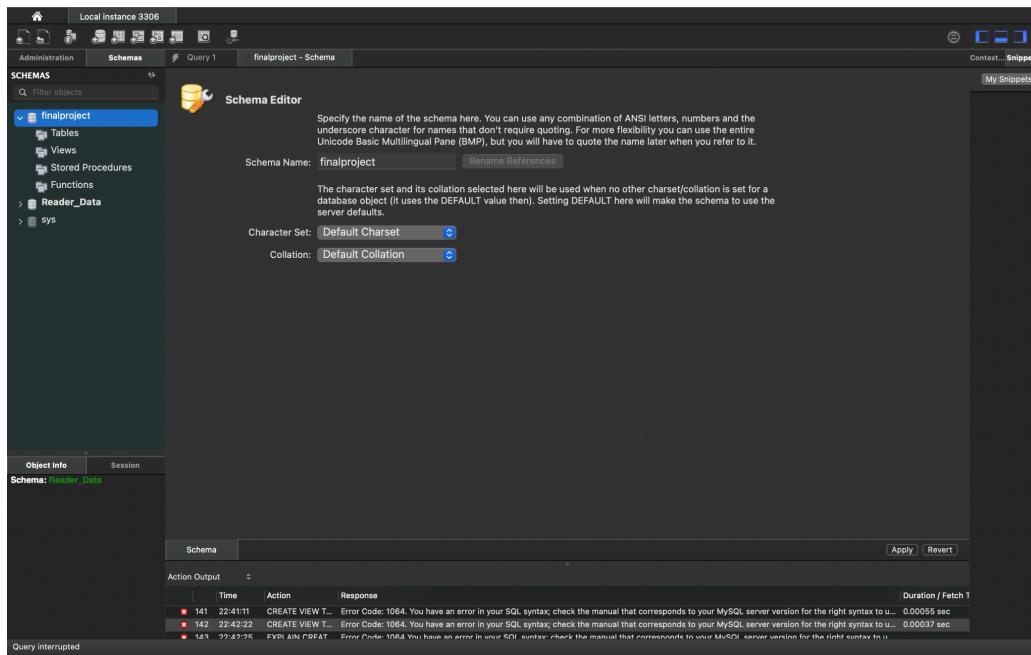
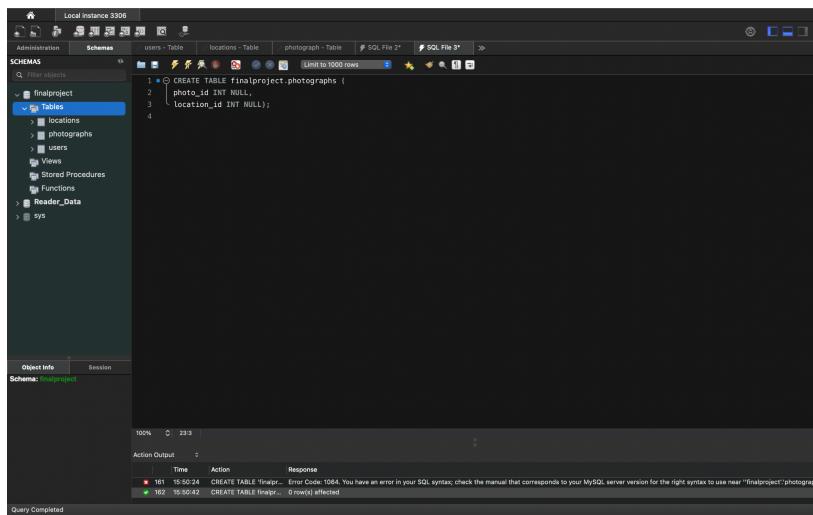


Database System

Prompt 1



Prompt 2



CODE:

```
CREATE TABLE finalproject.photographs (
photo_id INT NULL,
location_id INT NULL)
```

Prompt 3

The screenshot shows the SSMS interface with the following details:

