

Create Tables

```
CREATE TABLE HOTEL
(HotelID      INT              NOT NULL AUTO_INCREMENT,
StreetVARCHAR(15) ,
Country      VARCHAR(15) ,
State        VARCHAR(15) ,
Zip          VARCHAR(5) ,
PRIMARY KEY (HotelID)

);
```

```
CREATE TABLE CUSTOMER (
CID          INT              NOT NULL      AUTO_INCREMENT,
Name         VARCHAR(30)      NOT NULL,
Address      VARCHAR(100) NOT NULL,
Phone_No     CHAR(10) ,
Email        VARCHAR(100) NOT NULL,
Password     VARCHAR(100) NOT NULL,
PRIMARY KEY (CID),
UNIQUE (Email)
);
```

```
CREATE TABLE CREDIT_CARD (
CNumber      VARCHAR(16)      NOT NULL,
Ctype        VARCHAR(30)      NOT NULL,
Baddress     VARCHAR(100) NOT NULL,
Code         VARCHAR(4)       NOT NULL,
ExpDate      VARCHAR(4)       NOT NULL,
Name         VARCHAR(30)      NOT NULL,
PRIMARY KEY (CNumber)
);
```

```
CREATE TABLE ROOM (
HotelID      INT              NOT NULL,
RoomNoCHAR(4)      NOT NULL,
Rtype        VARCHAR(15) ,
Price        DECIMAL(10,2) ,
Description   VARCHAR(150) ,
Floor        VARCHAR(2) ,
Capacity     VARCHAR(6) ,
PRIMARY KEY (HotelID, RoomNo),
FOREIGN KEY (HotelID) REFERENCES HOTEL(HotelID),
ON DELETE CASCADE,
ON UPDATE CASCADE
);
```

```
CREATE TABLE DISCOUNTED_ROOM (
```

```

HotelID      INT          NOT NULL,
RoomNo CHAR(4)          NOT NULL,
Discount     DECIMAL,
StartDate    DATE,
EndDate      DATE,
PRIMARY KEY  (HotelID, RoomNo),
FOREIGN KEY  (HotelID, RoomNo) REFERENCES ROOM (HotelID, RoomNo)
ON DELETE CASCADE,
ON UPDATE CASCADE
);

```

```

CREATE TABLE RESERVATION (
InvoiceNo     INT          NOT NULL AUTO_INCREMENT,
CID           INT          NOT NULL,
Cnumber       VARCHAR(16) NOT NULL,
RDate         DATE,
TotalCost     DEC(10,4),
PRIMARY KEY   (InvoiceNo),
FOREIGN KEY   (CID) REFERENCES CUSTOMER(CID),
ON DELETE CASCADE,
ON UPDATE CASCADE,
FOREIGN KEY   (Cnumber) REFERENCES CREDIT_CARD(Cnumber)
ON DELETE SET NULL,
ON UPDATE CASCADE
);

```

```

CREATE TABLE ROOM_RESERVATION (
InvoiceNo      INT          NOT NULL,
HotelID        INT          NOT NULL,
RoomNo         CHAR(4)      NOT NULL,
CheckInDate    DATE         NOT NULL,
CheckOutDate   DATE         NOT NULL,
PRIMARY KEY    (HotelID, RoomNo, CheckInDate),
FOREIGN KEY    (HotelID, RoomNo) REFERENCES ROOM(HotelID, RoomNo),
ON DELETE CASCADE,
ON UPDATE CASCADE,
FOREIGN KEY    (InvoiceNo) REFERENCES RESERVATION(InvoiceNo)
ON DELETE CASCADE,
ON UPDATE CASCADE
);

```

```

CREATE TABLE BREAKFAST(
HotelID      INT          NOT NULL,
BType        VARCHAR(30)   NOT NULL,
BPrice DEC(10, 2),
Description   VARCHAR(300),
PRIMARY KEY   (HotelID, BType),
FOREIGN KEY   (HotelID) REFERENCES HOTEL(HotelID)

