Student Name	Arif Adatia
Course	CS275 - Introduction to Databases
Homework	Arif Plaza Inn project submission
Project URL	http://web.engr.oregonstate.edu/~adatiaa/Arif Plaza Inn/

The pieces

Outline (5%)

Give me a paragraph or two explaining your database content. If it is about auto dealerships, tell me what goes on at the auto dealership and why it would be interesting to track that data.

My Answer:

Arif Plaza Inn is the name of the database project. Let me first briefly introduce you to the need of this project and later provide the database content.

The use of this project will be for ease of online booking. The booking happens based on several selection criter ia like Date of arrival, Departure, Number of kids, adults and the type of room needed. The booking once done will generate a confirmation code and will email the reserved details as entered in the reservation form. The user can then confirm from his/her email the booking by using the confirmation code. The user can also modify and Cancel the reservation by keying the confirmation code received in the email provided during reservation.

To ensure the above process works well and all the details and data are captured, stored and retrieved and displayed the database entities are created based on a MySQL database. The database has the several entities and these are: user, room, reservation, amenities, room inventory, payment_notification, comments. Each entity holds a set of data as attributes and keys to link the entities in order to maintain the proper details are available at all times so that there are no inconsistencies that can make the online booking not so effective. Let me provide one happy scenario of the reservation process and how the data flow happens and the need to store that data.

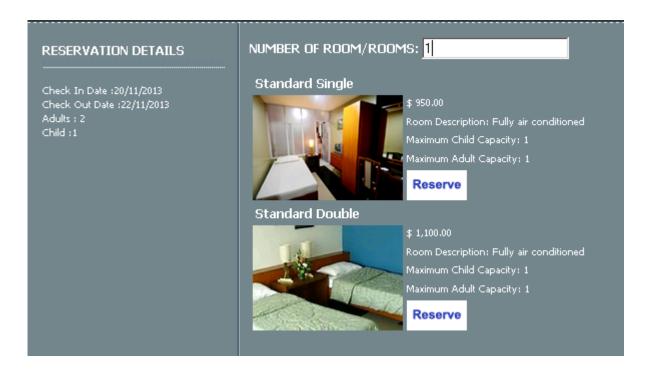
Guests who wish to avail the booking will visit my URL: http://web.engr.oregonstate.edu/~adatiaa/Arif Plaza Inn/ This URL will invoke and show the index.php page which is the landing page for this website. This landing page will provide the GUI that will introduce you to Arif Plaza Inn, the amenities, types of rooms and the cost of each room. The GUI is having 5 key pages which are: HOME, ABOUT US, CONTACTS, GALLERY, and ROOM RATES. The HTML elements on these pages hold the name and values of the elements. Some of the data are stored in database like the reservation details.

Reservation here is a 3 step process and each step has data associated in the webpage. Each step is explained in following section.

To book a reservation I will now use the Reservation form at the top left of the home page. I select the Start and End Dates, Number of adults and accompanying child and click on the Check availability button. One sample reservation looks like:



These details are the first data that are POSTED to next page and shown in the left navigation of the page. Once the User clicks on the Check Availability, the page navigates to next page to get all the details like First Name, Last name, Email, Phone etc to do the reservation.



The data collected here is the Number of rooms and the room type (Standard Single, Double). Once the user clicks **Reserve** then the page will connect to database and check the availability of the room from the data from roominventory table. If there is no reservation, then the page navigates to next page to collect person info as shown below. Also note the data collected is posted to next page so that the Reservation details are retained that will be **INSERTED** later once the reservation is confirmed.

Once the type of room is collected then user needs to either Login using the below form or enter his/her details. Login is possible if there was an early booking done.



If user keys in new email, alert is shown and system halts.



I have user client based calls to PHP server pages and this makes it easier so that page need not refresh each time. For new booking please fill the below details and click confirm.



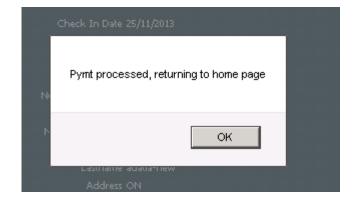
The above data collected is then saved to the form and page navigates to next page. At this time we have the Reservation details ready and the Confirmation email is also sent. The below data is **INSERETD to RESERVATION** TABLE along with **updating** of this to **USER** TABLE. This ensures that next time user can directly Login to the system.



This is the final page for the reservation. I currently not adding Payment by credit cards/paypal and feel it is complex at this stage. Pending payment data is retrieved from reservation table and alerted to user to pay.



Once user clicks OK the payment has been received and a confirmation message is shown.



Post this alert the user is redirected back to Home page. This completes one cycle of doing a reservation.

This is how the user was guided to select, reserve, key in personal details and do the reservation online. Thus data has been inserted into the database. This is the first happy scenario of reservation. Let me proceed to next question.

Database Outline in Words (5%)

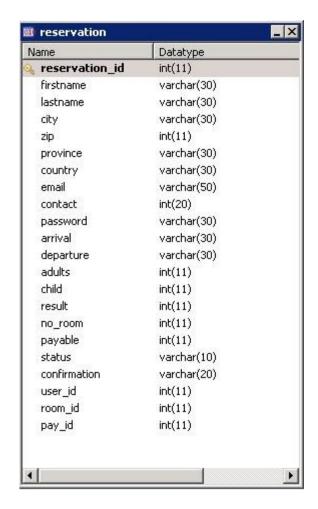
Tell me how the data is supposed to work. This is similar to the description I gave of the game backup database. What constraints should be in place. What tables are related to what other tables. A lot of the grading will be based on if things match this description of your database so make sure it is complete. If you say a constraint exist and you don't enforce it, that is incorrect. If you enforce a constraint you don't describe, that is incorrect.

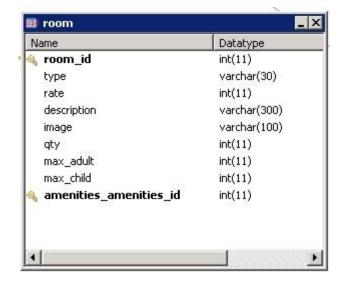
My Answer:

The database being created is a database for a Hotel reservation. The types of ROOMS that are included are Standard, Standard Double, Deluxe and Superior rooms. For simplicity, all types of rooms are of class "room" and they are differentiated by attribute 'roomtype'. Since my Hotel consists of almost 10 rooms and have many guests per day I plan on tracking the Guest reservations and the room types, and amenities they will use and charge the Guest for the total duration for the stay, I would like an easy way to keep track of my reservations. From time-to-time Guests checkout and I need to find the Reserve quota of the ROOMS by way of having ROOM INVENTORY, so it would be nice to track who has booked what room and which room is empty for Guest booking. Although not implemented currently, my intention is to create a mobile application that allows Guests to reserve from Mobile apps, using a mobile device, very useful for Business executive class. This idea was inspired by a friend of mine who is a Hotel manager and has shared his expertise on how a Hotel booking should typically be. For Payments I know that there are Gateways like Paypal that I am keen to integrate in this project but due to lack of time and external help I am using dummy payment options and display the reservation details.

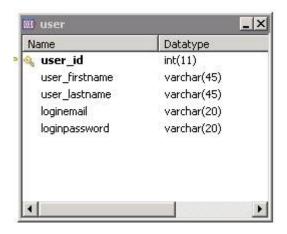
The main entity of my database is RESERVATION. RESERVATION is identified by the Reservation_ID and Confirmation number. Since it is possible to have more than one Reservation by same USER, I use the Confirmation number as a Unique identifier. A Reservation instance has details of the User, Login details, Date of arrival, Departure, Adults, Child and many more attributes as shown in table below.

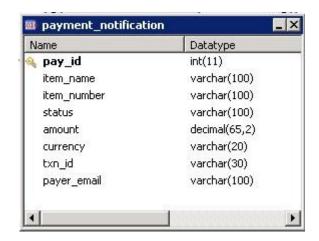
Below diagram show the TABLES and their attributes.



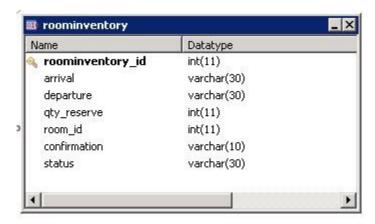


The second main entity is the ROOM as shown in figure. It has Primary KEY "room_id" and also since each room has unique amenities a second key "amenities_id" is also added to this table. Other attributes are room type that can be Standard, Standard Double, Deluxe or Superior types. Rate for room type is fixed and will be used to compute the Final payment. Each room has fixed number of Guests and it is also provided as attribute.





