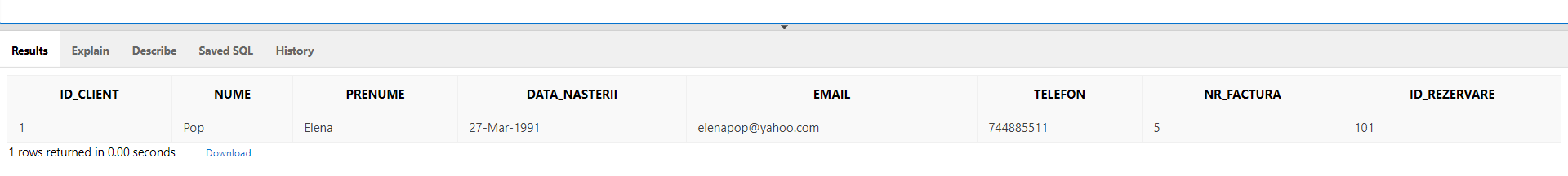
**6.Sa se determine tipul de camere care se afla la etajul 3**

SELECT tip\_camera FROM Tip\_Camera

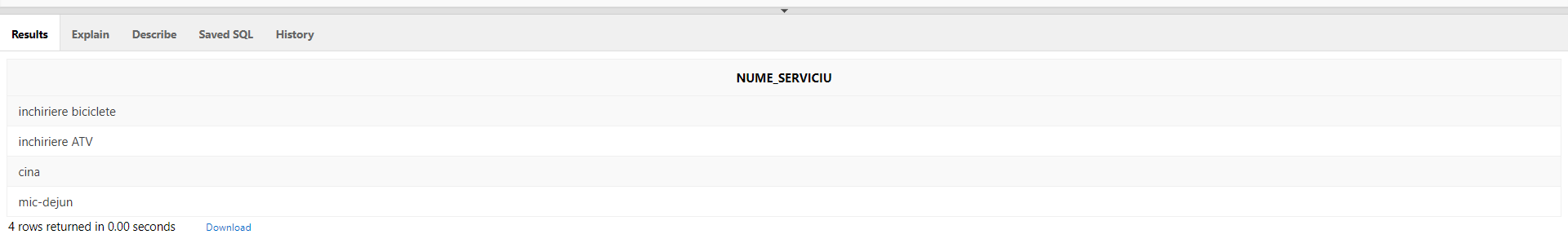
WHERE id\_tip =(SELECT id\_tip FROM Camera\_Hotel WHERE etaj =3) 

**7.Sa se determine clientii cazati in hotel in perioada 01 Iulie 2021,31 Iulie 2021**

SELECT \* FROM Clienti

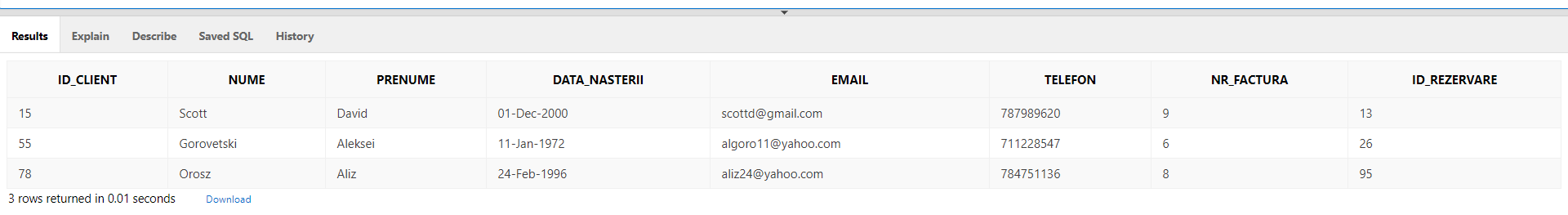
WHERE ID\_CLIENT=(SELECT id\_client FROM Rezervare WHERE data\_check\_in>='01-Jul\_2021' AND data\_check\_out<='31-Jul-2021')8.

