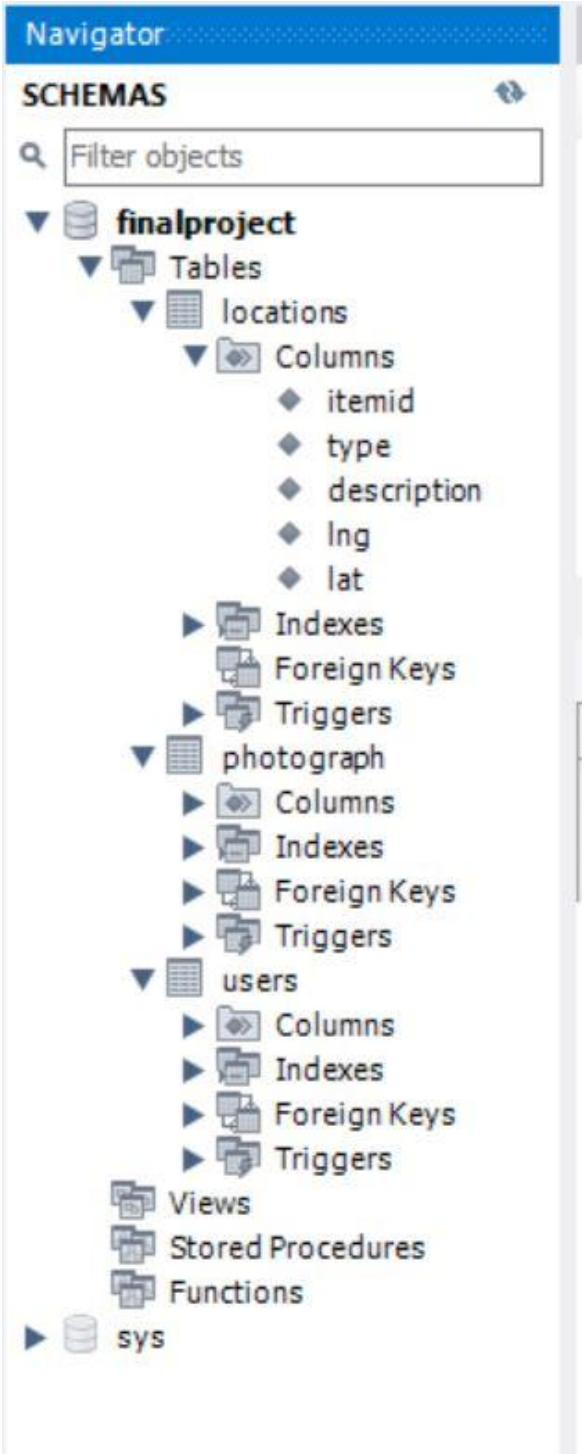
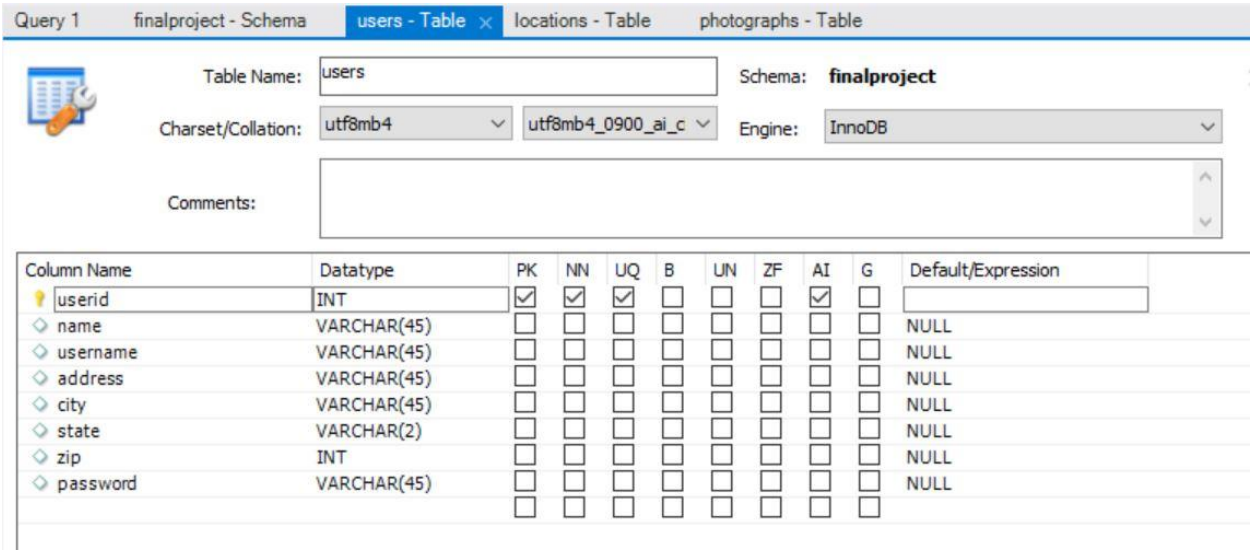
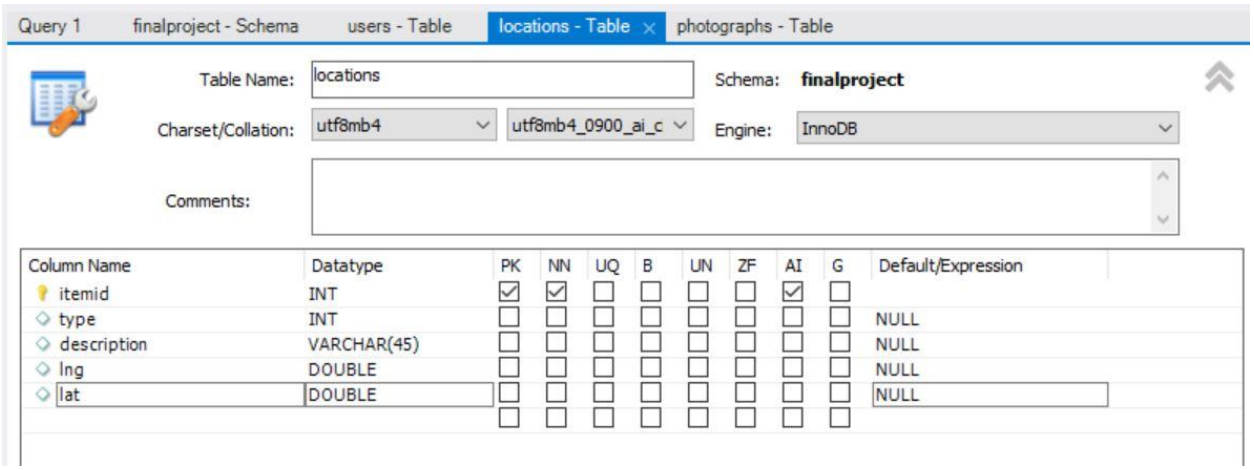
Prompt 1