```

```
ON DELETE CASCADE,  
ON UPDATE CASCADE  
);
```

```
CREATE TABLE RRESV_BREAKFAST(  
Btype          VARCHAR(30) NOT NULL,  
HotelID        INT          NOT NULL,  
RoomNo         CHAR(4)      NOT NULL,  
CheckInDate    DATE         NOT NULL,  
NoofOrders     INT,  
PRIMARY KEY (HotelID, BType, RoomNo, CheckInDate),  
FOREIGN KEY (HotelID, BType) REFERENCES BREAKFAST(HotelID, BType),  
ON DELETE CASCADE,  
ON UPDATE CASCADE,  
FOREIGN KEY (HotelID, RoomNo, CheckInDate) REFERENCES ROOM_RESERVATION(HotelID,  
RoomNo, CheckInDate)  
ON DELETE CASCADE,  
ON UPDATE CASCADE  
);
```

```
CREATE TABLE SERVICE(  
HotelID        INT          NOT NULL,  
SType          VARCHAR(30)  NOT NULL,  
SPrice         DEC(10,2),  
PRIMARY KEY (HotelID, SType),  
FOREIGN KEY (HotelID) REFERENCES HOTEL(HotelID)  
ON DELETE CASCADE,  
ON UPDATE CASCADE  
);
```

```
CREATE TABLE RRESV_SERVICE  
(SType          VARCHAR(30) NOT NULL,  
HotelID        INT          NOT NULL,  
RoomNo         CHAR(4)      NOT NULL,  
CheckInDate    DATE         NOT NULL,  
PRIMARY KEY (HotelID, SType, RoomNo, CheckInDate),  
FOREIGN KEY (HotelID, SType) REFERENCES SERVICE(HotelID, SType),  
ON DELETE CASCADE,  
ON UPDATE CASCADE,  
FOREIGN KEY (HotelID, RoomNo, CheckInDate) REFERENCES ROOM_RESERVATION(HotelID,  
RoomNo, CheckInDate)  
ON DELETE CASCADE,  
ON UPDATE CASCADE,  
);
```

```
CREATE TABLE ROOM_REVIEW (  
RID            INT          NOT NULL AUTO_INCREMENT,  
Rating         INT,
```

```

Text          VARCHAR(1000) ,
CID           INT              NOT NULL ,
HotelID       INT              NOT NULL ,
RoomNo        CHAR(4) ,
CONSTRAINT rreview_value CHECK(Rating BETWEEN 0 AND 10),
PRIMARY KEY (RID) ,
FOREIGN KEY (CID) REFERENCES CUSTOMER(CID) ,
ON DELETE SET TO NULL ,
ON UPDATE SET TO NULL ,
FOREIGN KEY (HotelID, RoomNo) REFERENCES ROOM(HotelID, RoomNo)
ON DELETE SET TO NULL ,
ON UPDATE SET TO NULL ,
);

CREATE TABLE BREAKFAST_REVIEW(
RID           INT              NOT NULL AUTO_INCREMENT ,
HotelID       INT ,
BType        VARCHAR(30) ,
CID           INT ,
Text          VARCHAR(1000) ,
Rating        INT ,
CONSTRAINT breview_value CHECK(Rating BETWEEN 0 AND 10),
PRIMARY KEY (RID) ,
FOREIGN KEY (HotelID, BType) REFERENCES BREAKFAST(HotelID, BType)
ON DELETE SET TO NULL ,
ON UPDATE SET TO NULL ,
);

CREATE TABLE SERVICE_REVIEW(
RID           INT              NOT NULL AUTO_INCREMENT ,
HotelID       INT ,
SType        VARCHAR(30) ,
CID           INT ,
Rating        INT ,
Text          VARCHAR(1000) ,
CONSTRAINT sreview_value CHECK(Rating BETWEEN 0 AND 10),
PRIMARY KEY (RID) ,
FOREIGN KEY (HotelID, SType) REFERENCES SERVICE(HotelID, SType)
ON DELETE SET TO NULL ,
ON UPDATE SET TO NULL ,
);

