```
#1. Create the database
CREATE DATABASE SalesDatabase;
USE SalesDatabase;
CREATE TABLE `Products` (
      ProductID int(11) primary key NOT NULL,
ProductName varchar(255) DEFAULT NULL,
      SupplierID int(11) DEFAULT NULL,
CategoryID int(11) DEFAULT NULL,
      'Unit' varchar(255) DEFAULT NULL,
'Price' double DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
CREATE TABLE `Customers`
      CustomerID` int(11) primary key NOT NULL,
CustomerName` varchar(255) DEFAULT NULL,
       ContactName` varchar(255) DEFAULT NULL,
       Address varchar (255) DEFAULT NULL,
       City` varchar(255) DEFAULT NULL,
       PostalCode' varchar(255) DEFAULT NULL.
       Country varchar (255) DEFAULT NULL
) ENGINE=InnoDB DEFAULT CHARSET=ut.f8:
create table department (
  DeptID int primary key,
        DeptName varchar(50)
CREATE TABLE `Employees` (
           EmployeeID int primary key not null,
          LastName` varchar(255) DEFAULT NULL,
FirstName` varchar(255) DEFAULT NULL,
           BirthDate date DEFAULT NULL,
           Salary` decimal(10,2),
           DeptID` int,
          Notes' text,
         FOREIGN KEY ('DeptID') REFERENCES department(DeptID)
) ENGINE=InnoDB DEFAULT CHARSET=utf8;
#3. Create the Sales table
CREATE TABLE Sales (
        SalesID INT PRIMARY KEY,
SalesRepID INT,
         ProductID INT,
        CustomerID int
         SalesAmount DECIMAL(10, 2),
        SalesDate DATE,
         FOREIGN KEY (SalesRepID) REFERENCES Employees(EmployeeID),
         foreign key (ProductID) references Products(ProductID)
         foreign key (CustomerID) references Customers(CustomerID)
-- 4. Create the Targets table CREATE TABLE Targets (
         SalesRepID INT PRIMARY KEY,
         Target DECIMAL(10, 2)
         FOREIGN KEY (SalesRepID) REFERENCES Employees (EmployeeID)
INSERT INTO department (DeptID, DeptName)
VALUES
 (1, 'Data Analysis'),
 (2, 'Sales'),
 (3, 'IT'),
 (4. 'Finance')
 (5, 'Marketing');
INSERT INTO 'Employees' ('EmployeeID', 'LastName', 'FirstName', 'BirthDate', 'Salary', 'DeptID', 'Notes') VALUES

(1, 'Davolio', 'Nancy', '1968-12-08', 52500.00, 1, 'Education includes a BA in psychology from Colorado State University. She also completed (The Art of the Co (2, 'Fuller', 'Andrew', '1952-02-19', 67500.00, 1, 'Andrew received his BTS commercial and a Ph.D. in international marketing from the University of Dallas. He
 (3, 'Leverling', 'Janet', '1963-08-30', 48000.00, 1, 'Janet has a BS degree in chemistry from Boston College. She has also completed a certificate program in f (4, 'Peacock', 'Margaret', '1958-09-19', 59000.00, 2, 'Margaret holds a BA in English literature from Concordia College and an MA from the American Institute o
(5, 'Buchanan', 'Steven', '1955-03-04', 61000.00, 2, 'Steven Buchanan graduated from St. Andrews University, Scotland, with a BSC degree. Upon joining the comp (6, 'Suyama', 'Michael', '1963-07-02', 54000.00, 2, 'Michael is a graduate of Sussex University (MA, economics) and the University of California at Los Angeles (7, 'King', 'Robert', '1960-05-29', 45500.00, 2, 'Robert King served in the Peace Corps and traveled extensively before completing his degree in English at the
(7, 'King', 'Robert', '1960-05-29', 45500.00, 2, 'Robert King served in the Peace Corps and traveled extensively before completing his degree in English at the (8, 'Callahan', 'Laura', '1958-01-09', 47000.00, 3, 'Laura received a BA in psychology from the University of Washington. She has also completed a course in bu (9, 'Dodsworth', 'Anne', '1969-07-02', 49500.00, 3, 'Anne has a BA degree in English from St. Lawrence College. She is fluent in French and German.'), (10, 'West', 'Adam', '1928-09-19', 32000.00, 3, 'Ann old chum.'), (11, 'Johnson', 'Sarah', '1970-12-12', 63000.00, 2, 'Sarah has over 15 years of experience in international sales and marketing.'), (12, 'White', 'David', '1985-07-07', 58000.00, 2, 'David leads client outreach strategies across Europe and Asia.'), (13, 'Harris', 'Jennifer', '1990-03-10', 47000.00, 2, 'Jennifer focuses on regional sales campaigns and customer acquisition.'), (14, 'Martinez', 'Carlos', '1984-11-05', 6000.00, 2, 'Carlos specializes in Latin American sales operations and growth strategies.'), (15, 'Parker', 'Emily', '1991-08-22', 55000.00, 2, 'Emily oversees strategic partnerships and key account management for enterprise clients.'), (16, 'Taylor', 'James', '1988-02-14', 47000.00, 1, 'James is an expert in statistical analysis and process optimization.'), (17, 'Clark', 'William', '1992-06-25', 49000.00, 3, 'William' is a software developer with expertise in backend development.').
