1. **create a database called 'assignment' (Note please do the assignment tasks in this database)**

create database assignment;

**2. Create the tables from assignment\_tables.sql and enter the records as specified in it.**

show tables;

|  |
| --- |
| city |
| employee |
| favauthors |
| favbooks |
| products |
| station |
| stock |
| suppliers |

create table employee (empid integer, fname varchar(30), lname varchar(30), deptno tinyint, salary decimal(10,2));

insert into employee values(100,'Jon','Hamm',10,2000);

insert into employee values(200,'Tom','Cruise', 10, 3000), (300,'Hugh','Laurie',20,7500),

(400,'Tom','Hanks',30,750);

insert into employee values(500,'Johnny','Depp', 20, 1300),

(600,'Hugh','Grant',30,850),

(700,'Ben','Affleck',30,75),

(800,'George','Clooney',10,10000);

insert into employee values(900,'Henry',Null, 10, 3000),

(1000,'Gregory','House',20,3500);

insert into employee values(1100,'Jean','Hackman',10,2700);

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 100 | Jon | Hamm | 10 | 2000.00 |
| 200 | Tom | Cruise | 10 | 3000.00 |
| 75 | Hugh | Laurie | 20 | 7500.00 |
| 133 | Tom | Hanks | 30 | 750.00 |
| 125 | Johnny | Depp | 20 | 1300.00 |
| 200 | Hugh | Grant | 30 | 850.00 |
| 233 | Ben | Affleck | 30 | 75.00 |
| 800 | George | Clooney | 10 | 10000.00 |
| 900 | Henry |  | 10 | 3000.00 |
| 250 | Gregory | House | 20 | 3500.00 |
| 1100 | Jean | Hackman | 10 | 2700.00 |

CREATE TABLE `station` (

`id` int(11) DEFAULT NULL,

`city` varchar(21) DEFAULT NULL,

`state` char(4) DEFAULT NULL,

`lat\_n` float(7,2) DEFAULT NULL,

`long\_w` float(7,2) DEFAULT NULL

) ;

**3. Create a table called authors with the following columns authorid , name**

**- choose appropriate datatypes for the columns**

**a) Insert the following data into the table**

**1. J K Rowling**

**2. Thomas Hardy**

**3. Oscar Wilde**

**4. Sidney Sheldon**

**5. Alistair Maclean**

**6. Jane Autsen**

create table authors(authorid int,name varchar(30));

insert into authors values(1,'JK Rowling');

insert into authors values(2,'Thomas Hardy'),

(3,'Oscar Wilde'),

(4,'Sidney Sheldon'),

(5,'Alistar Maclean'),

(6,'Jane Austen');

|  |  |
| --- | --- |
| 1 | JK Rowling |
| 2 | Thomas Hardy |
| 3 | Oscar Wilde |
| 4 | Sidney Sheldon |
| 5 | Alistar Maclean |
| 6 | Jane Austen |

**b) Change 'Alistair Maclean' to 'Alastair McNeal'**

set sql\_safe\_updates=0;

update authors set name='Alastair McNeal' where authorid=5;

select \* from authors;

|  |  |
| --- | --- |
| 1 | JK Rowling |
| 2 | Thomas Hardy |
| 3 | Oscar Wilde |
| 4 | Sidney Sheldon |
| 5 | Alastair McNeal |
| 6 | Jane Austen |

**4. Create a table called Books with the following columns bookid, title, authorid**

**- choose appropriate datatypes for the columns**

**a) Insert the following records**

**1. Harry Potter and the Philosopher's Stone,1**

**2. Harry Potter and the Chamber of Secrets,1**

**3. Harry Potter and the Half-Blood Prince,1**

**4. Harry Potter and the Goblet of Fire,1**

**5. Night Without End,5**

**6. Fear is the Key,5**

**7. Where Eagles Dare,5**

**8. Sense and Sensibility,6**

**9. Pride and Prejudice,6**

**10. Emma,6**

**11. Random Book,22**

create table Books(Bookid int,title varchar(100),authorid int);

insert into Books values(1,'Harry Potter and the Philosophers Stone',1),

(2,'Harry Potter and the Chamber of Secrets',1),

(3,'Harry Potter and the Half-blood Prince',1);

insert into Books values(4,'Harry Potter and the Goblet of Fire',1),

(5,'Night Without End',5),

(6,'Fear is the Key',5),

(7,'Where Eagles Dare',5),

(8,'Sense and Sensibility',6);

insert into Books values(9,'Pride and Prejudice',6),

(10,'Emma',6),

(11,'Random Book',22);

|  |  |  |
| --- | --- | --- |
| 1 | Harry Potter and the Philosophers Stone | 1 |
| 2 | Harry Potter and the Chamber of Secrets | 1 |
| 3 | Harry Potter and the Half-blood Prince | 1 |
| 4 | Harry Potter and the Goblet of Fire | 1 |
| 5 | Night Without End | 5 |
| 6 | Fear is the Key | 5 |
| 7 | Where Eagles Dare | 5 |
| 8 | Sense and Sensibility | 6 |
| 9 | Pride and Prejudice | 6 |
| 10 | Emma | 6 |
| 11 | Random Book | 22 |

**b) Delete 'Random Book' from the table.**

delete from Books where Bookid=11;

select \* from Books;

|  |  |  |
| --- | --- | --- |
| 1 | Harry Potter and the Philosophers Stone | 1 |
| 2 | Harry Potter and the Chamber of Secrets | 1 |
| 3 | Harry Potter and the Half-blood Prince | 1 |
| 4 | Harry Potter and the Goblet of Fire | 1 |
| 5 | Night Without End | 5 |
| 6 | Fear is the Key | 5 |
| 7 | Where Eagles Dare | 5 |
| 8 | Sense and Sensibility | 6 |
| 9 | Pride and Prejudice | 6 |
| 10 | Emma | 6 |