- Object Explorer (Left):** Shows the database structure under "finalproject".
 - Tables: locations, photographs.
 - Columns: photo_id, user_id, location_id.
 - Indexes.
 - Foreign Keys.
 - Triggers.
 - Views.
 - Stored Procedures.
 - Functions.
- Query Editor (Top Right):** Displays a script of ALTER TABLE statements for the "finalproject.locations" table.

```
1 ALTER TABLE finalproject.locations
2     CHANGE COLUMN type type INT NOT NULL ,
3     CHANGE COLUMN description description VARCHAR(45) NOT NULL ,
4     CHANGE COLUMN Ing Ing DOUBLE NOT NULL ,
5     CHANGE COLUMN lat lat DOUBLE NOT NULL
6
7 ALTER TABLE finalproject.locations
8     CHANGE COLUMN type type INT NOT NULL ,
9     CHANGE COLUMN description description VARCHAR(45) NOT NULL ,
10    CHANGE COLUMN Ing Ing DOUBLE NOT NULL ,
11    CHANGE COLUMN lat lat DOUBLE NOT NULL
12
13 ALTER TABLE finalproject.photographs
14     CHANGE COLUMN photo_id photo_id INT NOT NULL ,
15     CHANGE COLUMN location_id location_id INT NOT NULL
```
- Object Info (Bottom Left):** Details for the "photographs" table:
 - Table: photographs
 - Columns:
 - photo_id int
 - user_id int
 - location_id int
 - Related Tables:
 - locations (location_id → itemid)
 - On Update RESTRICT
 - On Delete RESTRICT
- History (Bottom Right):** Shows the execution history of the ALTER TABLE statements.

Date	Time	Statement
2022-10-12	16:35:07	ALTER TABLE finalproject.locations
2022-10-11	16:33:37	ALTER TABLE finalproject.photographs

Code 1 Locations: ALTER TABLE finalproject.locations

CHANGE COLUMN type type INT NOT NULL ,
CHANGE COLUMN description description VARCHAR(45) NOT NULL ,
CHANGE COLUMN Ing Ing DOUBLE NOT NULL ,
CHANGE COLUMN lat lat DOUBLE NOT NULL

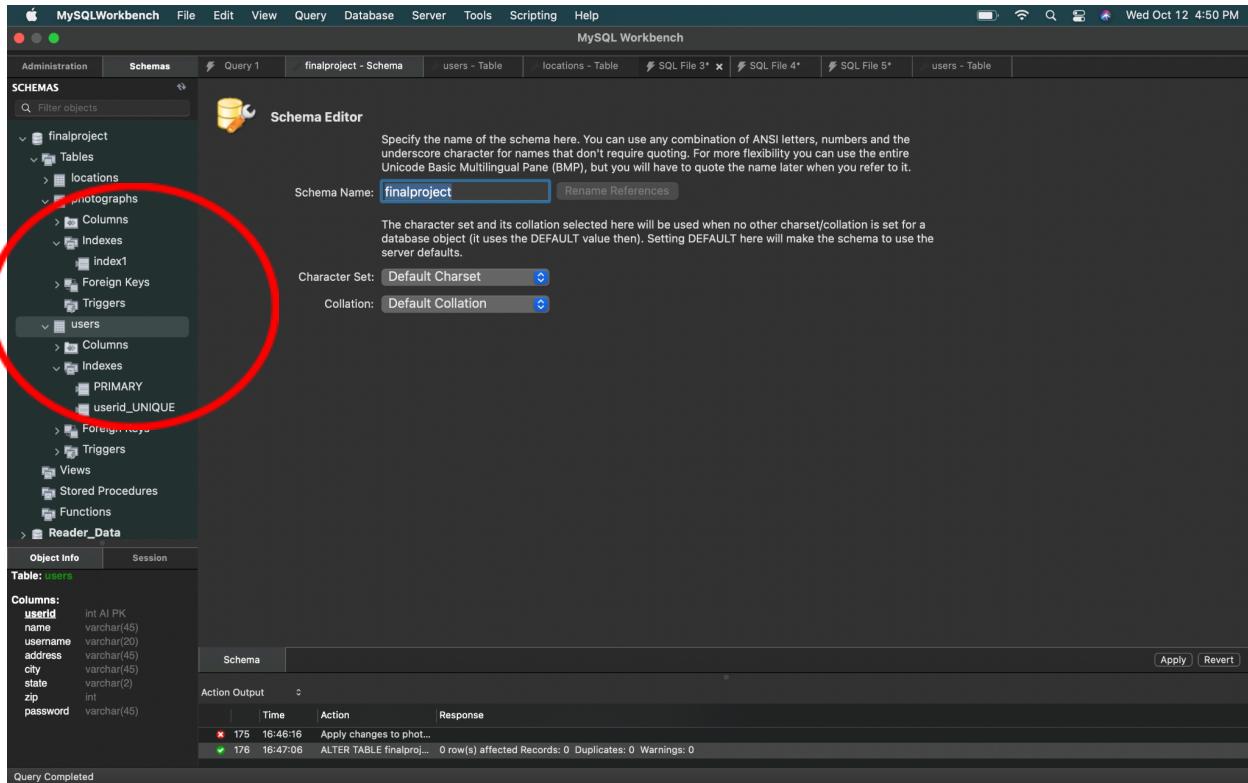
Code 2 Photographs:

ALTER TABLE finalproject.photographs
CHANGE COLUMN photo_id photo_id INT NOT NULL ,
CHANGE COLUMN location_id location_id INT NOT NULL

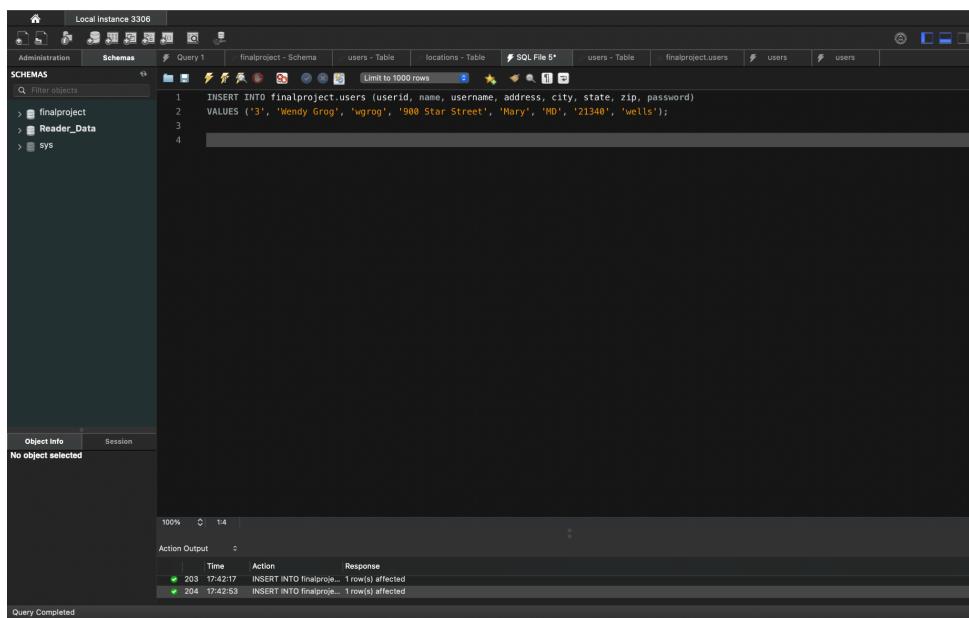
Code 3 Users:

ALTER TABLE finalproject.users
CHANGE COLUMN name name VARCHAR(45) NOT NULL ,
CHANGE COLUMN username username VARCHAR(20) NOT NULL ,
CHANGE COLUMN password password VARCHAR(45) NOT NULL

Prompt 4



Prompt 5



```

Local Instance 3306
Administration Schemas
Query 1 finalproject - Schema users - Table locations - Table SQL File 5* users - Table finalproject.users users users
Limit to 1000 rows
1 INSERT INTO finalproject.users (userid, name, username, address, city, state, zip, password)
2 VALUES ('2', 'Sam Smarf', 'ssmarf', '356 A Street', 'Beefy', 'PA', '19943', 'swimming');
3

```

Action Output:

Time	Action	Response
202 17:42:16	INSERT INTO finalproj...	Error Code:1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'VALUES ('3', 'Wendy Gro...
203 17:42:17	INSERT INTO finalproj...	1 row(s) affected