The third entity is the USER which will facilitate the Reservation process and also USER can modify later on by Logging into the DB with longinemail and loginpassword. These attributes are shown in figure. Once the Reservation is complete there is a confirmation dialog. The reservation can be viewed by using the View Reservation and this will need PAYMENT_NOTIFICATION table that will provide the Bill of Services against the items used and the amount paid.

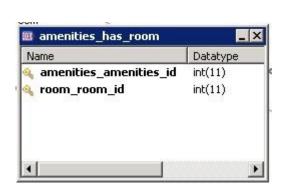


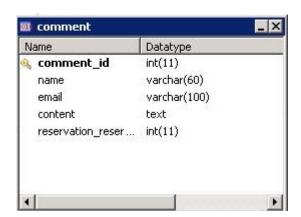


Next the ROOM INVENTORY table holds the details of the EARLIER reservation and is manily used to check the AVAILABILITY of the rooms on the NEW DATES as requested by Current user who wishes to do a booking. STATUS attribute provides the Active or CheckedOUT values that will make it easier for newer booking to get a proper booking.

ROOM AMENITIES table provides the details of each amenity and can be accessed using amenities_id.

Since AMENITIES and ROOM HAVE MANY TO MANY Relationship these are resolved by the AMENITIES_HAS_ROOM JUNTION TABLE which links the two entities using amenities_id and room_id attributes.





The COMMENT table holds any special needs of the USER and that can be entered during Reservation or updated later using Modify reservation. The comment is unique to a particular RESERVATION_ID.

CONSTRAINTS:

I have mainly **foreign key constraints** and below is the brief description and actual implementation of the said constraint; this ensures that what I am saying has been implemented.

For reservation table:

My constraints on the reservation table are:

- 1) user_id should refer to the user_id attribute of the USER table.
- 2) Room id should refer to the room id attribute of the ROOM table.
- 3) Pay_id should refer to the pay_id of the PAYMENT_NOTIFICATION table.

These constraints ensure that duplicate inserts are not possible and also while retrieving data no more than the needed rows are returned that can affect the output quality.



For room table:

My constraint is, amenities_id refers to the amenities_id of the AMENITIES table. This ensures there are NO duplicate amenities in the data.



For room inventory table:

My constraint is, room_id should refer to the room_id of ROOM table. This ensures there are Unique rooms and no duplicates are Inserted or removed that can affect other table transaction too.



For amenities_has_room:

My constraints are:

- 1) amenities _id should refer to the amenities _id of the AMENITIES table.
- 2) Room_id should refer to Room_id of the ROOM table.

These are needed to resolve the many to many relations among these two entities

Name A	Constraint
`fk_amenities_has_room_amenities1`	FOREIGN KEY (`amenities_amenities_id`) REFERENCES `amenities`(`amenities_id`) ON UPDATE NO_ACTION ON DELETE NO_ACTION
`fk_amenities_has_room_room1`	FOREIGN KEY (`room_room_id`) REFERENCES `room`(`room_id`) ON UPDATE NO_ACTION ON DELETE NO_ACTION

For Comment table:

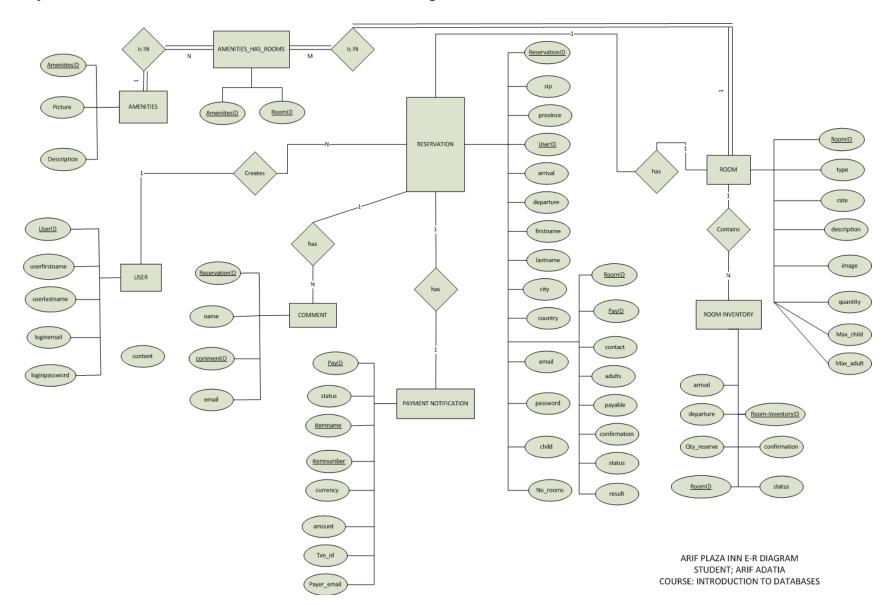
My constraint is reservation_id should refer to reservation_id of RESERVATION table.

Name A	Constraint
`fk_comment_reservation1` FOREIGN KEY (`reservation_reservation_id`) REFERENCES `reservation`(`reservation_id`) ON UPDATE NO_ACTION ON DELETE	

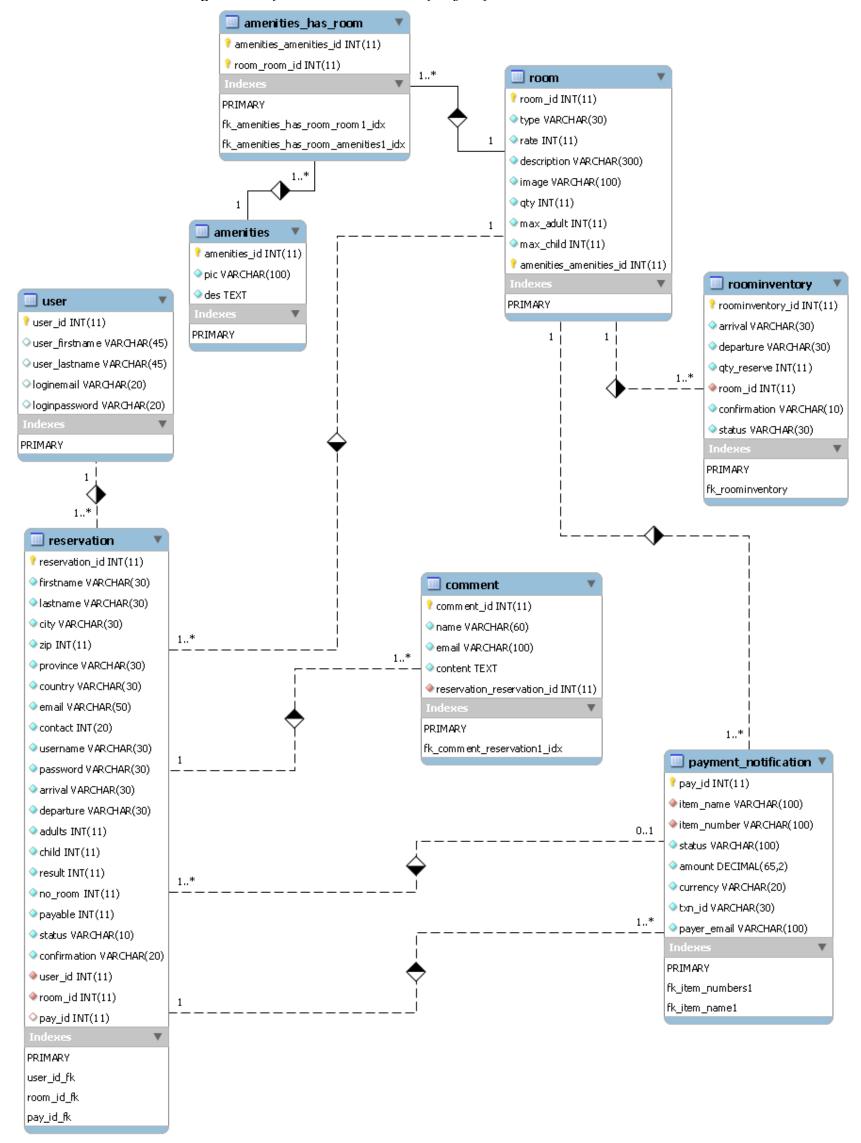
ER Diagram of Database (10%)

This diagram should capture, as best as possible, all of the constraints and components of your database outline.