```


Insert Test Data

INSERT INTO HOTEL

(HotelId, Street, Country, State, ZIP)

VALUES

('14012', '500 Beach Blvd.', 'United States', 'California', '92008'),
('24142', '311 Jefferson Ct.', 'United States', 'Virginia', '20124'),
('21853', '4 Blvd. Playa', 'Mexico', 'Quintana Roo', '77500'),
('14013', '42 Wallaby Way', 'Australia', 'Sydney', '20600'),
('15151', 'Memphis Boulevard', 'United States', 'Tennessee', '37501');

INSERT INTO CUSTOMER

(Name,Address,Phone_No,Email>Password)

VALUES

('Daniel T Picinich', '684 Sorwin Road, Wood Ridge New Jersey, 07075',
'2019309462', 'dtp@jitn.edu', 'password'),
('Luke Walker', '684 Board Lane, Ridgevale New Jersey, 07072', '2012314462',
'skywalker@gmail.com', 'anakin'),
('Anya Fenix', '1 Main Street, Smalltown Montana, 00001', '9733456512',
'forthecoalition@gmail.com', 'country'),
('Carrie Lay', '2 Malibu Road, Los Angeles California, 90210', '2125453211',
'carrieforever@gmail.com', 'hockey'),
('Gil Namwob', '127 Roosevelt Street, Fair Heights New Jersey, 07604',
'201935456', 'gilbertnamwob@hotmail.com', 'lawyer'),
('admin', 'Hulton MDF Room', NULL, 'admin', 'admin'),
('Lena Oxton', '5 Gaslamp Avenue, London England, EC2M', '2018038345',
'loxten@overwatch.un', 'calvary');

INSERT INTO CREDIT_CARD

(Cnumber, Ctype, Baddress, Code, ExpDate, Name)

VALUES

('4321876509874321', 'Visa', '684 Sorwin Road, Wood Ridge New Jersey, 07075',
'111', '2020-04-05', 'Daniel T Picinich'),
('1111111111111111', 'Master', '684 Board Lane, Ridgevale New Jersey, 07072',
'222', '2022-09-02', 'Luke Walker'),
('2222222222222222', 'Discover', '1 Main Street, Smalltown Montana, 00001',
'333', '2017-09-01', 'Anya Fenix'),
('2332344345545665', 'Discover', '127 Roosevelt Street, Fair Heights New
Jersey, 07604', '321', '2018-10-01', 'Gil Namwob'),
('9009988965564334', 'Visa', '2 Malibu Road, Los Angeles California, 90210',
'456', '2024-01-09', 'Carrie Lay');

INSERT INTO ROOM

(HotelID, RoomNo, Rtype, Price, Description, Floor, Capacity)