Query Completed


```

Local Instance 3306
Administration Schemas
Query 1 finalproject - Schema users - Table locations - Table SQL File 5* users - Table finalproject.users users users
Limit to 1000 rows
1 INSERT INTO finalproject.users (userid, name, username, address, city, state, zip, password)
2 VALUES ('4', 'Joe Jogger', 'jjogger', '183713 N North Street', 'Norther', 'WV', '51423', 'tarts');
3
4

```

Action Output:

Time	Action	Response
204 17:42:53	INSERT INTO finalproj...	1 row(s) affected
205 17:43:09	INSERT INTO finalproj...	1 row(s) affected

Query Completed

Code:

```

INSERT INTO finalproject.users (userid, name, username, address, city, state, zip, password)
VALUES ('1', 'Bonnie Buntcake', 'bbunt', '6709 Wonder Street', 'Wonderbread', 'OH', '46105', 'eclectic');

INSERT INTO finalproject.users (userid, name, username, address, city, state, zip, password)
VALUES ('2', 'Sam Smarf', 'ssmarf', '356 A Street', 'Beefy', 'PA', '19943', 'swimming');

VALUES ('3', 'Wendy Grog', 'wgrog', '900 Star Street', 'Mary', 'MD', '21340', 'wells');

VALUES ('4', 'Joe Jogger', 'jjogger', '183713 N North Street', 'Norther', 'WV', '51423', 'tarts');

```

Prompt 6

The screenshot shows the MySQL Workbench interface. The left sidebar displays the schema 'finalproject' with tables 'locations', 'photographs', and 'users'. The 'users' table is selected. The main pane contains a SQL editor with the following code:

```
1 • SELECT count(*)
  2   FROM finalproject.users;
```

The results grid shows a single row with 'count(*)' and a value of 4. Below the results, the log pane shows two entries:

Action	Time	Response
COUNT(*)	228 17:53:30	Error Code: 1064. You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'COUNT(*)' FROM users'
SELECT count(*)	229 17:53:36	1 row(s) returned

The status bar at the bottom indicates 'Query Completed'.

Code:

```
SELECT COUNT(*)
FROM finalproject.users;
```

Prompt 7

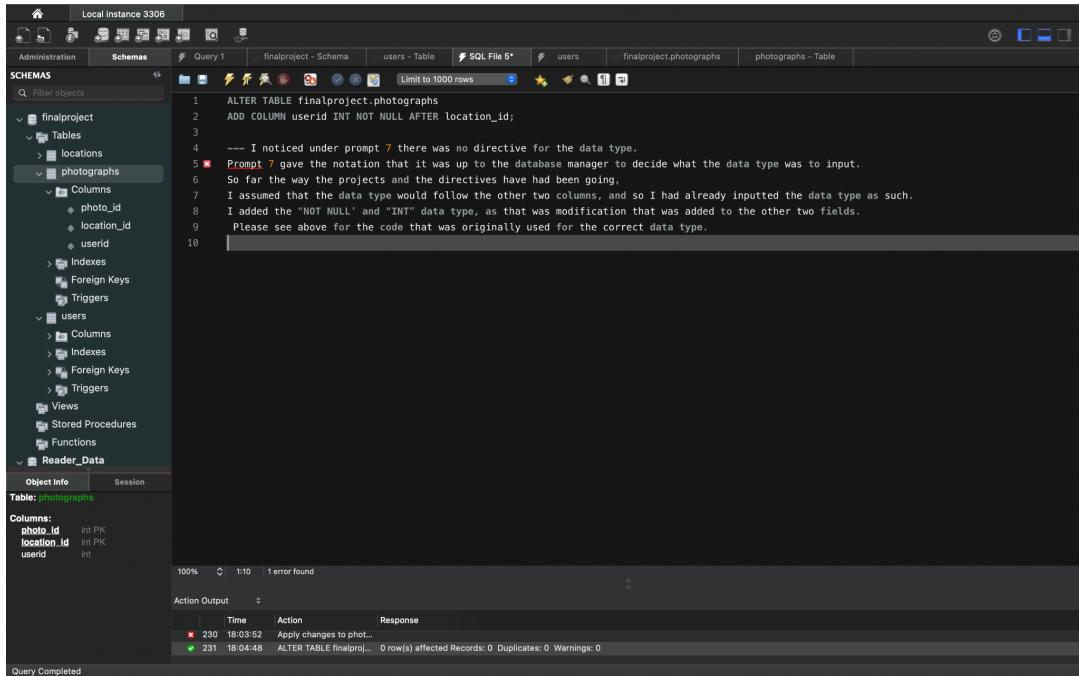
The screenshot shows the MySQL Workbench interface. The left sidebar displays the schema 'finalproject' with tables 'locations' and 'photographs'. The 'photographs' table is selected. The main pane contains a SQL editor with the following code:

```
1 ALTER TABLE finalproject.photographs
2 ADD COLUMN user_id INT NOT NULL AFTER location_id;
3 |
```