My answer: Please refer enclosed "Arif Plaza Inn ER Diagram" visio file for details



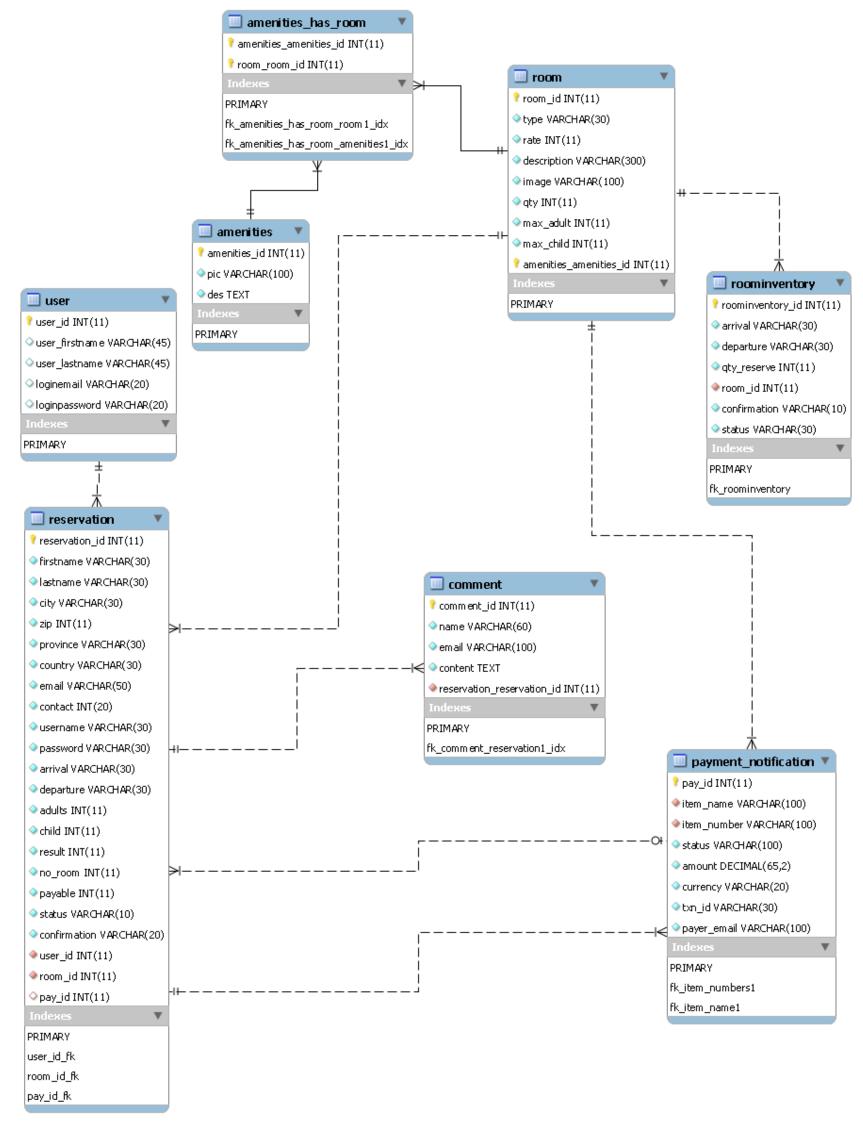
The relations can also been generated from UML notation of My SQL Workbench as below;



Database Schema (10%)

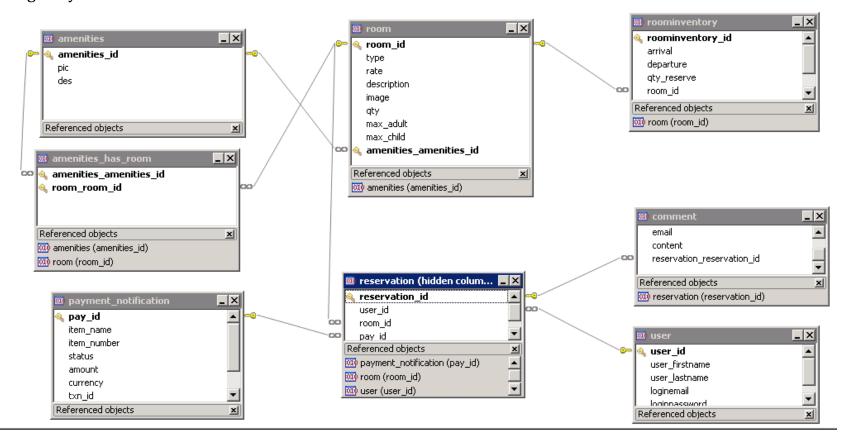
This should capture every attribute of every table. Additionally it should show every foreign key reference used in the database.

My answer: Please refer enclosed "Arif Plaza Inn Schema" MySQL Model file for details

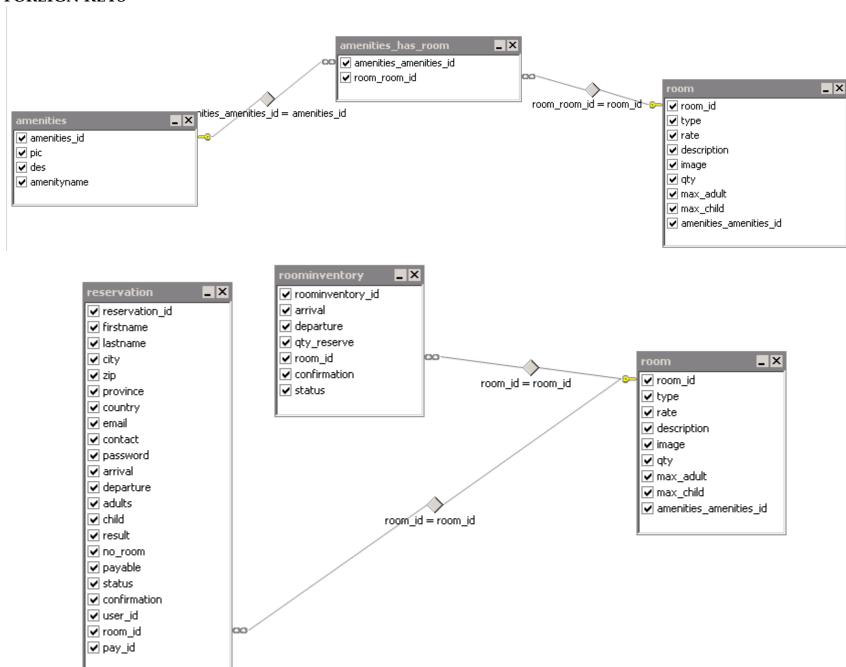


The above diagram shows the Database schema from the MySQL Work bench.

Also below is shown the same in slightly different tool TOAD, this shows mainly the relationships using the foreign keys.



FOREIGN KEYS



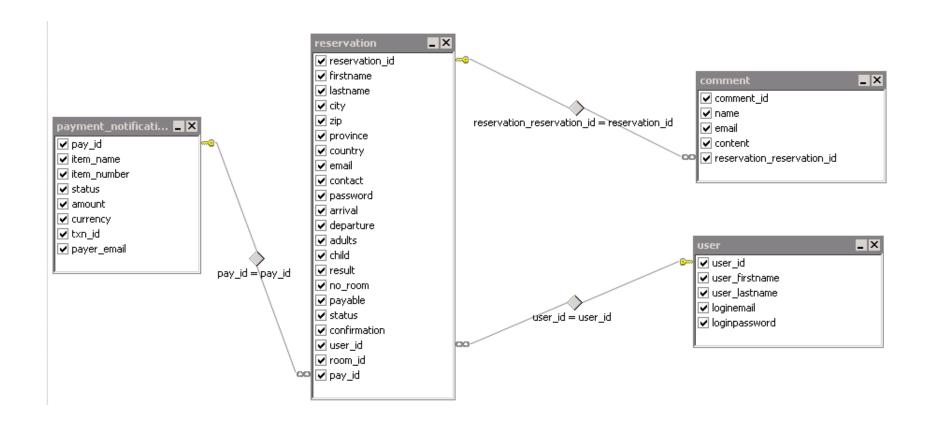
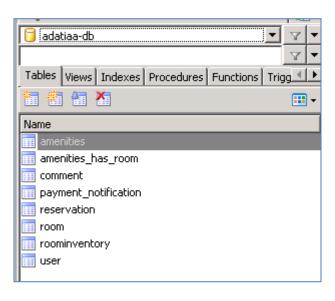


Table Creation Queries (10%)

I want to see the queries your ran to build your tables. These should not be in any of the website code because you should not be dynamically building or deleting tables.