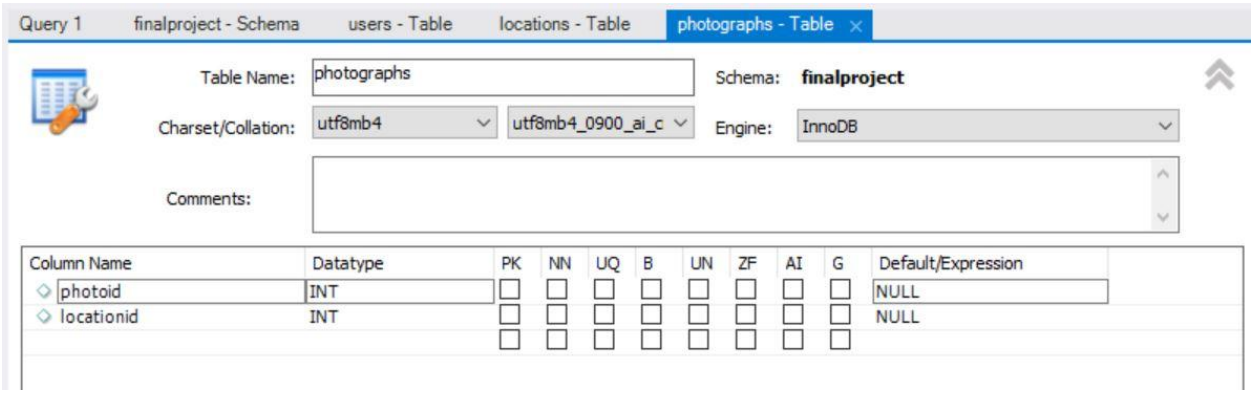

Navigator
SCHEMAS
Filter objects
finalproject
Tables
locations
Columns
itemid
type
description
lng
lat
Indexes
Foreign Keys
Triggers
photograph
Columns
Indexes
Foreign Keys
Triggers
users
Columns
Indexes
Foreign Keys
Triggers
Views
Stored Procedures
Functions
sys