VALUES

('14012', '4010', 'Basic Room', '150', 'Queen-sized bed with Complimentary
Wi-Fi. Bottega Veneta toiletries and Nespresso coffee machine included.
Attached bathroom.', '4', '2'),

```

('24142', '3009', 'Cabin', '200', 'Rustic log cabin themed room. Includes one
King bed, one bath, and attached fireplace.', '1', '2'),
('21853', '2111', 'Bohemian', '300', 'Stay in an upscale room fit for a
celebrity. Large california king bed with shower/bathtub combo unit. Sleek and
austere decorations.', '2', '2'),
('14013', '2001', 'Family Clubhouse', '250', 'Room decorated with children in
mind. Two twin sized bunk beds with an additional queen sized bed.', '10', '6'),
('14013', '2002', 'Extended Family Clubhouse', '350', 'Large scale room
decorated with children in mind. Three twin sized bunk beds with a king sized
bed. Includes play area with toys for all ages.', '10', '8'),
('14012', '4011', 'Basic Room', '150', 'Queen-sized bed with Complimentary
Wi-Fi. Bottega Veneta toiletries and Nespresso coffee machine included.
Attached bathroom.', '4', '2'),
('14012', '4012', 'Basic Room', '150', 'Queen-sized bed with Complimentary
Wi-Fi. Bottega Veneta toiletries and Nespresso coffee machine included.
Attached bathroom.', '4', '2'),
('14012', '4013', 'Basic Room', '150', 'Queen-sized bed with Complimentary
Wi-Fi. Bottega Veneta toiletries and Nespresso coffee machine included.
Attached bathroom.', '4', '2'),
('14013', '2000', 'Family Clubhouse', '250', 'Room decorated with children in
mind. Two twin sized bunk beds with an additional queen sized bed.', '10', '6'),
('14013', '2003', 'Extended Family Clubhouse', '350', 'Large scale room
decorated with children in mind. Three twin sized bunk beds with a king sized
bed. Includes play area with toys for all ages.', '10', '8'),
('24142', '3010', 'Cabin', '200', 'Rustic log cabin themed room. Includes one
King bed, one bath, and attached fireplace.', '1', '2'),
('24142', '3011', 'Cabin', '200', 'Rustic log cabin themed room. Includes one
King bed, one bath, and attached fireplace.', '1', '2'),
('24142', '3012', 'Cabin', '200', 'Rustic log cabin themed room. Includes one
King bed, one bath, and attached fireplace.', '1', '2'),
('21853', '2112', 'Bohemian', '300', 'Stay in an upscale room fit for a
celebrity. Large california king bed with shower/bathtub combo unit. Sleek and
austere decorations.', '2', '2'),
('21853', '2113', 'Bohemian', '300', 'Stay in an upscale room fit for a
celebrity. Large california king bed with shower/bathtub combo unit. Sleek and
austere decorations.', '2', '2'),
('21853', '2114', 'Bohemian', '300', 'Stay in an upscale room fit for a
celebrity. Large california king bed with shower/bathtub combo unit. Sleek and
austere decorations.', '2', '2'),
('21853', '2115', 'Bohemian', '300', 'Stay in an upscale room fit for a
celebrity. Large california king bed with shower/bathtub combo unit. Sleek and
austere decorations.', '2', '2');

```

INSERT INTO DISCOUNTED_ROOM

(HotelID, RoomNo, Discount, StartDate, EndDate)

VALUES

('14012', '4010', .10, '2017-04-01', '2017-05-01'),

```
('24142', '3009', .20, '2018-05-01', '2018-05-08'),
('21853', '2111', .25, '2018-12-25', '2018-12-28'),
('14013', '2001', .05, '2017-08-01', '2017-08-30'),
('14013', '2002', .05, '2018-08-01', '2018-08-30');
```

INSERT INTO RESERVATION

```
(InvoiceNo, CID, Cnumber, RDate)
```

VALUES

```
('000444555', 8, '4321876509874321', '2016-04-05'),
('000555444', 10, '2332344345545665', '2017-05-01'),
('000654654', 9, '9009988965564334', '2015-01-01'),
('001010101', 16, '2222222222222222', '2016-12-26'),
('001111111', 12, '1111111111111111', '2017-01-09');
```

INSERT INTO ROOM_RESERVATION

```
(InvoiceNo, HotelID, RoomNo, CheckInDate, CheckOutDate)
```

VALUES

```
('000444555', '14012', '4010', '2017-01-09', '2017-01-16'),
('000555444', '24142', '3009', '2018-06-19', '2018-07-01'),
('000654654', '21853', '2111', '2015-08-01', '2015-09-01'),
('001010101', '14013', '2001', '2017-12-20', '2017-12-27'),
('001111111', '14013', '2002', '2018-05-16', '2018-05-23');
```