 (17, 'Clark', 'William', '1992-06-25', 49000.00, 3, 'William is a software developer with expertise in backend development.'), (18, 'Lewis', 'Sophia', '1994-11-19', 53000.00, 3, 'Sophia is an IT systems analyst with strong knowledge of enterprise systems.'),
(19, 'Allen', 'Grace', '1979-01-22', 56000.00, 4, 'Grace manages the department's financial forecasting and budgeting.'), (20, 'King', 'Liam', '1990-02-15', 60000.00, 5, 'Liam leads marketing campaigns for key product launches.'), (21, 'Green', 'Isabella', '1993-09-05', 57000.00, 5, 'Isabella creates marketing strategies that optimize digital outreach.'), (22, 'Baker', 'Mason', '1989-07-18', 59000.00, 5, 'Mason oversees global brand development initiatives.');
      7. Insert data into Targets table
INSERT INTO Targets (SalesRepID, Target) VALUES
 (4, 7000),
 (5, 9000),
 (6, 5000),
 (7, 9500),
 (11, 4000)
 (12, 7500),
 (13, 8200),
 (14. 6500)
 (15, 8700);
INSERT INTO 'Customers' ('CustomerID', 'CustomerName', 'ContactName', 'Address', 'City', 'PostalCode', 'Country') VALUES (1, 'Alfreds Futterkiste', 'Maria Anders', 'Obere Str. 57', 'Berlin', '12209', 'Germany'), (2, 'Ana Trujillo Emparedados y helados', 'Ana Trujillo', 'Avda. de la Constitución 2222', 'México D.F.', '05021', 'Mexico'),
INSERT INTO `Customers` (`CustomerID`,
```

```
    Antonio Moreno Taqueria', 'Antonio Moreno', 'Mataderos 2312', 'Mexico D.F.', '05023', 'Mexico'),
    'Around the Born', 'Thomas Hardy', '120 Hanover Sq.', 'London', 'WAI IDP', 'UK'),
    'Berglunds snabbkOp', 'Christina Berglund', 'BerguvavAgen St, 'Luleâ', '8-958 22', 'Sweden'),
    'Blauer See Delikatesens, 'Hanna Mose', 'Forterstr. '57', 'Manhelm', '63105', 'Germany'),
    'Bloom Jero et fils', 'Frédérique Citeaux', '24, place Kicher', 'Stranburg', '57000', 'France'),
    'Bon appl', 'Laurence Lebihans, '12, ruse des Bouchers', 'Warabourg', 'S7000', 'France'),
    'Bon appl', 'Laurence Lebihans, '12, ruse des Bouchers', 'Warabourg', 'S7000', 'France'),
    'Contro Comical Marketse', 'Elizabeth Lincoln', '23 Taswassen Blud', 'Taswassen', '178 884', 'Canada'),
    'Bo's Beverages', 'Victoria Asbucchie', 'Santiscondon', 'ECZ SM', 'UK'),
    'Cactus Comidas para llevar', 'Patricio Simpson', 'Cerrito 333', 'Buenos Aires', '1010', 'Argettina'),
    'Consol Gadated Moding', 'Blizabeth Brown', 'Berkeley Gardens 12 Erwery', 'Uniondon', 'WAI STM', 'UK'),
    'Consol Gadated Moding', 'Elizabeth Brown', 'Berkeley Gardens 12 Erwery', 'Uniondon', 'WAI STM', 'Grance'),
    'Bastern Connection', 'Ann Devon', '35 King George', 'London', 'WAI SFM', 'UK'),
    'Brantia Arquibaido', 'Aria Cruz', 'Rua Ordo, '22', 'Sao Paulo', '0543-050', 'Germany'),
    'Familia Arquibaido', 'Aria Cruz', 'Rua Ordo, '22', 'Sao Paulo', '0543-050', 'Germany', 'Sapin'),