**8.Se doreste aflarea serviciilor pentru care exista mai mult de 3 rezervari**

SELECT nume\_serviciu FROM Servicii s WHERE 3<= (SELECT COUNT(id\_serviciu) FROM Serviciile\_Rezervate a WHERE s.cod\_serviciu=a.id\_serviciu ) 

**9.Se doreste aflarea datelor despre clientii care sunt cazati in hotel pentru mai mult de 7 zile**

SELECT \* FROM Clienti a WHERE a.id\_rezervare IN (SELECT id\_rezervare FROM Rezervare r WHERE (r.data\_check\_out - r.data\_check\_in) >7 )



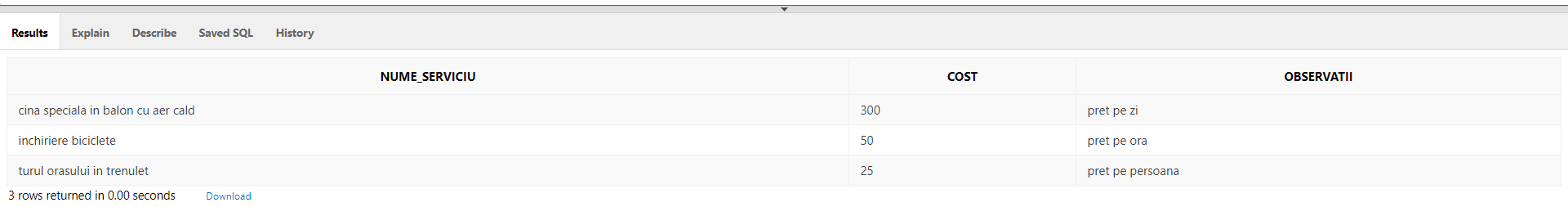
**10.Se doreste aflarea oaspetilor care vor fi cazati in hotel in perioada 1 Iulie-31August**

SELECT nume,prenume FROM Clienti a WHERE a.id\_rezervare IN(SELECT id\_rezervare FROM Rezervare r WHERE r.data\_check\_in BETWEEN '01-Jul-2021' AND '31-Aug-2021')

ORDER BY a.nume ASC

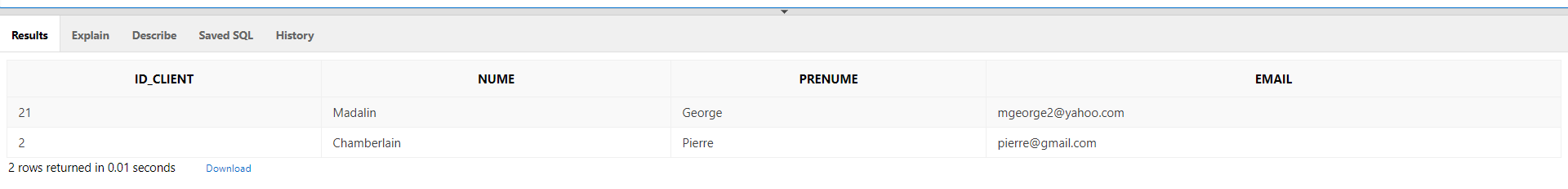
**11.Se doreste afisarea serviciilor rezervate de clientul cu rezervarea 140**

SELECT nume\_serviciu,cost,observatii FROM Servicii a WHERE a.cod\_serviciu IN(SELECT id\_serviciu FROM Serviciile\_Rezervate r WHERE r.id\_rezervare =140)