Prompt 2

```
CREATE TABLE users (
  userid SERIAL PRIMARY KEY,
  name VARCHAR(20),
  username VARCHAR(20),
  address VARCHAR(20),
  city VARCHAR(20),
  state VARCHAR(2),
  zip INTEGER,
  password VARCHAR(20)
);


CREATE TABLE locations (
  itemid SERIAL PRIMARY KEY,
  type INTEGER,
  description VARCHAR(20),
  lng REAL,
  lat REAL
);


CREATE TABLE photographs (
  photoid PRIMARY KEY,
  locationid INTEGER
);
```







Prompt 3

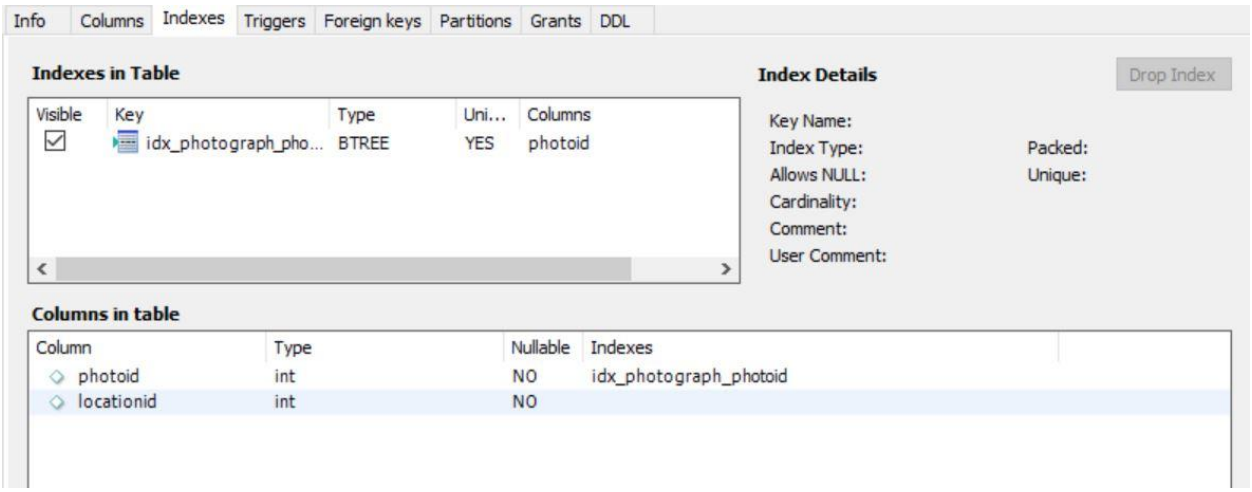
ALTER TABLE locations
MODIFY type VARCHAR(255) NOT NULL,
MODIFY description VARCHAR(255) NOT NULL,
MODIFY lng DECIMAL(9,6) NOT NULL,
MODIFY lat DECIMAL(9,6) NOT NULL;

ALTER TABLE users
MODIFY name VARCHAR(255) NOT NULL,
MODIFY username VARCHAR(255) NOT NULL,
MODIFY password VARCHAR(255) NOT NULL;

ALTER TABLE photograph
MODIFY photoid INT NOT NULL,
MODIFY locationid INT NOT NULL;

Prompt 4

CREATE UNIQUE INDEX idx_photograph_photoid ON photograph (photoid);