The status bar at the bottom indicates 'Query Completed'.

Code: ALTER TABLE finalproject.photographs
ADD COLUMN userid INT NOT NULL AFTER location_id

Prompt 8



The screenshot shows a database management interface with a sidebar containing 'Administration' and 'SCHEMAS' sections. Under 'SCHEMAS', 'finalproject' is selected, and 'Tables' is expanded, showing 'locations' and 'photographs'. 'photographs' is selected, revealing its columns: 'photo_id' (int PK), 'location_id' (int PK), and 'userid' (int). The main area displays a query window with the following code:

```
1 ALTER TABLE finalproject.photographs
2 ADD COLUMN userid INT NOT NULL AFTER location_id;
3
4 --- I noticed under prompt 7 there was no directive for the data type.
5 Prompt 7 gave the notation that it was up to the database manager to decide what the data type was to input.
6 So far the way the projects and the directives have had been going,
7 I assumed that the data type would follow the other two columns, and so I had already inputted the data type as such.
8 I added the "NOT NULL" and "INT" data type, as that was modification that was added to the other two fields.
9 Please see above for the code that was originally used for the correct data type.
10
```

The status bar at the bottom indicates 'Query Completed'.

--- I noticed under prompt 7 there was no directive for the data type. Prompt 7 gave the notation that it was up to the database manager to decide what the data type was to input. So far the way the projects and the directives have had been going, I assumed that the data type would follow the other two columns, and so I had already inputted the data type as such. I added the “NOT NULL” and “INT” data type, as that was modification that was added to the other two fields. Please see above for the code that was originally used for the correct data type.

Code:

ALTER TABLE finalproject.photographs
ADD COLUMN userid INT NOT NULL AFTER location_id

Prompt 9

The screenshot shows the MySQL Workbench interface with three tables created:

- users**: Contains 4 rows with phoid, locationid, and userid.
- locations**: Contains 4 rows with type, description, lng, and lat.
- photographs**: Contains 4 rows with photo_id, user_id, location_id, and timestamp.

```

CREATE TABLE `finalproject`.`users` (
  `phoid` int NOT NULL,
  `locationid` int NOT NULL,
  `userid` int NOT NULL,
  PRIMARY KEY (`phoid`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8;

CREATE TABLE `finalproject`.`locations` (
  `type` varchar(255) NOT NULL,
  `description` varchar(255) NOT NULL,
  `lng` decimal(10,8) NOT NULL,
  `lat` decimal(10,8) NOT NULL,
  PRIMARY KEY (`type`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8;

CREATE TABLE `finalproject`.`photographs` (
  `photo_id` int NOT NULL,
  `user_id` int NOT NULL,
  `location_id` int NOT NULL,
  `timestamp` timestamp NOT NULL,
  PRIMARY KEY (`photo_id`)
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
    
```

The screenshot shows the execution of four INSERT INTO statements for the photographs table:

1. INSERT INTO finalproject.photographs (photo_id, user_id) VALUES ('1', '1');
2. INSERT INTO finalproject.photographs (photo_id, user_id) VALUES ('2', '1');
3. INSERT INTO finalproject.photographs (photo_id, user_id) VALUES ('3', '3');
4. INSERT INTO finalproject.photographs (photo_id, user_id) VALUES ('4', '4');