    'Folk och få HB', 'Maria Larsson', 'Mergstan 24', 'Bracke', '5-844 67', 'Sweden'), 'Germany',
    'France gourmander', 'Martin Eance, '18', chausede de Tournai', 'Ullie', 'S9300', 'France'),
    'France restauration', 'Carine Schmitt', '54', rue Royale', 'Nantes', '44000', 'France'),
    'France restauration', 'Carine Schmitt', '54', rue Royale', 'Nantes', 'Germany', 'Germany', 'Germany', 'Germany', 'Germany
                (3, 'Antonio Moreno Taquería', 'Antonio Moreno', 'Mataderos 2312', 'México D.F.', '05023', 'Mexico'),
    (50, Maison Dewey', 'Catherine Dewey', 'Rue Joseph-Bens 532', 'Bruxellee', 'B-1180', 'Bedgium',

(51, 'Mère Faillarde', 'Jean Frenière', '43 rue St. Laurent', 'Montréal', 'Hill' 163', 'Canada'),

(52, 'Morgenstern Gesundkost', 'Alexander Feuer', 'Heerstr. 22', 'Leipzig', '04179', 'Germany'),

(53, 'North', South, 'Simon Crowther', 'South House 300 Queensbridge', 'London', 'SW7 (RZ', 'UK'),

(54, 'Océano Atlântico Ltda.', 'Yvonne Moncada', 'Ing. Gustavo Moncada 858 Pieo 20-A', 'Buenos Aires', '1010', 'Argentina'),

(55, 'Old World Delicatessen', 'Rene Phillips', '2743 Bering St.', 'Anchorage', '99508', 'USA'),

(56, 'Ottilies Käseladen', 'Henriette Pfaltheim', 'Mehrheimerstr. 369', 'Köln', '50739', 'Germany'),

(57, 'Paris spécialités', 'Marie Bertrand', '265, boulevard Charonne', 'Paris', '75012', 'France'),

(58, 'Pericles Comidas clásicas', 'Guillermo Fernández', 'Calle Dr. Jorge Cash 321', 'México D.F.', '195033', 'Mexico'),

(59, 'Piccolo und mehr', 'Georg' Pipps', 'Geislawe Jave, 'Suburg', '5200', 'Austria'),

(60, 'Princesa Isabel Vinhoss', 'Isabel de Castro', 'Estrada da sadde n. 59', 'Lisboa', '1756', 'Portugal'),

(61, 'Que Delicia', 'Bernardo Batista', 'Rua da Panificadora, 12', 'Rio de Janeiro', 'O2389-673', 'Brazil'),

(62, 'Queen Cozinha', 'Lúcia Carvalho', 'Alameda dos Canàrios, 891', 'São Paulo', '05487-020', 'Brazil'),

(63, 'QUICK Stop', 'Horst Kloss', 'Taucherstrañe Dr.', 'Cunewalde', '01307', 'Germany'),

(64, 'Rancho grande', 'Sergio Gutierrez', 'Av. del Libertador 900', 'Buenos Aires', '1010', 'Argentina'),

(65, 'Ratiesnake Canyon Grocery', 'Paula Milson', '2817 Milson Dr.', 'Albuquerque', '8710', 'USA'),

(66, 'Reggiani Caseifici', 'Maurizio Moroni', 'Strada Provinciale 124', 'Reggio Emilia', '42100', 'Italy'),

(67, 'Ricardo Adocicados', 'Janete Limeira', 'Av. Copacabana, 26'', 'Ric de Janeiro', 'Brazil'),

(68, 'Ratiesnake Canyon Grocery', 'Paula Milson', '2817 Milson', 'Salou', 'Salou', 'Brazil'),

(69, 'Romero y tomillo', 'Alejandra Camino', 'Gran Via, 'L' 'Madrid', 'Salou', 'Salou', 