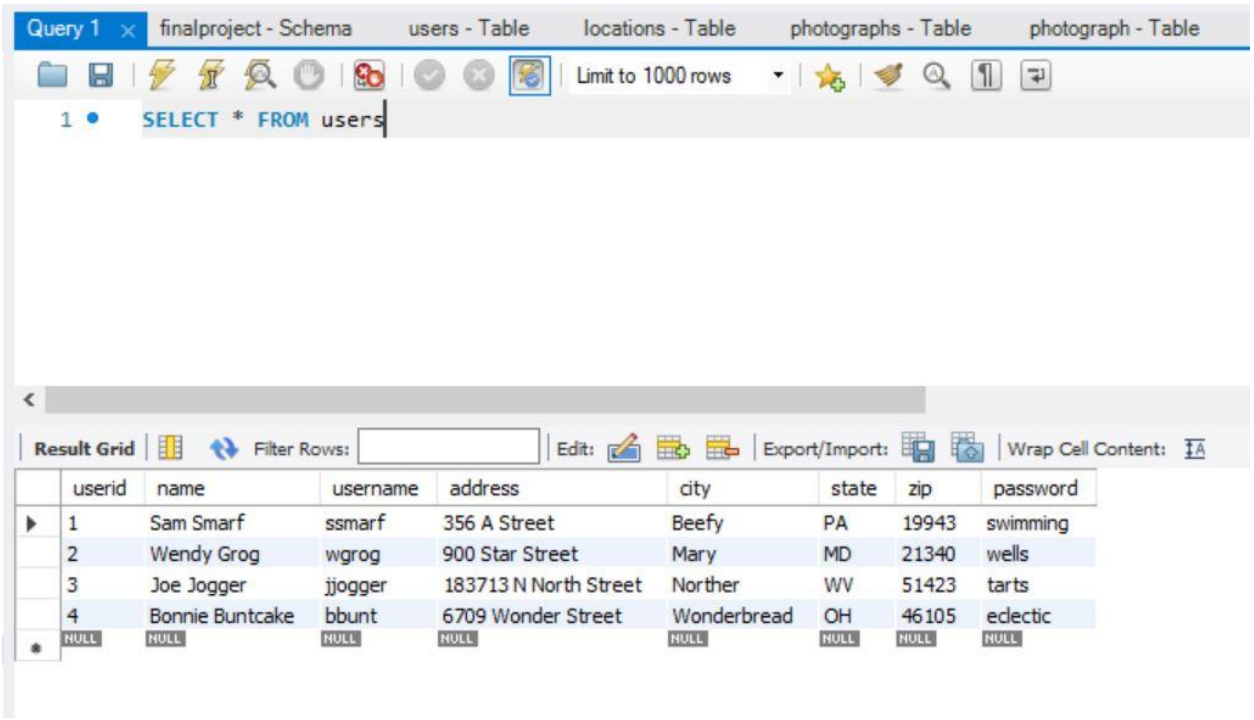


Prompt 5

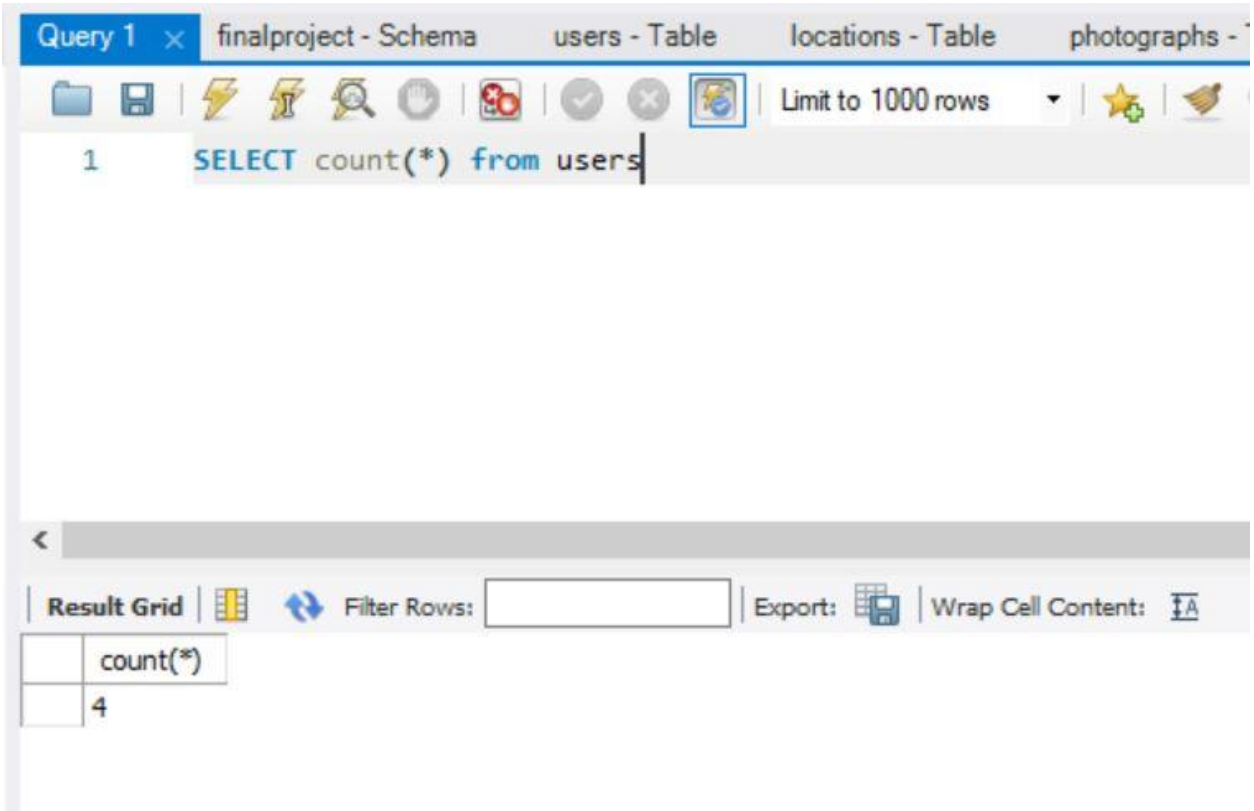
INSERT INTO users (name, username, address, city, state, zip, password)
VALUES ('Sam Smarf', 'ssmarf', '356 A Street', 'Beefy', 'PA', 19943, 'swimming');