My answers: Below are the queries that have resulted in the 8 tables created in **adatiaa-db at OSU server**. Tables are created statically and NOT present in web pages. Please find details of OSU server DUMP in file **adatiaa-db-remote.sql**

NOTE: Please refer **SchemaReport.pdf** for a detailed REPORT generated by TOAD, some differences might exists as I have few scripts from localhost, however both are working copies.



```
USE `adatiaa-db`;
DROP TABLE IF EXISTS `adatiaa-db`.`user`;

CREATE TABLE IF NOT EXISTS `adatiaa-db`.`user` (
  `user_id` INT(11) NOT NULL AUTO_INCREMENT,
  `user_firstname` VARCHAR(45) NULL,
  `user_lastname` VARCHAR(45) NULL,
  `loginemail` varchar(20) DEFAULT NULL,
  `loginpassword` varchar(20) DEFAULT NULL,
  PRIMARY KEY (`user_id`))
ENGINE = InnoDB;

DROP TABLE IF EXISTS `adatiaa-db`.`amenities`;
```

```
CREATE TABLE IF NOT EXISTS `adatiaa-db`.`amenities` (
   `amenities id` INT(11) NOT NULL AUTO INCREMENT,
  'pic' VARCHAR(100) NOT NULL,
  `des` TEXT NOT NULL,
  PRIMARY KEY (`amenities id`))
ENGINE = InnoDB;
DROP TABLE IF EXISTS `adatiaa-db`.`room`;
CREATE TABLE IF NOT EXISTS `adatiaa-db`.`room` (
  `room id` INT(11) NOT NULL AUTO INCREMENT,
  `type VARCHAR(30) NOT NULL,
`rate` INT(11) NOT NULL,
  `description` VARCHAR(300) NOT NULL,
  `image` VARCHAR(100) NOT NULL,
  `qty` INT(11) NOT NULL,
  `max adult` INT(11) NOT NULL,
  `max child` INT(11) NOT NULL,
  `amenities_amenities_id` INT(11) NOT NULL,
PRIMARY KEY (`room_id`, `amenities_amenities_id`),
  INDEX `fk room amenities1 idx` (`amenities amenities id` ASC),
  CONSTRAINT `fk_room_amenities1`
    FOREIGN KEY (`amenities_amenities_id`)
REFERENCES `adatiaa-db`.`amenities` (`amenities_id`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;
CREATE TABLE IF NOT EXISTS `adatiaa-db`.`amenities_has_room` (
  `amenities amenities id` INT(11) NOT NULL,
  `room_room_id` INT(11) NOT NULL,
  PRIMARY KEY (`amenities_amenities_id`, `room_room_id`),
INDEX `fk_amenities_has_room_room1_idx` (`room_room_id` ASC),
  INDEX `fk_amenities_has_room_amenities1_idx` (`amenities_amenities_id` ASC),
  CONSTRAINT `fk_amenities_has_room_amenities1
    FOREIGN KEY (`amenities_amenities_id`)
REFERENCES `adatiaa-db`.`amenities` (`amenities_id`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION,
  CONSTRAINT `fk_amenities_has_room_room1`
    FOREIGN KEY (`room_room_id`)
REFERENCES `adatiaa-db`.`room` (`room_id`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;
DROP TABLE IF EXISTS `adatiaa-db`.`payment notification`;
CREATE TABLE IF NOT EXISTS `adatiaa-db`.`payment_notification` (
  'pay id' INT(11) NOT NULL AUTO INCREMENT,
   item name ` VARCHAR(100) NOT NULL,
  `item number` VARCHAR(100) NOT NULL,
  `status` VARCHAR(100) NOT NULL,
`amount` DECIMAL(65,2) NOT NULL,
  `currency` VARCHAR(20) NOT NULL,
  `txn id` VARCHAR(30) NOT NULL,
   `payer email` VARCHAR(100) NOT NULL,
  PRIMARY KEY ('pay_id'),
  CONSTRAINT `fk_item_numbers1`
    FOREIGN KEY (`item_number`)
REFERENCES `adatiaa-db`.`reservation` (`confirmation`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION,
    CONSTRAINT `fk_item_name1`
    FOREIGN KEY (`item name`)
    REFERENCES `adatiaa-db`.`room` (`type`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION
ENGINE = InnoDB;
DROP TABLE IF EXISTS `adatiaa-db`.`reservation`;
CREATE TABLE IF NOT EXISTS `adatiaa-db`.`reservation` (
  `reservation id` INT(11) NOT NULL AUTO INCREMENT,
```

```
`firstname` VARCHAR(30) NOT NULL,
`lastname` VARCHAR(30) NOT NULL,
  `city` VARCHAR(30) NOT NULL,
`zip` INT(11) NOT NULL,
   `province` VARCHAR(30) NOT NULL,
  `country` VARCHAR(30) NOT NULL,
  `email` VARCHAR(50) NOT NULL,
  `contact` INT(20) NOT NULL,
`username` VARCHAR(30) NOT NULL,
  `password` VARCHAR(30) NOT NULL,
   arrival` VARCHAR(30) NOT NULL,
  `departure` VARCHAR(30) NOT NULL,
  `adults` INT(11) NOT NULL,
  `child` INT(11) NOT NULL,
`result` INT(11) NOT NULL
  `no room` INT(11) NOT NULL,
  `payable` INT(11) NOT NULL,
   status` VARCHAR(10) NOT NULL,
  `confirmation` VARCHAR(20) NOT NULL,
  `user id` INT(11) NOT NULL,
     `room id` INT(11) NOT NULL,
     pay_id` INT(11) NULL DEFAULT NULL,
  PRIMARY KEY (`reservation id`),
  INDEX `user_id_fk` (`user_id` ASC),
INDEX `room_id_fk` (`room_id` ASC),
INDEX `pay_id_fk` (`pay_id` ASC),
  CONSTRAINT `user_id_fk`
    FOREIGN KEY (`user_id`)
REFERENCES `adatiaa-db`.`user` (`user_id`)
    ON DELETE CASCADE
    ON UPDATE CASCADE,
  CONSTRAINT `room id_fk`
    FOREIGN KEY (`room_id`)
    REFERENCES `adatiaa-db`.`room` (`room_id`)
    ON DELETE CASCADE
    ON UPDATE CASCADE,
  CONSTRAINT `pay_id_fk`
    FOREIGN KEY (`pay_id`)
REFERENCES `adatiaa-db`.`payment_notification` (`pay_id`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;
DROP TABLE IF EXISTS `adatiaa-db`.`comment`;
CREATE TABLE IF NOT EXISTS `adatiaa-db`.`comment` (
  `comment id` INT(11) NOT NULL AUTO INCREMENT,
  `name` VARCHAR(60) NOT NULL,
  `email` VARCHAR(100) NOT NULL,
  `content` TEXT NOT NULL,
  `reservation_reservation_id` INT(11) NOT NULL,
  PRIMARY KEY (`comment id`),
  INDEX `fk_comment_reservation1_idx` (`reservation_reservation_id` ASC),
  CONSTRAINT `fk_comment_reservation1`
    FOREIGN KEY (`reservation_reservation_id`)
REFERENCES `adatiaa-db`.`reservation` (`reservation_id`)
    ON DELETE NO ACTION
    ON UPDATE NO ACTION)
ENGINE = InnoDB;
DROP TABLE IF EXISTS `adatiaa-db`.`roominventory`;
CREATE TABLE IF NOT EXISTS `adatiaa-db`.`roominventory` (
  `roominventory id` INT(11) NOT NULL AUTO INCREMENT,
   `arrival` VARCHAR(30) NOT NULL,
  `departure` VARCHAR(30) NOT NULL,
  `qty_reserve` INT(11) NOT NULL,
  room id` INT(11) NOT NULL,
  `confirmation` VARCHAR(10) NOT NULL,
  `status` VARCHAR(30) NOT NULL,
  PRIMARY KEY (`roominventory id`),
  INDEX `fk roominventory` (`room id` ASC),
  \overline{\text{CONSTRAINT}} `fk roominventory
    FOREIGN KEY (`room_id`)
REFERENCES `adatiaa-db`.`room` (`room id`)
    ON DELETE CASCADE
    ON UPDATE CASCADE)
ENGINE = InnoDB;
```

General Use Queries (30%)

I want to see all of the queries that will be used to **select, update, add or delete data**. Because many of these will be based on user input, use square brackets to act as place holders for variables that will be user provided. For example, if I were going to query based on employee salaries, I might have a query like this:

SELECT salary FROM employee WHERE salary > [salaryInput]; Another example INSERT INTO employee(name, age) VALUES ([user],[name]);

My answer: Please you can visit my folder "/nfs/stak/students/a/adatiaa/public_html/Arif Plaza Inn"

I will be providing all the details of the respective queries and why they are used.