The fourth statement fails with the error: "Error code 1364. Field 'location_id' doesn't have a default value".

```

INSERT INTO finalproject.photographs (photo_id, user_id) VALUES ('1', '1');
INSERT INTO finalproject.photographs (photo_id, user_id) VALUES ('2', '1');
INSERT INTO finalproject.photographs (photo_id, user_id) VALUES ('3', '3');
INSERT INTO finalproject.photographs (photo_id, user_id) VALUES ('4', '4');
    
```

Photograph Data:

```

INSERT INTO finalproject.photographs (photo_id, user_id) VALUES ('1', '1');
INSERT INTO finalproject.photographs (photo_id, user_id) VALUES ('2', '1');
INSERT INTO finalproject.photographs (photo_id, user_id) VALUES ('3', '3');
INSERT INTO finalproject.photographs (photo_id, user_id) VALUES ('4', '4');
    
```

Location Data:

```

INSERT INTO finalproject.locations (type, description, lng, lat) VALUES ('1', 'Independence Hall ', '794.35', '651.43');
INSERT INTO finalproject.locations (type, description, lng, lat) VALUES ('2', '6709 Wonder Street', '323.41', '412.22');
INSERT INTO finalproject.locations (type, description, lng, lat) VALUES ('1', 'Sunrise ', '221.45', '132.43');
INSERT INTO finalproject.locations (type, description, lng, lat) VALUES ('2', '356 A Street', '123.32', '222.43');
INSERT INTO finalproject.locations (type, description, lng, lat) VALUES ('1', 'Mountains', '34.12', '87.990');
    
```

```

INSERT INTO finalproject.locations (type, description, lng, lat) VALUES ('2', '900 Star Street', '1071.9', '206.45');
INSERT INTO finalproject.locations (type, description, lng, lat) VALUES ('1', 'Moonrise', '816.2', '111.2');INSERT INTO finalproject.locations (type, description, lng, lat) VALUES ('2', '183714 N North Street', '176.11', '11.176');

```

Prompt 10

The screenshot shows the Oracle SQL Developer interface. In the top-left pane, the 'SCHEMAS' tree shows 'finalproject' selected. In the main SQL Editor area, the following query is entered:

```

1 SELECT name
2 FROM finalproject.users;

```

The Result Grid below displays the names of users from the 'users' table:

Name
Bonnie Burtsko
Sam Smart
Hankie Grig
Joe Jogger

At the bottom of the interface, the status bar indicates 'Query Completed'.

Code:

```

SELECT name
FROM finalproject.users;

```

Prompt 11

The screenshot shows the Oracle SQL Developer interface. In the top-left pane, the 'SCHEMAS' tree shows 'finalproject' selected, and 'photographs' is expanded to show its columns. In the main SQL Editor area, the following query is entered:

```

1 SELECT name
2 FROM finalproject.users, finalproject.photographs
3 WHERE users.userid = photographs.photo_id;

```

The Result Grid below displays the names of users who have photographs:

Name
Bonnie Burtsko
Sam Smart
Hankie Grig
Joe Jogger

At the bottom of the interface, the status bar indicates 'Query Completed'.

CODE:

```

SELECT name
FROM finalproject.users, finalproject.photographs WHERE users.userid =
photographs.photo_id;

```

Prompt 12

The screenshot shows the MySQL Workbench interface with a query editor and a results grid.

Query Editor:

```
1
2 • SELECT DISTINCT (name)
3   FROM finalproject.users, finalproject.photographs
4   WHERE users.userid = photographs.photo_id;
```

Results Grid:

name
Bonnie Buntcake
Sam Smarf
Wendy Grog
Joe Jogger

Object Info (Table: photographs):

Columns:

- photo_id int
- userid int
- location_id int

Related Tables:

Target	locations (location_id → itemid)
On Update	RESTRICT
On Delete	RESTRICT

Query Completed

CODE:

```
SELECT DISTINCT (name)
FROM finalproject.users, finalproject.photographs
WHERE users.userid = photographs.photo_id;
```