INSERT INTO users (name, username, address, city, state, zip, password)
VALUES ('Wendy Grog', 'wgrog', '900 Star Street', 'Mary', 'MD', 21340, 'wells');

INSERT INTO users (name, username, address, city, state, zip, password)
VALUES ('Joe Jogger', 'jjogger', '183713 N North Street', 'Norther', 'WV', 51423, 'tarts');

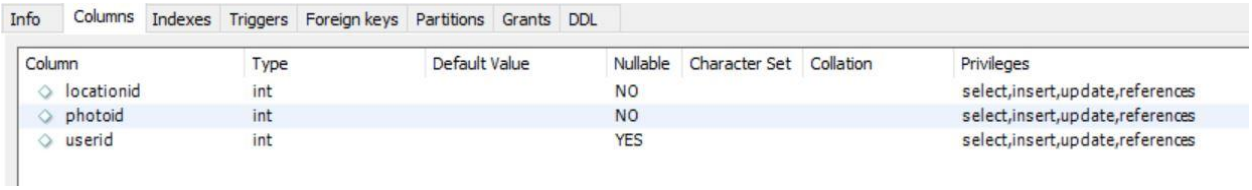

Query 1
finalproject - Schema
users - Table
locations - Table
photographs - Table
photograph - Table
Limit to 1000 rows
1 SELECT * FROM users
Result Grid
Filter Rows:
Edit:
Export/Import:
Wrap Cell Content:
userid name username address city state zip password
1 Sam Smarf ssmarf 356 A Street Beefy PA 19943 swimming
2 Wendy Grog wgrog 900 Star Street Mary MD 21340 wells
3 Joe Jogger jjogger 183713 N North Street Norther WV 51423 tarts
4 Bonnie Buntcake bbunt 6709 Wonder Street Wonderbread OH 46105 eclectic
NULL NULL NULL NULL NULL NULL NULL NULL

Prompt 6


Query 1
finalproject - Schema
users - Table
locations - Table
photographs -
Limit to 1000 rows
1 SELECT count(*) from users
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
count(*)
4

Prompt 7

ALTER TABLE photograph
ADD COLUMN userid INT AFTER locationid;



Info | Columns | Indexes | Triggers | Foreign keys | Partitions | Grants | DDL

Column	Type	Default Value	Nullable	Character Set	Collation	Privileges
locationid	int		NO			select,insert,update,references
photoid	int		NO			select,insert,update,references
userid	int		YES			select,insert,update,references

Prompt 8

Considering the importance of data integrity, we need to ensure that the new "userid" column in the "photograph" table maintains a proper relationship with the "users" table. To achieve this, we should define a foreign key constraint on the "userid" column.

To modify the "photograph" table and add the "userid" column with a foreign key constraint, we can use the ALTER TABLE statement as follows:

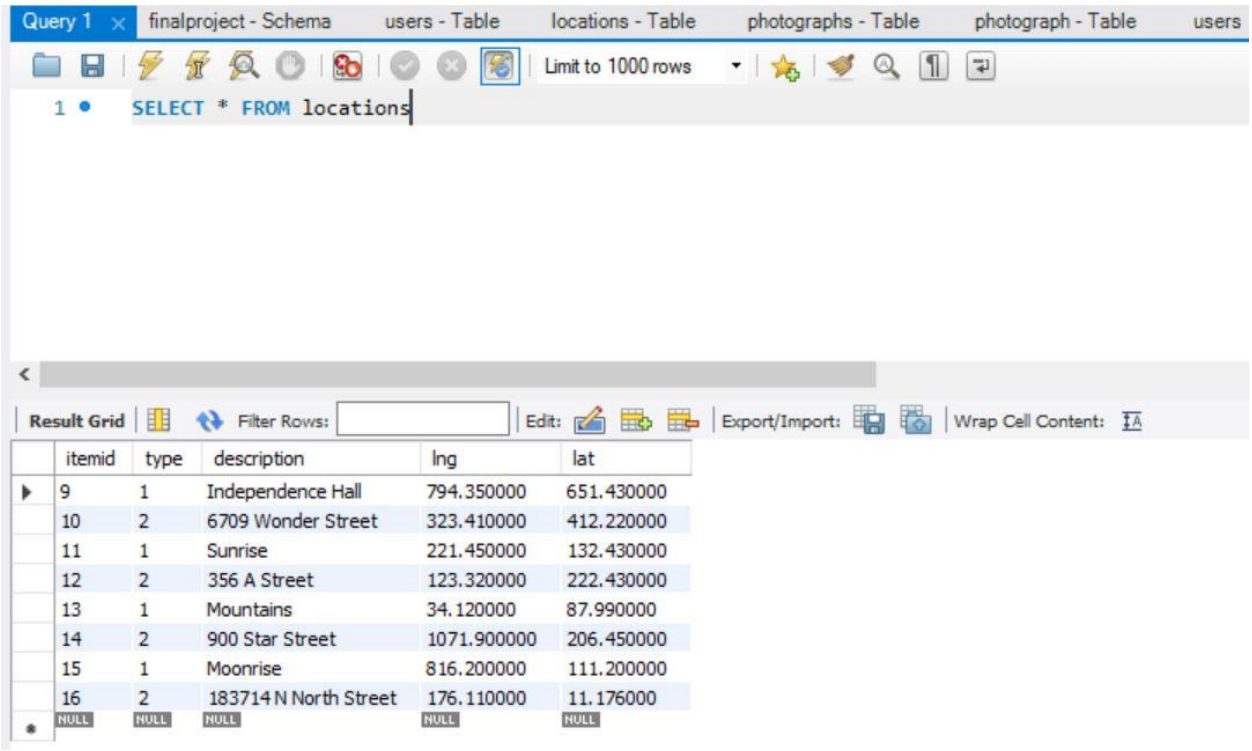
ALTER TABLE photograph
ADD COLUMN userid INT,
ADD CONSTRAINT fk_userid FOREIGN KEY (userid) REFERENCES users (userid);

By establishing this foreign key constraint, we ensure that the values in the "userid" column of the "photograph" table correspond to valid user IDs existing in the "users" table. This helps maintain data integrity by preventing inconsistencies and ensuring referential integrity between the two tables.