INSERT INTO BREAKFAST

```
(HotelID, BType, BPrice, Description)
```

VALUES

```
('14012', 'American', '20', 'Breakfast sandwiches with hash browns. Includes unlimited refills of juice'),
('24142', 'Complimentary', '0', 'Simple breakfast of toast, bagels, with your choice of coffee or tea.'),
('21853', 'Buffet', '10', 'All you can eat buffet including eggs, bacon, pancakes, and sausage.'),
('14013', 'French', '30', 'Scones and other pastries are included with this light option'),
('15151', 'American', '20', 'Breakfast sandwiches with hash browns. Includes unlimited refills of juice');
```

INSERT INTO RRESV_BREAKFAST

```
(BType, HotelID, RoomNo, CheckInDate, NoofOrders)
```

VALUES

```
('American', '14012', '4010', '2017-01-09', '2'),
('Complimentary', '24142', '3009', '2018-06-19', '2'),
('Buffet', '21853', '2111', '2015-08-01', '2'),
('French', '14013', '2001', '2017-12-20', '6'),
('American', '15151', '2002', '2018-05-16', '8');
```

INSERT INTO SERVICE

```
(HotelID, SType, SPrice)
```


VALUES

```
('14012', 'Beach Dropoff', '25'),  
( '24142', 'Airport Shuttle', '50'),  
( '21853', 'Beach Dropoff', '5'),  
( '14013', 'Laundry', '20'),  
( '15151', 'Parking', '12');
```

INSERT INTO RRESV_SERVICE

```
(SType, HotelID, RoomNo, CheckInDate)
```

VALUES

```
('Beach Dropoff', '14012', '4010', '2017-01-09'),  
( 'Airport Shuttle', '24142', '3009', '2018-06-19'),  
( 'Beach Dropoff', '21853', '2111', '2015-08-01'),  
( 'Laundry', '14013', '2001', '2017-12-20'),  
( 'Parking', '15151', '2002', '2018-05-16');
```

INSERT INTO ROOM_REVIEW

```
(RID, Rating, Text, CID, HotelID, RoomNo)
```

VALUES

```
('151515151', '10', 'Room was absolutely gorgeous. Amazing view, comfortable  
bed. Completely recommend', '8', '14013', '2002'),  
( '111111111', '0', 'Room was absolutely horrible. Terrible stench of death  
throughout the premises. Ants and roaches feasting in the kitchenette.', '9',  
'24142', '3009'),  
( '222222222', '1', 'Room appeared to have just been visited by an exterminator.  
No actual live insects but rodent droppings found by the bathroom.' , '8',  
'24142', '3009'),  
( '333444555', '8', 'Room was very satisfactory, with soft pillows and warm  
sheets. However, the staff was very rude and unaccommodating.', '11', '21853',  
'2111'),  
( '474747477', '5', 'The room was serviceable. Nothing amazing, but nothing  
terrible either. It was a bed for my wife and I to sleep in as a road trip  
stop', '12', '14012', '4010'),  
( '47474748', '10', 'Just a perfect stay. Highly recommend this room', '10',  
'14012', '4010');
```

INSERT INTO BREAKFAST_REVIEW

```
(RID, HotelID, BType, CID, Text, Rating)
```

VALUES

```
('575757111', '14012', 'American', '9', "Amazing breakfast with customizable  
options", '10'),  
( '567567568', '24142', 'Complimentary', '10', 'Free is free. It's fine.', '5'),  
( '112211201', '21853', 'Buffet', '12', "Food is nothing special, but endless.  
Eat up!", '8')
```

```
('909881112', '14013', 'French', '9', "I was expecting much more food  
considering the price", '3'),  
( '111211298', '15151', 'American', '11', "Bagels were stale, but eggs were  
outstanding", '6');
```

INSERT INTO SERVICE_REVIEW

(RID, HotelID, SType, CID, Rating, Text)

VALUES

```
('575757112', '14012', 'Beach Dropoff', '9', '10', 'Driver gave us a beautiful  
tour of the beaches'),  
( '567567569', '24142', 'Airport Shuttle', '11', '5', 'Vehicle was unkempt, but  
arrived safely and on time'),  
( '11221126', '21853', 'Beach Dropoff', '14', '8', 'Quick drop-off, with a clean  
vehicle.')
```

```
('909881111', '14013', 'Laundry', '13', '3', 'Dress shirt for a big meeting had  
a burn on the sleeve. '),  
( '111211299', '15151', 'Parking', '10', '6', 'Parking lot is far from the  
rooms, but plenty of spaces.');
```