        INSERT INTO 'Products' ('ProductID', 'ProductName', 'SupplierID', 'Ca (1, 'Chais', 1, 1, '10 boxes x 20 bags', 18), (2, 'Chang', 1, 1, '24 - 12 oz bottles', 19), (3, 'Aniseed Syrup', 1, 2, '12 - 550 ml bottles', 10), (4, 'Chef Anton\'s Gajun Seasoning', 2, 2, '48 - 6 oz jars', 22), (5, 'Chef Anton\'s Gumbo Mix', 2, 2, '36 boxes', 21.35), (6, 'Grandma\[ \] 's Boysenberry Spread', 3, 2, '12 - 8 oz jars', 25), (7, 'Uncle Bob\'s Organic Dried Pears', 3, 7, '12 - 1 lb pkgs.', 30), (8, 'Northwoods Cranberry Sauce', 3, 2, '12 - 12 oz jars', 40), (9, 'Mishi Kobe Niku', 4, 6, '18 - 500 g pkgs.', 97), (10, 'Ikura', 4, 8, '12 - 200 ml jars', 31), (11, 'Queso Cabrales', 5, 4, '1 kg pkg.', 21), (12, 'Queso Manchego La Pastora', 5, 4, '10 - 500 g pkgs.', 38), (13, 'Konbu', 6, 8, '2 kg box', 6), (14, 'Tofu', 6, 7, '40 - 100 g pkgs.', 23.25), (15, 'Genen Shouyu', 6, 2, '24 - 250 ml bottles', 15.5),
              INSERT INTO 'Products' ('ProductID', 'ProductName', 'SupplierID', 'CategoryID', 'Unit', 'Price') VALUES
```

```
(16. 'Pavlova', 7, 3, '32 - 500 g boxes', 17.45).
(17. 'Alice Mutton', 7, 6, '20 - 1 kg tins', 39).
(18. 'Carnarvon Tigers', 7, 8, '16 kg pkg., 62.5).
(19. 'Martime Chocolate Biscuits', 8, 3, '10 boxes x 12 pieces', 9.2),
(21. 'Sir Kodney's Scones', 8, 3, '24 - 500 g pkgs.', 21),
(22. 'Quataff)'s Kackerbad', 9, 7, 24 - 500 g pkgs.', 21),
(23. 'Tunmbrod', 9, 5, '12 - 250 g pkgs.', 24 - 500 g pkgs.', 21),
(24. 'Quaranaf Farntástica', 10, 1, '12 - 355 ml cans', 4.5),
(25. 'Nuhuca Nuß-Nouyat-Creme', 11, 3, '20 - 450 g glasses', 14),
(26. 'Quambra Gummibarchen', 11, 3, '100 - 220 g bags', 31.23),
(27. 'Schogdi Schokolade', 11, 3, '100 - 220 g bags', 31.23),
(28. 'Rôssle Sauerkraut', 12, 7, '25 - 525 g cans', 45.6),
(29. 'Thuringer Rostbratwurst', 12, 6, '50 bags x 30 sausgs', 123.79),
(30. 'Nord-Ost Matjeshering', 13, 8, '10 - 220 g glasses', 25.89),
(31. 'Gorgonzola Telino', 14, 4, '12 - 100 g pkgs', 12.5),
(32. 'Mascarpone Fabioli', 14, 4, '24 - 200 g pkgs', 32),
(33. 'Sacd-Ost Matjeshering', 13, 8, '10 - 220 g glasses', 25.89),
(34. 'Sasquatch Ale', 16, 1, '24 - 12 oz bottles', 14),
(35. 'Steeleye Stout', 16, 1, '24 - 12 oz bottles', 14),
(36. 'Inlagd Sill', 17, 8, '12 - 500 g pkgs.', 26),
(39. 'Côte de Blaye', 18, 1, '12 - 500 g pkgs.', 26),
(39. 'Côte de Blaye', 18, 1, '12 - 500 g pkgs.', 26),
(39. 'Côte de Blaye', 18, 1, '12 - 50 d ptrles', 18),
(41. 'Jack's New England Clam Chowder', 19, 8, '12 - 12 oz cans', 9.65),
(42. 'Singaporean Hokkien Fried Mee', 20, 5, '32 - 1 kg pkgs.', 14),
(43. 'Shorton Crab Meat', 19, 8, '24 - 4 oz tins', 18.4),
(44. 'Gula Malacca', 20, 2, '20 - 2 kg bags', 19.45),
(45. 'Kspeesild', 21, 8, '1k pkg., '12.75),
(47. 'Kaanse kocken', 22, 3, '10 - 4 oz boxes', 9.5),
(48. 'Chocolade', 22, 3, '10 pkgs.', 12.75),
(49. 'Waxilaku', 23, 3, '24 - 50 g pkgs.', 20),
(50. 'Vaukionen suklaa', 23, 3, '12 - 100 g bars', 16.25),
(51. 'Wanjimp Dried Apples', 24, 7, '50 - 300 g pkgs.', 33),