Starting with the index.php page, I provide the reservation form to see if there are rooms available. For this I will be selecting the dates, number of adults, kids to this form. Once this form is submitted to server, I will be using the queries in **testing.php page**.



```
//Connects to the database
$con = new mysqli("oniddb.cws.oregonstate.edu","adatiaa-db","4h3lBWMFh8IfBWKN","adatiaa-db");
if($con->connect_errno){
        echo "Connection error " . $con->connect_errno . " " . $con->connect_error;
    }

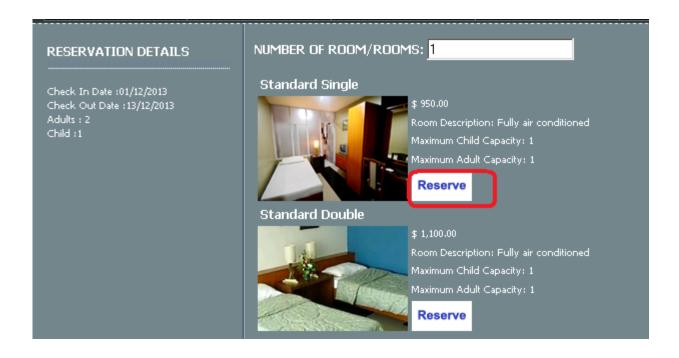
$result = mysqli_query($con, "SELECT * FROM room");

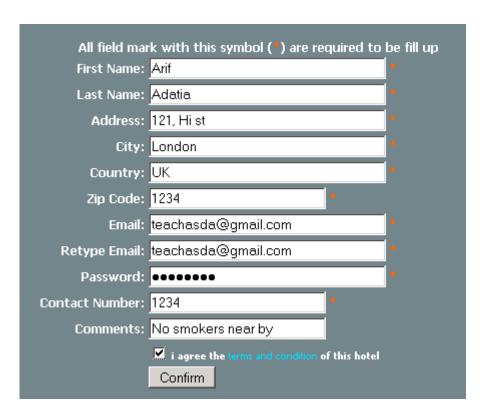
while($row = mysqli_fetch_array($result))
{
        $a=$row['room_id'];
        $query = mysqli_query($con, "SELECT sum(qty_reserve) FROM roominventory where arrival <= '$arival' and departure >= '$departure' and room_id='$a'");

while($rows = mysqli_fetch_array($query))
{
        $inogbuwin=$rows['sum(qty_reserve)'];
}
        $angavil = $row['qty'] - $inogbuwin;

//Other code that will echo table with availability status
```

The above code will obtain the **SUM** of the Available quantity of rooms for the specified **INTERVAL** of time. If there is room available the **RESERVE** button is displayed, if no room available, "Room Not available" is shown instead of Reserve button.





Once the **Reserve button** in clicked, the reservation details are posted to next page where personal details as above are collected and posted to **Payment.php page**. Below code will generate the AMOUNT PAYABLE based on the selected room type and number of rooms.

```
$result1 = mysqli_query($con,"SELECT * FROM room where room_id='$roomid'");
$stmt = mysqli_fetch_array($result1);

$roomid = $stmt['room_id'];
$roomtype=$stmt['type'];
$rate=$stmt['rate'];
$type=$stmt['type'];

$payable= $rate*$nroom;
```

Once the payment is computed, then the USER DETAILS are INSERTED to RESERVATION table, USER table and COMMENT table

```
$sql="INSERT INTO reservation (arrival, departure, adults, child, result, room_id, no_room, firstname,
lastname, city, zip, province, country, email, contact, password, payable, confirmation, user_id, pay_id)
VALUES
('$arival','$departure','$adults','$child','$result','8','$nroom','$name','$last','$city','$zip','$address','$country','$email','$cnumber','$password','$payable','$confirmation',1,1)";

$query = mysqli query($con,$sql) or die(mysql error());
```

```
// Get the reservation id of the the inserted record
    $sq13 = "SELECT reservation_id FROM reservation WHERE confirmation = '$confirmation'";

$result1 = mysqli_query($con,$sq13);
$rowl = mysqli_fetch_array($result1);
$reser_id = $rowl['reservation_id'];

//echo    $reser_id;

$sq11 = "INSERT INTO user (user_firstname, user_lastname, loginemail, loginpassword)
VALUES('$name','$last','$email','$password')";
$query1 = mysqli_query($con,$sq11) or die(mysql_error());

echo " user inserted successfully";

$sq12 = "INSERT INTO comment (content,reservation_reservation_id,email)
VALUES('$comment', '$reser_id','$email') ";
$query2 = mysqli_query($con,$sq12) or die(mysql_error());

echo " comment inserted successfully";

mysqli_close($con);
```

Once the user details are inserted to tables, then the page moves to actual PAYMENT form as below, also an EMAIL is generated with the CONFIRMATION NUMBER details that is sent to user for future needs.



On clicking PAY NOW, user is moved to CONFIRM PAYMENT page where once again all the User details is displayed. The SQL used is below

```
Booker Personnal Information
        FirstName: Arif 2
       LastName: Adatia2
       Address: 121, Hi st
          City: London
            Zip: 1234
          Country: UK
   Email: teachasda@gmail.com
Telephone/Cellphone Number: 1234
      Reservation Details
     Arrival Date: 01/12/2013
   Departure Date: 13/12/2013
  Confirmation Code: bmxezvmn
     Number of night stay: 12
        Rate Information
   Room Type: Standard Single
       Room Rate: $950.00
  Total Payable amount: $950.00
```

Confirm

```
$member_id = $_GET['id'];

$result = mysqli_query($con,"SELECT * FROM reservation WHERE confirmation = '$member_id'");

($row = mysqli_fetch_array($result));

echo '<br/>'>';
echo '<br/>'';
echo '<br/>'>';
echo "FirstName: ".$row['firstname']. "<br/>";
echo "LastName: ".$row['lastname']. "<br/>">";
echo "Address: ".$row['province']. "<br/>">";
echo "City: ".$row['city']. "<br/>">";
echo "Zip: ".$row['city']. "<br/>">";
echo "Country: ".$row['country']. "<br/>">";
echo "Country: ".$row['country']. "<br/>">";
echo "Country: ".$row['country']. "<br/>">";
echo "Telephone/Cellphone Number: ".$row['contact']. "<br/>">";
echo '<br/>'>";
```

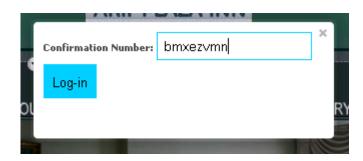
Also data from other tables are SELECTED

```
$result1 = mysqli_query($con, "SELECT * FROM room WHERE room_id = '$q'");
($row1 = mysqli_fetch_array($result1));
echo "Room Type: ".$row1['type']. "<br />";
echo "Room Rate: $";
$sd=$row1['rate'];
```

The above completes the NEED for the FIRST RESERVATION.
Once complete then User can then MODIFY CANCEL or VIEW Reservation, details shown below.

Modify: From home page please select **Modify** link. This will pop up a dialog and request the confirmation that you received in email or noted that during first reservation.





Let me key in the Confirmation that I got for one of my recent reservation. Once I click on Login, next page with all the details related to this reservation appears from Database queries.