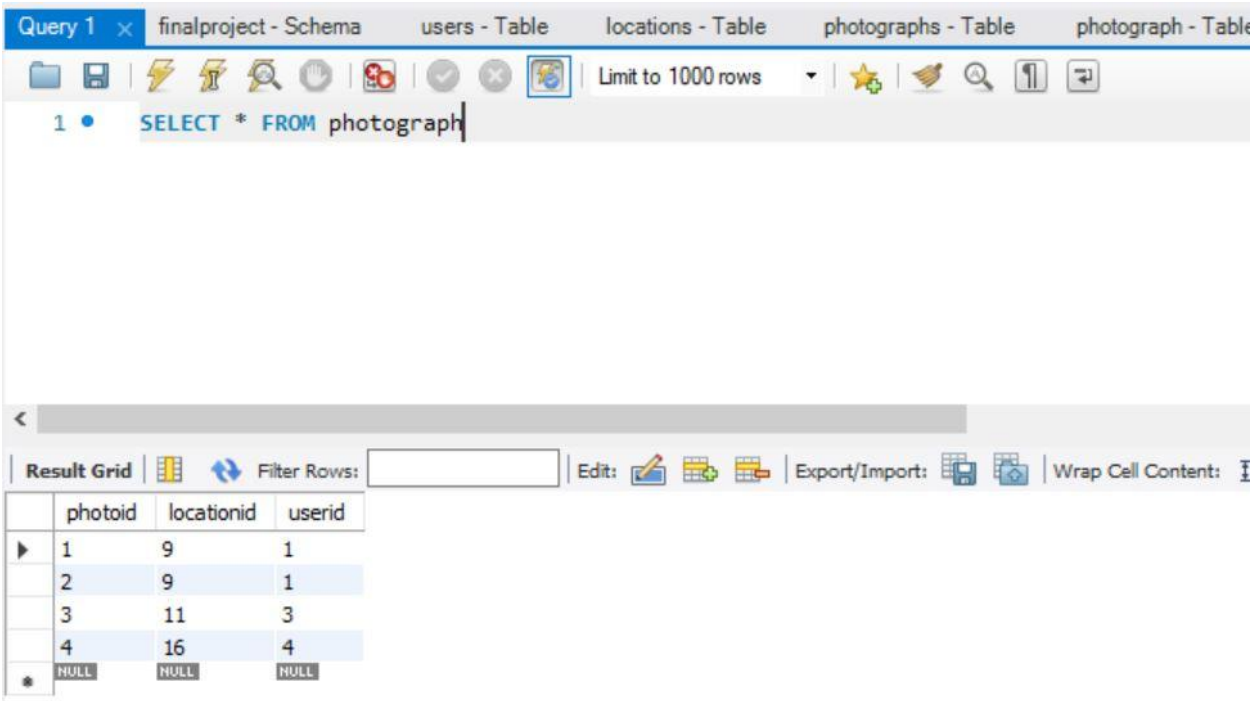
Prompt 9

INSERT INTO locations (type, description, lng, lat)
VALUES
(1, 'Independence Hall', 794.35, 651.43),
(2, '6709 Wonder Street', 323.41, 412.22),
(1, 'Sunrise', 221.45, 132.43),
(2, '356 A Street', 123.32, 222.43),
(1, 'Mountains', 34.12, 87.99),
(2, '900 Star Street', 1071.9, 206.45),
(1, 'Moonrise', 816.2, 111.2),
(2, '183714 N North Street', 176.11, 11.176);

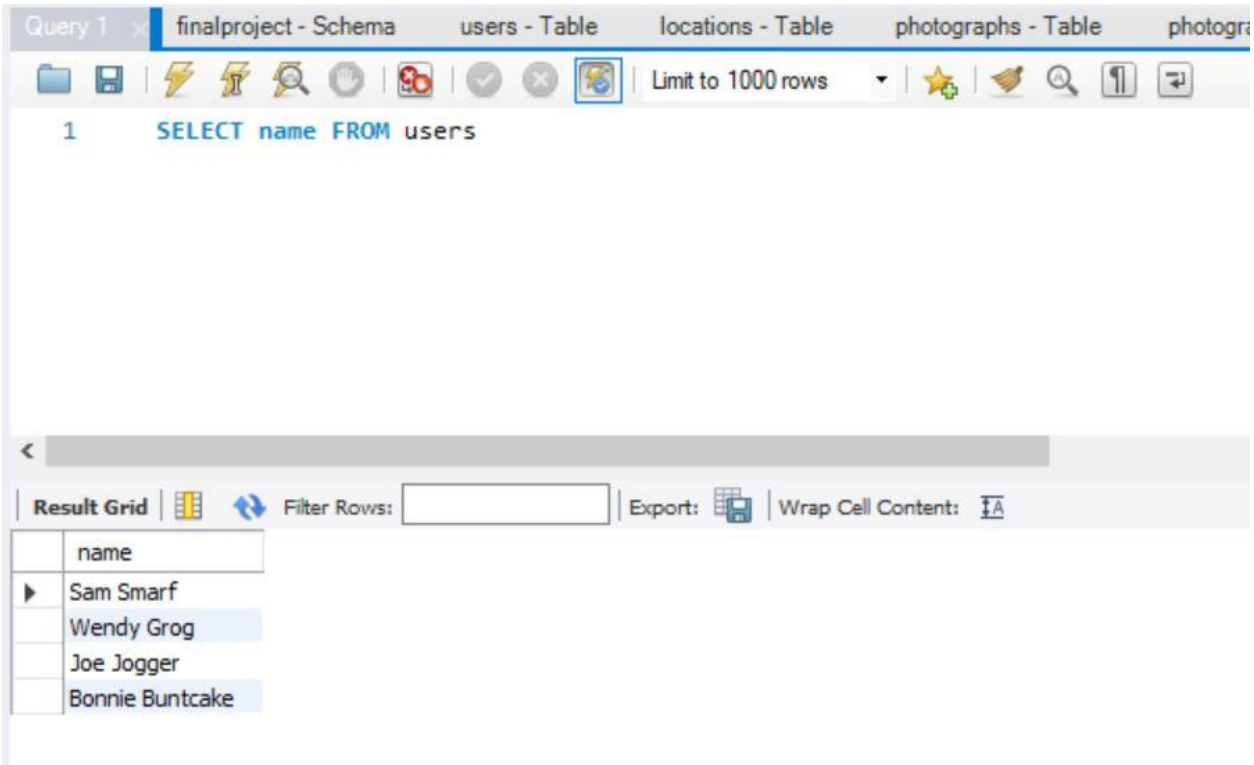
```
INSERT INTO photograph (photoid, locationid, userid)
VALUES (1, (SELECT itemid FROM locations WHERE description = 'Independence Hall'), 1);

INSERT INTO photograph (photoid, locationid, userid)
VALUES (2, (SELECT itemid FROM locations WHERE description = 'Independence Hall'), 1);

INSERT INTO photograph (photoid, locationid, userid)
VALUES (3, (SELECT itemid FROM locations WHERE description = 'Sunrise'), 3);

INSERT INTO photograph (photoid, locationid, userid)
VALUES (4, (SELECT itemid FROM locations WHERE description = '183714 N North Street'),
4);
```