SQL Statements Handled in Application

Check that user information matches information in customer table

```
SELECT Email, Password
FROM CUSTOMERS
WHERE Email = "emailvar" AND Password = "passvar";
```

-Create new user information through registration

```
INSERT INTO CUSTOMER
VALUES
(ssnvar, namevar, addressvar, phonevar, emailvar, passvar);
```

Input: State and Country | Output: list of hotels

```
SELECT HotelID
FROM HOTEL
WHERE State="statevar" AND Country="countryvar";
```

Input: HotelID | Output: Room types

```
SELECT Rtype
FROM ROOM
WHERE HotelID="hotelidvar";
```

Input: HotelID, Room Type, Check In Date, Check Out Date | Output: list of available rooms

```
SELECT *
FROM ROOM
WHERE NOT EXISTS (SELECT HotelID, RoomNo
FROM ROOM_RESERVATION
WHERE HotelID='hotelidvar' AND ('checkindatevar' BETWEEN CheckInDate AND
CheckOutDate) AND 'checkoutdatevar' BETWEEN CheckInDate AND CheckOutDate));
```

Of these available rooms, join discounts (gets available rooms, and adds the discount attribute to them. Discount is null if that room doesn't have a discount)

```
SELECT R.*, Discount
FROM (SELECT *
FROM ROOM
WHERE NOT EXISTS
(SELECT HotelID, RoomNo
FROM ROOM_RESERVATION
WHERE HotelID='14012' AND
('checkindatevar' BETWEEN CheckInDate AND CheckOutDate) AND
('checkoutdatevar' BETWEEN CheckInDate AND CheckOutDate)))
AS R
LEFT JOIN DISCOUNTED_ROOM AS D
ON R.HotelID=D.HotelID AND R.RoomNo=D.RoomNo;
```

Input: HotelID | Output: available breakfast types

```
SELECT Btype, Bprice, Description
FROM BREAKFAST
WHERE HotelID="hotelidvar";
```

Input: HotelID | Output: available service types

```
SELECT Stype, Sprice
FROM SERVICE
WHERE HotelID="hotelidvar";
```

//see if card exists

```
SELECT *
FROM CREDIT_CARD
WHERE CNumber='CNumber' AND Ctype='Ctype' AND Baddress='Baddress' AND
Code='CCode' AND ExpDate='ExpDate' AND Name='CName';
```

//add card (if it doesn't exist)

```
INSERT INTO CREDIT_CARD
VALUES
('Cnumber', 'Ctype', 'Baddress', 'Code', 'ExpDate', 'Name');
```

//create reservation

```
INSERT INTO RESERVATION
(CID, Cnumber, RDate)
VALUES
(CID, 'Cnumber', 'reserveDate');
```

//book (multiple) rooms into reservation

```
INSERT INTO ROOM_RESERVATION
VALUES
(InvoiceNo, HotelID, RoomNo, 'CheckInDate', 'CheckOutDate');
```

//get list of user's reservations

```
SELECT *
FROM RESERVATION AS R, CREDIT_CARD AS C
WHERE R.Cnumber=C.Cnumber AND R.CID='cidvar';
```