The page is **personinfoedit.php** and the queries are as below:

The above code SELECTS data from reservation table; similarly SELECT for other tables too

```
$result1 = mysqli_query($con,"SELECT * FROM room WHERE room_id='$room_id'");
$row1 = mysqli_fetch_array($result1);
$roomtype=$row1['type'];

$result2 = mysqli_query($con,"SELECT * FROM comment WHERE reservation_reservation_id='$reserv_id'");
if($result2 === FALSE) {
echo "No data for given reservation_id, aborting transaction,please retry";
die(mysql_error()); //
}

$row2 = mysqli_fetch_array($result2);
$comment=$row2['content'];
```

Once the above data is displayed user can change any of these and submit to make Changes to the tables as below in saveedit.php page.

```
Arif Plaza Inn
#79 Burnhamptop St., Toronto 6100
Telephone: +(416) 278-2210
Telefax: +(416) 278-2210
Mobile: (416) 278-2210
Email: teachasda@gmail.com

Affected rows (UPDATE Reservation): 1
Affected rows (DELETE from Reservation): 0
Affected rows (NEW INSERTS into Roominvetory): 1 Affected rows (UPDATES to Comments): 0

Close
```

```
$query5 = "SELECT reservation_id FROM reservation where confirmation='$confirm'";
$result5 = mysqli_query($con, $query5);
$row5 = mysqli fetch array($result5);
$reserv_id = $row5['reservation_id'];
$result2 = mysqli_query($con, "UPDATE reservation SET arrival='$arival', departure='$departure',
adults='$adults', child='$child', result='$result', room_id='$roomid', no_room='$nroom', firstname='$name',
lastname='$last', city='$city', zip='$zip', province='$address',country='$country', email='$email',
contact='$cnumber', password='$password', payable='$payable' WHERE confirmation='$confirm'");
printf("Affected rows (UPDATE Reservation): %d\n", mysqli affected rows($con));
echo nl2br("\n");
$result3 = mysqli_query($con,"DELETE FROM roominventory WHERE confirmation='$confirm'");
printf("Affected rows (DELETE from Reservation): %d\n", mysqli affected rows($con));
echo nl2br("\n");
      $result4 = mysqli_query($con,"INSERT INTO roominventory (arrival, departure, qty_reserve, room_id,
confirmation) VALUES ('$\frac{1}{2}\text{arival','$departure','$nroom','$roomid','$confirm')");
            printf("Affected rows (NEW INSERTS into Roominvetory): %d\n", mysqli affected rows($con));
            printf("\n");
            $result4 = mysqli_query($con,"UPDATE comment SET email='$email', content = '$comment' WHERE
reservation_reservation id = '$reserv id'");
            printf("Affected rows (UPDATES to Comments): %d\n", mysqli_affected_rows($con));
            echo nl2br("\n");
```

VIEW RESERVATION: From home page select View Reservation



A pop up dialog request the confirmation, I will use the one used earlier to do changes

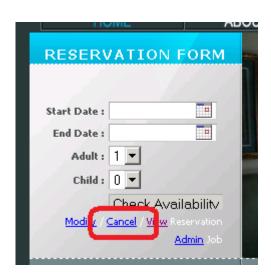


Once confirmation number is accepted, the above page appears. The query for this is from viewreservation.php

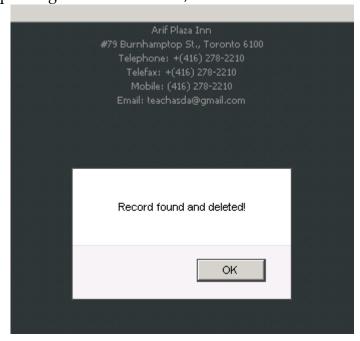
```
$member_id = $_GET['confirmation'];
      $result = mysqli_query($con,"SELECT * FROM reservation WHERE confirmation = '$member_id'");
while($row = mysqli_fetch_array($result))
  echo '<br />';
  echo '<b>'.'Booker Personnal Information'.'</b>';
  echo '<br />';
  echo "FirstName: ".$row['firstname']. "<br />";
echo "LastName: ".$row['lastname']. "<br />";
  echo "Address: ".$row['province']. "<br />";
  echo "City: ".$row['city']. "<br />";
  echo "Zip: ".$row['zip']. "<br />";
  echo "Country: ".$row['country']. "<br />";
echo "Email: ".$row['email']. "<br />";
  echo "Telephone/Cellphone Number: ".$row['contact']. "<br />";
  echo '<br />';
 echo '<br>';
  echo '<b>'.'Reservation Details'.'</b>'.'<br />';
  echo "Arrival Date: ".$row['arrival']. "<br />";
  echo "Departure Date: ".$row['departure']. "<br />";
  echo "Confirmation Code: ".$row['confirmation']. "<br />";
  echo "Number of night stay: ".$row['result'];
  echo '<br />';
  echo '<br />';
  echo '<b>'.'Rate Information'.'</b>'.'<br />';
  $q=$row['room id'];
  $dfg=$row['payable'];
  $item=$row['confirmation'];
  $result1 = mysqli query($con, "SELECT * FROM room WHERE room id = '$q'");
while($row1 = mysqli fetch array($result1))
  echo "Room Type: ".$row1['type']. "<br />";
  echo "Room Rate: $";
```

```
$sd=$row1['rate'];
      echo formatMoney($sd, true);
echo
      "<br />";
  }
  echo 'Total Payable amount: $';
echo $dfg;
echo '<br /><br />';
echo '<b>'.'Payment Information'.'</b>'.'<br />';
echo "Confirmation Number: ";
echo $item;
$result3 = mysqli_query($con,"SELECT * FROM payment_notification WHERE item number = '$item'");
 if($result3 === FALSE) {
  echo "No data for given confirmation";
    die(mysqli_error()); //
}
while($row3 = mysqli fetch array($result3))
{
  echo '<br />';
echo "Payer Email: ".$row3['payer_email']. "<br />";
  echo "Transaction ID.: ".$row3['txn_id']. "<br />";
echo "Currency: ".$row3['currency']. "<br />";
  echo "Amount: $";
$fg=$row3['amount'];
echo formatMoney($fg, true);
echo "<br />";
  echo "Status: ".$row3['status']. "<br />";
```

CANCEL RESERVATION: From home page select Cancel Reservation



A pop up dialog requesting the **confirmation**, I will use the one used earlier to do changes



The **cancelindex-exec.php** is where the DELETE query exists:

```
$result1 = mysqli_query($con, "SELECT * FROM reservation WHERE confirmation='$confirmation1'");

(int)$row_cnt = mysqli_num_rows($result1);

if( (int)$row_cnt == 0)
{

    echo "<script type='text/javascript'>alert('No records found, nothing to

Cancel!')</script>";
}
else
{

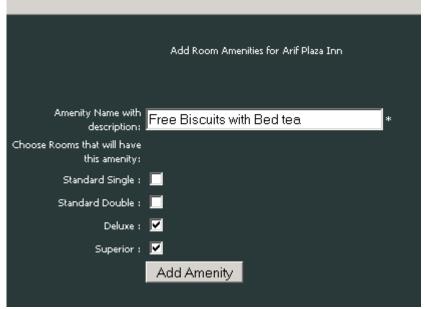
$result = mysqli_query($con, "DELETE FROM reservation WHERE confirmation='$confirmation1'");
    echo "<script type='text/javascript'>alert('Record found and deleted!')</script>";
}

mysqli_close($con);
```

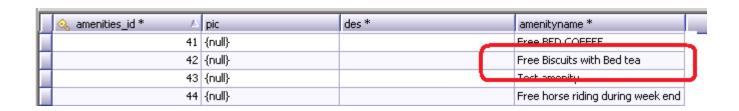
Lastly ADMIN JOB can ADD Amenities to selected ROOMs. The feature is shown below.

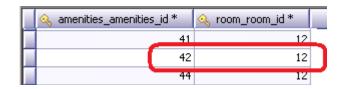


Once Admin is clicked below form is use to collect the Amenity and the Rooms that will be applicable

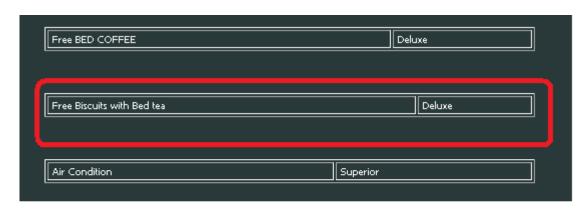


If you see the Amenities table you can find that this amenity has been added. Also the JUNCTION table Amenities_HAS_Room has also updated.





After ADD Amenity button is clicked below viewamenities.php page confirms the addition.