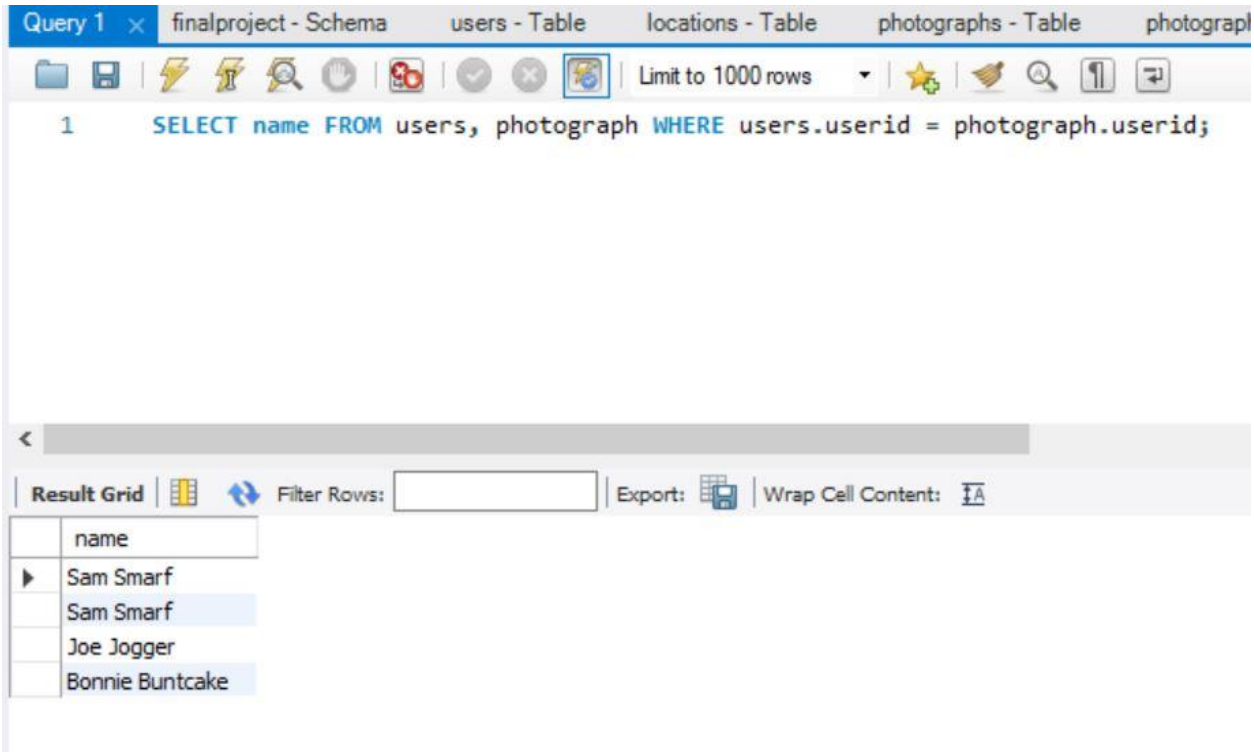
itemid	type	description	lng	lat
9	1	Independence Hall	794.350000	651.430000
10	2	6709 Wonder Street	323.410000	412.220000
11	1	Sunrise	221.450000	132.430000
12	2	356 A Street	123.320000	222.430000
13	1	Mountains	34.120000	87.990000
14	2	900 Star Street	1071.900000	206.450000
15	1	Moonrise	816.200000	111.200000
16	2	183714 N North Street	176.110000	11.176000
NULL	NULL	NULL	NULL	NULL


Query 1
finalproject - Schema
users - Table
locations - Table
photographs - Table
photograph - Table
Limit to 1000 rows
1 SELECT * FROM photograph
Result Grid
Filter Rows:
Edit:
Export/Import:
Wrap Cell Content:
photoid locationid userid
1 9 1
2 9 1
3 11 3
4 16 4
NULL NULL NULL

Prompt 10


Query 1
finalproject - Schema
users - Table
locations - Table
photographs - Table
Limit to 1000 rows
1 SELECT name FROM users
Result Grid
Filter Rows:
Export:
Wrap Cell Content:
name
Sam Smarf
Wendy Grog
Joe Jogger
Bonnie Buntcake

Prompt 11



Prompt 12