(53. 'Parth Pasties', 24, 6, '48 pieces', 3, 3.9,
(54. 'Yourdier', 27, 2, '15 - 625 g jars', 43.9),
(65. 'Noucis
      (77, 'Original Frankfurter grüne Soße', 12, 2, '12 boxes', 13);
     INSERT INTO Sales (SalesID, SalesRepID, ProductID, CustomerID, SalesAmount, SalesDate) VALUES
     (1, 4, 35, 10, 5000.00, '2023-08-05'),
(2, 4, 22, 45, 3500.00, '2023-08-06'),
      (3, 5, 51, 18, 4500.00, '2023-08-07'),
(4, 5, 17, 23, 5500.00, '2023-08-10'),
     (5, 6, 28, 39, 6000.00, '2023-08-12'), (6, 6, 67, 74, 4500.00, '2023-08-14'), (7, 7, 13, 5, 7000.00, '2023-08-15'), (8, 7, 46, 62, 4800.00, '2023-08-16'),
      (9, 11, 33, 31, 5500.00, '2023-08-17'),
(10, 11, 58, 52, 6300.00, '2023-08-18'),
(11, 12, 41, 61, 4800.00, '2023-08-19'),
     (11, 12, 41, 61, 4800.00, '2023-08-19'), (12, 12, 16, 28, 4200.00, '2023-08-21'), (13, 13, 74, 83, 5000.00, '2023-08-22'), (14, 13, 62, 51, 4700.00, '2023-08-23'), (15, 14, 25, 8, 5500.00, '2023-08-24'), (16, 14, 55, 35, 6000.00, '2023-08-25'), (17, 15, 48, 59, 4800.00, '2023-08-26'), (18, 15, 60, 72, 5300.00, '2023-08-27');
     #Example1
     SELECT E.FirstName, E.LastName, E.Salary, D.DeptName
    FROM Employees E
INNER JOIN Department D ON E.DeptID = D.DeptID
     WHERE D.DeptName = 'Sales' AND E.Salary >
     select FirstName
     from Employees
     where Salary between 40000 and 60000;
     SELECT E.FirstName, E.LastName, E.HireDate, D.DeptName
     FROM Employees E
     INNER JOIN Department D ON E.DeptID = D.DeptID
     WHERE D.DeptName = 'Marketing' AND E.Salary >= 60000
    ORDER BY HireDate:
     #Example4
     SELECT SalesAmount, CustomerName FROM SALES
     right join CUSTOMERS
     on sales.CustomerID = Customers.CustomerID
```

```
where SALES.SalesAmount>1000 AND SALES.SALESDATE >= '2023-08-01'
ORDER BY SALES.SALESDATE ASC;
#Example5
SELECT e.FirstName, e.LastName, d.DeptName
FROM Employees e
INNER JOIN department d ON e.DeptID = d.DeptID;
#Example6
 select products.productID, productName, SUM(salesAmount) AS total_sales
FROM Products
 inner join sales
on sales.productID = products.productID
WHERE salesdate BETWEEN '2024-04-01' AND '2024-06-30'
GROUP BY productID, productName;
#Example7
#EXAMPLEY

select e.FirstName, e.salary

from Employees e

JOIN (SELECT deptID , AVG(Salary) as AvgSalary

FROM Employees
GROUP BY deptID) AS DeptAvg
ON e.deptID = DeptAvg.deptID
WHERE e.Salary > DeptAvg.AvgSalary;
\texttt{\#Example8} \\ \textbf{SELECT} \ e.FirstName, \ e.LastName, \ \textbf{SUM}(s.SalesAmount) \ \textbf{AS} \ TotalSales, \ t.Target
FROM Employees e

JOIN Sales s ON e.EmployeeID = s.SalesRepID

JOIN Targets t ON e.EmployeeID = t.SalesRepID
WHERE YEAR(s.SalesDate) = 2023
GROUP BY e.EmployeeID
HAVING SUM(s.SalesAmount) > t.Target
ORDER BY TotalSales DESC
LIMIT 5;
```