//get list of room bookings from user's reservation, with information about hotel

```
SELECT *  
FROM RESERVATION AS R, ROOM_RESERVATION AS M, ROOM AS O, HOTEL AS H  
WHERE R.InvoiceNo=M.InvoiceNo AND M.InvoiceNo='invoicevar' AND  
      M.HotelID=O.HotelID AND M.RoomNo=O.RoomNo AND M.HotelID=H.HotelID;
```

```
//get list of breakfasts ordered
```

```
SELECT *  
FROM BREAKFAST AS B, RRESV_BREAKFAST AS R  
WHERE B.HotelID=R.HotelID AND B.BType=R.BType AND  
R.HotelID='hotelidvar' AND R.RoomNo='roomnovar' AND  
R.CheckInDate='checkindatevar';
```

```
//get list of services ordered
```

```
SELECT *  
FROM SERVICE AS S, RRESV_SERVICE AS R  
WHERE S.HotelID=R.HotelID AND S.SType=R.SType AND  
R.HotelID='hotelidvar' AND R.RoomNo='roomnovar' AND  
R.CheckInDate='checkindatevar';
```

```
//insert room review
```

```
INSERT INTO ROOM_REVIEW  
(Rating,Text,CID,HotelID,RoomNo)  
VALUES  
('ratingvar','textvar','cidvar','hotelidvar','roomnovar');
```

```
//insert breakfast review
```

```
INSERT INTO BREAKFAST_REVIEW  
(Rating,Text,CID,HotelID,BType)  
VALUES  
('ratingvar','textvar','cidvar','hotelidvar','BType');
```

```
//insert service review
```

```
INSERT INTO SERVICE_REVIEW  
(Rating,Text,CID,HotelID,SType)  
VALUES  
('ratingvar','textvar','cidvar','hotelidvar','SType');
```

SQL statements for the statistics app

1. For a given time period (begin date and end date) compute the highest rated room type for each hotel.

```
SELECT RType  
FROM(SELECT M.HotelID, M.RType, AVG(Rating) AS RAvgScore  
      FROM ROOM AS M,ROOM_REVIEW AS W,ROOM_RESERVATION AS R  
      WHERE CheckInDate BETWEEN 'startdatevar' and 'enddatevar' AND  
      M.HotelID=W.HotelID AND M.HotelID=R.HotelID AND  
      M.RoomNo=W.RoomNo AND M.RoomNo=R.RoomNo  
      GROUP BY HotelID,RType) as avgscore  
GROUP BY HotelID  
HAVING MAX(RAvgScore) ;
```

2. For a given time period (begin date and end date) compute the 5 best customers (in terms of money spent in reservations).

```
SELECT Name,totalcost  
FROM (SELECT Name, SUM(TotalCost) AS totalcost  
      FROM CUSTOMER,RESERVATION  
      WHERE RDATE BETWEEN 'startdatevar' AND 'enddatevar' AND  
      CUSTOMER.CID=RESERVATION.CID  
      GROUP BY RESERVATION.CID) AS tc  
ORDER BY totalcost DESC  
LIMIT 5;
```

3. For a given time period (begin date and end date) compute the highest rated breakfast type across all hotels.

```
SELECT HotelID, BType  
FROM(SELECT R.HotelID, B.BType, AVG(Rating) AS BAVgScore  
      FROM BREAKFAST_REVIEW AS W, BREAKFAST AS B, RRESV_BREAKFAST  
      AS R  
      WHERE CheckInDate BETWEEN 'startdatevar' AND 'enddatevar' AND  
      W.HotelID=B.HotelID AND W.HotelID=R.HotelID AND  
      W.BType=B.BType AND W.BType=R.BType  
      GROUP BY HotelID, BType) AS avgscore  
HAVING MAX(BAvgScore) ;
```

4. For a given time period (begin date and end date) compute the highest rated servicetype across all hotels.

```
SELECT HotelID, SType  
FROM(SELECT R.HotelID, S.SType, AVG(Rating) AS SAVgScore  
      FROM SERVICE_REVIEW AS W, SERVICE AS S, RRESV_SERVICE
```

```
AS R
WHERE CheckInDate BETWEEN 'startdatevar' AND 'enddatevar' AND
W.HotelID=S.HotelID AND W.HotelID=R.HotelID AND
W.SType=S.SType AND W.SType=R.SType
GROUP BY HotelID, BType) AS avgscore
HAVING MAX(SAvgScore) ;
```