The INSERT/ UPDATE Queries as below;

```
// create an array with all the rooms that needs this amenity
$array = array();
  if(\$stdroom !== NULL) // !== to check for NULL and not empty string.
        $array["stdroom"] = 8;
    if($stddouble !== NULL)
        $array["stddouble"] = 9;
             if($deluxe !== NULL)
        $array["deluxe"] = 11;
             if($superior !== NULL)
        $array["superior"] = 12;
         \ensuremath{//} INSERT amenity, then retrieve all data and display
$sql="INSERT INTO amenities (amenityname)
VALUES
('$member id')";
if (!mysqli query($con,$sql))
 die('Error: ' . mysqli_error());
 }
 // Get Amenities ID generated from amenities table, insert that value into amenities has room table.
  // From roomvars see which have been selected and set, for these rooms get the id and insert that id
into amenities has room table.
  // Put the set rooms to an array and while loop until array end, insert the amenity for each room
```

```
// echo $member id;
 $result3 = mysqli query($con, "SELECT amenities id from amenities WHERE amenityname = '$member id' LIMIT
1");
 $row3 = mysqli fetch array($result3);
 $amenityid2 = $row3['amenities id'];
// echo $amenityid2;
  // LOOP for array that has rooms that needs to be added
 foreach ($array as $data) {
 $sql2="INSERT INTO amenities has room(amenities amenities id, room room id)
('$amenityid2','$data')";
if (!mysqli_query($con,$sql2))
 die('Error: ' . mysqli error());
 }
 }
// CREATE a JOIN of the amenity and room so that proper SELECT query can return the required amenity
$query_2 = "SELECT a.amenityname, r.type FROM amenities a
INNER \overline{\text{JOIN}} amenities has room ar ON a.amenities id = ar.amenities amenities id
INNER JOIN room r ON r.room_id = ar.room_room_id";
$result = mysqli_query($con,$query_2);
echo '<b>'.'List of Amenities '.'</b>';
while($row = mysqli_fetch_array($result))
 {
 echo '';
 echo '<br />';
 echo '<br />':
   echo ' <span class="style2" align ="left">'.$row['amenityname'].'</span>';
     echo ' <span class="style2" align ="left">'.$row['type'].'</span>';
 echo '<br />';
 $amenityname = $row['amenityname'];
 $roomtype = $row['type'];
  }
 }
mysqli_close($con);
```

Thats all for the Other queries that are heavily related to their use in PHP and HTML pages, detailed below

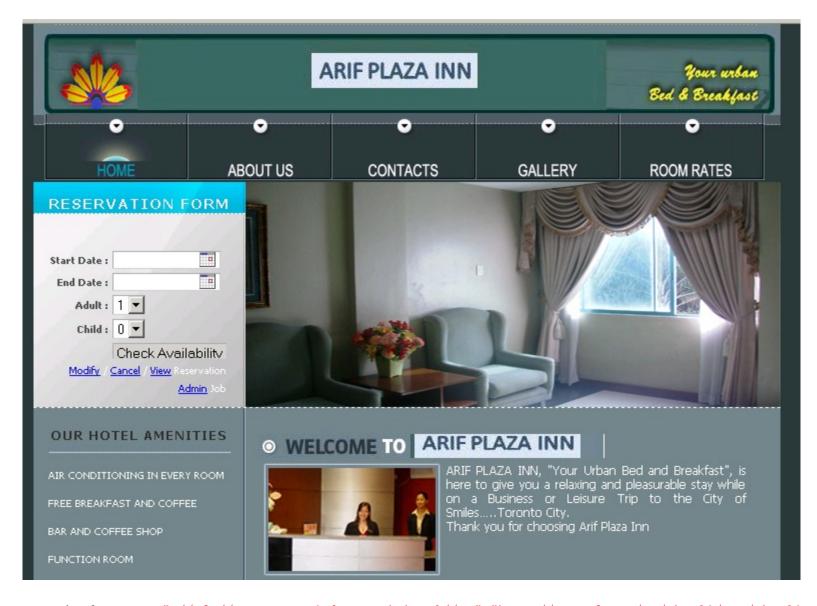
HTML (10%)

All of the needed forms and buttons should be present to allow me to perform all of actions required of the database. This is graded on if the functionality is there. Not if it looks pretty.

My answer:

I will provide important PHP pages where HTML is used. Web pages like INDEX.PHP shown below, also sample HTML code shown. I have HTML and PHP section in same webpage that is convenient and used in many projects.

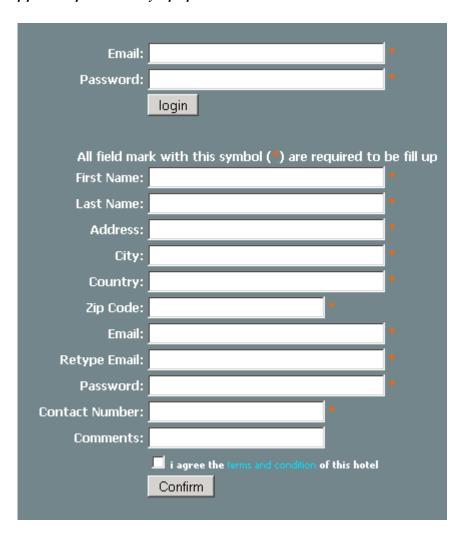
More of the files can be obtained at: OSU server: /nfs/stak/students/a/adatiaa/public_html/Arif Plaza Inn



```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-</pre>
transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">
<head>
<meta http-equiv="Content-Type" content="text/html; charset=utf-8" />
<title>Arif Plaza Inn</title>
<link href="css/styles.css" rel="stylesheet" type="text/css" />
<!--sa nivo slider-->
<link rel="stylesheet" href="nivo-slider.css" type="text/css" media="screen" />
   <link rel="stylesheet" href="style.css" type="text/css" media="screen" />
<!--sa calendar-->
     <script type="text/javascript">
function validateForm()
var x=document.forms["index"]["start"].value;
if (x==null || x=="")
 alert("you must enter your check in Date(click the calendar icon)");
 return false;
var y=document.forms["index"]["end"].value;
if (y==null | | y=="")
 alert("you must enter your check out Date(click the calendar icon)");
 return false;
</script>
<div id="formPan">
<h2 class="style2">RESERVATION FORM </h2>
```

```
<form method="post" action="testing.php" name="index" onsubmit="return validateForm()">
<div style="margin-top:20px; margin-left:10px;">
<div align="right">
    <label>Start Date : </label>
   </div>
    <input name="Input" type="submit" value="Check Availability" id="button" />
 <div align="right"><a rel="facebox" href="modifyindex.php">Modify</a> / <a</pre>
href="cancelindex.php">Cancel</a> / <a href="viewindex.php">View</a> Reservation </div>
   <div align="right"> <a href="admin.php">Admin</a> Job </div>
   </div>
</form>
/body>
</html>
```

Next I will provide HTML snippet in personalinfo.php



```
</div>
<div id="featured">
 <br />
  <form action="payment1.php" method="post" style="height: 89px; margin-top: -31px;" onsubmit="return</pre>
validateForm1() " name="log">
 <input name="start" type="hidden" value="<?php echo $arival; ?>" />
 <input name="end" type="hidden" value="<?php echo $departure; ?>" />
 <input name="adult" type="hidden" value="<?php echo $adults; ?>" />
<input name="child" type="hidden" value="<?php echo $child; ?>" />
 <input name="n room" type="hidden" value="<?php echo $no rooms; ?>" />
 <input name="rm_id" type="hidden" value="<?php echo $roomid; ?>" />
<input name="rm_type" type="hidden" value="<?php echo $roomtype; ?>" />
 <input name="result" type="hidden" value="<?php echo $results; ?>" />
 <div align="right" class="style1"></div>
     >
     <div align="right" class="style1">Email:</div>
     <input name="email" type="text" class="ed" id="last" size="35" />
     <span class="style3">*</span>
      
   <tr>
     <div align="right" class="style1">Password:</div>
     <input name="password" type="text" class="ed" id="address" size="35" />
     <span class="style3">*</span>
       
   </t.r>
       
     <input name="login" type="submit" value="login" />
       
   </form>
```

Next I will show the HTML snippet for confirmpayment.php

Arif Plaza Inn

#79 Burnhamptop St., Toronto 6100 Telephone: +(416) 278-2210 Telefax: +(416) 278-2210 Mobile: (416) 278-2210 Email: teachasda@gmail.com