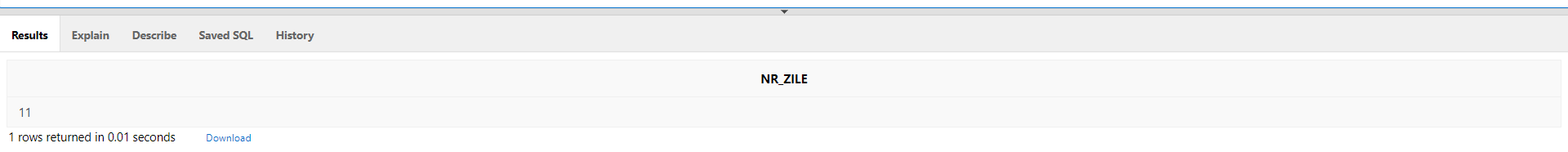
ORDER BY cost DESC

**12.Se doreste aflarea datelor despre clientii care lasa mai putin de 5000 de lei pentru sejurul lor la hotel**

SELECT id\_client,nume,prenume,email FROM Clienti WHERE nr\_factura IN(SELECT nr\_factura FROM Factura WHERE valoarea<=5000)

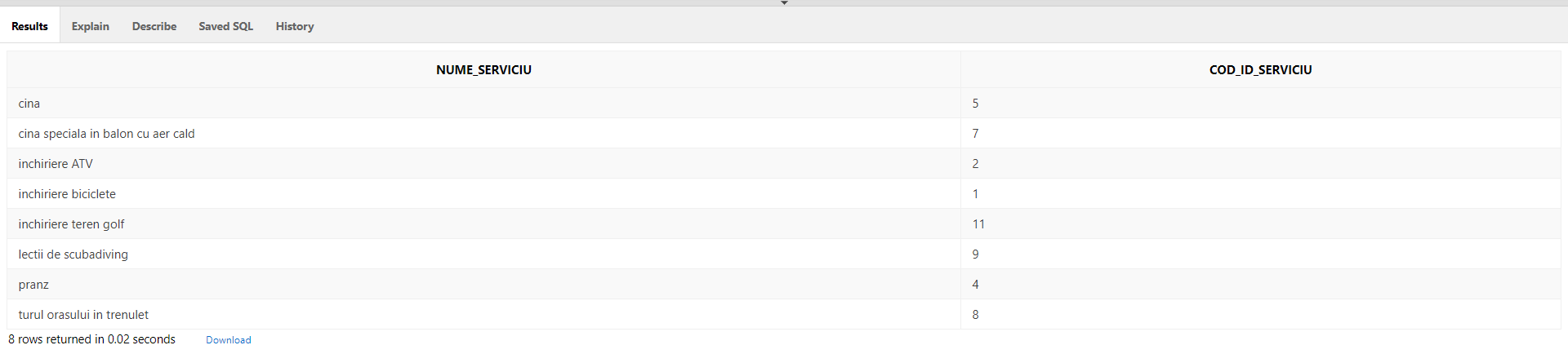


**13.Se doreste afisarea numarului de zile in care este este rezervata camera 410**

SELECT(data\_check\_out - data\_check\_in) AS Nr\_zile FROM Rezervare WHERE id\_rezervare =(SELECT id\_rezervare FROM Camera\_Hotel WHERE numar\_camera =410) 

**14.Se doreste afisarea numelor si id-urilor serviciilor care sunt rezervate in perioada 01-Aug-2021,01-Sep-2021**

SELECT s.nume\_serviciu,s.cod\_id\_serviciu FROM Servicii s WHERE s.cod\_serviciu IN(SELECT a.id\_serviciu FROM Serviciile\_Rezervate a WHERE a.data\_inceput BETWEEN '01-Aug-2021' AND '01-Sep-2021' )

ORDER BY s.nume\_serviciu ASC

**15.Sa se afiseze media preturilor pentru camerele rezervate in perioada Iunie-Septembrie**

SELECT AVG(pret) FROM Tip\_Camera t JOIN Camera\_Hotel c ON(t.id\_tip=c.id\_tip) JOIN Rezervare r ON (c.id\_rezervare=r.id\_rezervare)

WHERE r.data\_check\_in BETWEEN '01-Jun-2021' AND '01-Sep-2021'