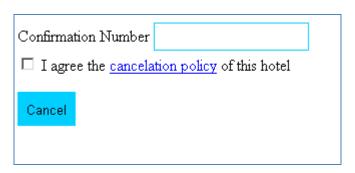
Booker Personnal Information

FirstName: arif-new
LastName: adatia-new
Address: ON
City: Toronto
Zip: 12345
Country: CA
Email: teachasda@gmail.com
Telephone/Cellphone Number: 416278

I am showing only small code portion:

```
$row = mysql fetch array($result));
  echo '<br />';
  echo '<b>'.'Booker Personnal Information'.'</b>';
  echo '<br />';
  echo "FirstName: ".$row['firstname']. "<br />";
  echo "LastName: ".$row['lastname']. "<br />";
  echo "Address: ".$row['province']. "<br />";
  echo "City: ".$row['city']. "<br />";
  echo "Zip: ".$row['zip']. "<br />";
  echo "Country: ".$row['country']. "<br />";
  echo "Email: ".$row['email']. "<br />";
  echo "Telephone/Cellphone Number: ".$row['contact']. "<br />";
  echo '<br />';
 echo '<br>';
  echo '<b>'.'Reservation Details'.'</b>'.'<br />';
  echo "Arrival Date: ".$row['arrival']. "<br />";
  echo "Departure Date: ".$row['departure']. "<br />";
  echo "Confirmation Code: ".$row['confirmation']. "<br />";
  echo "Number of night stay: ".$row['result'];
  echo '<br />';
  echo '<br />';
  echo '<b>'.'Rate Information'.'</b>'.'<br />';
  $q=$row['room id'];
```

Next, cancelindex.php HTML,



There are many HTML code embedded inside PHP pages, it is not possible to cover all that has been developed here. Please you can refer to the files in the OSU webserver.

PHP (10%)

You should be using the mysqli class to perform your database operations. It should be clear what all the code is doing. It should produce no errors.

My Answer:

Let me provide key PHP files as below.

Personalinfo.php: PHP section of this file as below

```
<?php
    //Turn on error reporting
ini_set('display_errors', 'On');
ini set('safe mode', '1');</pre>
```

```
$arival = $_POST['start'];
$departure = $ POST['end'];
      $adults = $ POST['adult'];
      $child = $_POST['child'];
      $no rooms = $ POST['no rooms'];
      rac{1}{2}
      $results = $ POST['result'];
      property = \overline{1};
      $rate =95:
      $description = 'Standard';
      $image = '';
      amenities id = 1;
      $email = "";
      $password = "";
  //Connects to the database
$con = new mysqli("localhost", "root", "", "adatiaa-db");
if($con->connect_errno){
      echo "Connection error " . $con->connect_errno . " " . $con->connect_error;
      $query = "SELECT * FROM user where loginemail='$email' and loginpassword='$password' LIMIT 1";
      $result11 = mysqli_query($con, $query);
      $row11 = mysqli fetch array($result11);
      if (empty($row11)) {
    //echo 'There is no user with that email and password combination';
                     // throw new Exception('There is no user with that email and password combination.');
        $row11 =NULL;
else
$email = $row11['loginemail'];
      $password = $row11['loginpassword'];
2>
Next let me show the PHP section of cancelindex-exec.php page
```

```
<?php
                  //Connects to the database
$con = new mysqli("localhost", "root", "", "adatiaa-db");
if ($con->connect_errno) {
      echo "Connection error " . $con->connect_errno . " " . $con->connect_error;
                  $confirmation = $ POST['confirmation'];
                  $confirmation1 = preg replace('/\s+/', '', $confirmation);
                  echo $confirmation1;
                  $result1 = mysqli_query($con, "SELECT * FROM reservation WHERE
confirmation='$confirmation1'");
      (int) $row_cnt = mysqli_num_rows($result1);
                  if( (int) $row cnt == 0)
                   echo "<script type='text/javascript'>alert('No records found, nothing to
Cancel!')</script>";
                  else
            $result = mysqli query($con, "DELETE FROM reservation WHERE confirmation='$confirmation1'");
                        echo "<script type='text/javascript'>alert('Record found and deleted!')</script>";
                  }
                        mysqli close($con);
```

?>

Next is PHP section of saveedit.php

<?php

```
//Connects to the database
$con = new mysqli("localhost", "root", "", "adatiaa-db");
if($con->connect errno){
      echo "Connection error " . $con->connect erroo . " " . $con->connect error;
      $arival = $ POST['start'];
      $confirm = $_POST['confirmation'];
$departure = $ POST['end'];
      $adults = $ POST['adult'];
      $child = $_POST['child'];
$nroom = $ POST['n room'];
      $roomid = $_POST['rm_id'];
      $result = $ POST['result'];
      $name = $ POST['name'];
      $last = $_POST['last'];
      $address = $_POST['address'];
      $city = $ POST['city'];
      zip = \sqrt{POST['zip']};
      $country = $_POST['country'];
      $password = $\overline{\sigma} POST['password'];
      $email = $_POST['email'];
      $cnumber = $_POST['cnumber'];
      $comment = $_POST['comment'];
      $query = "SELECT * FROM room where room id='$roomid'";
$result1 = mysqli query($con, $query);
$row = mysqli_fetch_array($result1);
$rate=$row['rate'];
  $type=$row['type'];
   $payable= $rate*$nroom;
  // Obtain reserve id from reservation table for given confirmation
  $query5 = "SELECT reservation_id FROM reservation where confirmation='$confirm'";
$result5 = mysqli query($con, $query5);
$row5 = mysqli_fetch_array($result5);
$reserv id = $row5['reservation id'];
$result2 = mysqli_query($con, "UPDATE reservation SET arrival='$arival', departure='$departure',
adults='$adults', child='$child', result='$result', room_id='$roomid', no_room='$nroom', firstname='$name',
lastname='$last', city='$city', zip='$zip', province='$address',country='$country', email='$email',
contact='$cnumber', password='$password', payable='$payable' WHERE confirmation='$confirm'");
printf("Affected rows (UPDATE Reservation): %d\n", mysqli_affected_rows($con));
echo nl2br("\n");
$result3 = mysqli query($con,"DELETE FROM roominventory WHERE confirmation='$confirm'");
printf("Affected rows (DELETE from Reservation): %d\n", mysqli_affected_rows($con));
echo nl2br("\n");
      $result4 = mysqli_query($con,"INSERT INTO roominventory (arrival, departure, qty_reserve, room_id,
confirmation) VALUES ('$\sir arival','$\departure','$\nroom','$\roomid','$\confirm')");
            printf("Affected rows (NEW INSERTS into Roominvetory): %d\n", mysqli_affected_rows($con));
            printf("\n");
            $result4 = mysqli_query($con,"UPDATE comment SET email='$email', content = '$comment' WHERE
reservation_reservation_id = "$reserv_id'");
            printf("Affected rows (UPDATES to Comments): %d\n", mysqli affected rows($con));
            echo nl2br("\n");
      /* free result set */
      if($result1 !== false) {
mysqli_free_result($result1);
/* close connection */
mysqli close($con);
```

There are many other PHP files and it is not possible to cover all of them here. Please refer to the web server folder.

Style (10%)

This is a catchall for if you have bad coding style, don't comment, have illegible diagrams etc.

My answer:

For this I have provided standards for the pages wherever possible, for example use of CSS

Comments like in index.php have been provided at appropriate places

```
"Reservation Date" example using two datePickers

* Functionality

1. When the page loads:

- We clear the value of the two inputs (to clear any values cached by the browser)

- We set an "onchange" event handler on the startDate input to call the

setReservationDates function

2. When a start date is selected

- We set the low range of the endDate datePicker to be the start date the user has just selected

- If the endDate input already has a date stipulated and the date falls before the new start date then we clear the input's value

* Caveats (aren't there always)

*/
```

Most of the diagrams are TOOL generated except VISIO ER diagram. So chances of illegible ones are less. I have provided VISO FILE, please refer that as the image in too BIG to fit in this page size.

I have used My SQL Workbench, TOAD, VISIO, MS Word, MS Paint and have all the data Dumps for INSERT operations.

There are several models, Diagrams, included in the ZIP file for the final project submission. Also you can RUN the steps as detailed here to see the ACTUAL working of the features.

I hope you will enjoy my first database project.

I hope for the best.