**5. Rename the table Books to Favbooks and Authors to Favauthors.**

rename table Books to Favbooks;

rename table authors to favauthors;

**6. Create the following tables. Use auto increment wherever applicable**

**a. Products**

**product\_id - primary key**

**product\_name - cannot be null and only unique values are allowed**

**description**

**supplier\_id - foreign key of supplier table**

**b. Suppliers**

**supplier\_id - primary key**

**supplier\_name**

**location**

**c. Stock**

**id - primary key**

**product\_id - foreign key of product table**

**balance\_stock**

create table suppliers(supplierid int primary key auto\_increment,suppliername varchar(30),location varchar(100));

create table products(productid int primary key,productname varchar(20) not null unique,description varchar(50),supplierid int,foreign key(supplierid) references suppliers(supplierid) on delete cascade on update cascade);

create table stock(id int primary key,productid int,balancestock int,foreign key(productid) references products(productid) on delete cascade on update cascade);

**7. Enter some records into the three tables.**

insert into suppliers values(1,'Andrews','Hyderabad');

insert into suppliers values(2,'Gopinath','Mumbai');

insert into suppliers values(3,'Lakshman','Hyderabad');

insert into suppliers values(4,'Jai','Guntur');

select \* from suppliers;

|  |  |  |
| --- | --- | --- |
| 1 | Andrews | Hyderabad |
| 2 | Gopinath | Mumbai |
| 3 | Lakshman | Hyderabad |
| 4 | Jai | Guntur |
|  |  |  |

insert into products values(1,'Nivea','foam',1);

insert into products values(10,'Gillete','sfoam',1);

select \* from products;

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | Nivea | foam | 1 |
| 10 | Gillete | sfoam | 1 |

insert into stock values(1,1,20);

insert into stock values(2,1,30);

|  |  |  |
| --- | --- | --- |
| 1 | 1 | 20 |
| 2 | 1 | 30 |
|  |  |  |

**8. Modify the supplier table to make supplier name unique and not null.**

alter table suppliers modify suppliername varchar(30) not null unique;

**9. Modify the emp table as follows**

**a. Add a column called deptno**

**b. Set the value of deptno in the following order**

**deptno = 20 where emp\_id is divisible by 2**

**deptno = 30 where emp\_id is divisible by 3**

**deptno = 40 where emp\_id is divisible by 4**

**deptno = 50 where emp\_id is divisible by 5**

**deptno = 10 for the remaining records.**

alter table employee add column deptno int;

select \* from employee;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 100 | Jon | Hamm | 2000.00 |  |
| 200 | Tom | Cruise | 3000.00 |  |
| 75 | Hugh | Laurie | 7500.00 |  |
| 133 | Tom | Hanks | 750.00 |  |
| 125 | Johnny | Depp | 1300.00 |  |
| 200 | Hugh | Grant | 850.00 |  |
| 233 | Ben | Affleck | 75.00 |  |
| 800 | George | Clooney | 10000.00 |  |
| 900 | Henry |  | 3000.00 |  |
| 250 | Gregory | House | 3500.00 |  |
| 1100 | Jean | Hackman | 2700.00 |  |

update employee set deptno=20 where empid=100;

update employee set deptno=20 where empid=200;

update employee set deptno=20 where empid=75;

update employee set deptno=30 where empid=133;

update employee set deptno=30 where empid=125;

update employee set deptno=30 where empid=200;

update employee set deptno=40 where empid=233;

update employee set deptno=40 where empid=800;

update employee set deptno=50 where empid=900;

update employee set deptno=50 where empid=250;

select \* from employee;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 100 | Jon | Hamm | 2000.00 | 20 |
| 200 | Tom | Cruise | 3000.00 | 30 |
| 75 | Hugh | Laurie | 7500.00 | 20 |
| 133 | Tom | Hanks | 750.00 | 30 |
| 125 | Johnny | Depp | 1300.00 | 30 |
| 200 | Hugh | Grant | 850.00 | 30 |
| 233 | Ben | Affleck | 75.00 | 40 |
| 800 | George | Clooney | 10000.00 | 40 |
| 900 | Henry |  | 3000.00 | 50 |
| 250 | Gregory | House | 3500.00 | 50 |
| 1100 | Jean | Hackman | 2700.00 |  |
|  |  |  |  | 20 |

update employee set deptno=10 where empid=1100;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 100 | Jon | Hamm | 2000.00 | 10 |
| 200 | Tom | Cruise | 3000.00 | 30 |
| 75 | Hugh | Laurie | 7500.00 | 20 |
| 133 | Tom | Hanks | 750.00 | 30 |
| 125 | Johnny | Depp | 1300.00 | 30 |
| 200 | Hugh | Grant | 850.00 | 30 |
| 233 | Ben | Affleck | 75.00 | 40 |
| 800 | George | Clooney | 10000.00 | 40 |
| 900 | Henry |  | 3000.00 | 50 |
| 250 | Gregory | House | 3500.00 | 50 |
| 1100 | Jean | Hackman | 2700.00 | 10 |
|  |  |  |  | 20 |

**b. Set the value of deptno in the following order**

**deptno = 20 where emp\_id is divisible by 2**

**deptno = 30 where emp\_id is divisible by 3**

**deptno = 40 where emp\_id is divisible by 4**

**deptno = 50 where emp\_id is divisible by 5**

**deptno = 10 for the remaining records.**

update employee set empid=empid/2 where deptno=20;

update employee set empid=empid/3 where deptno=30;

update employee set empid=empid/4 where deptno=40;

update employee set empid=empid/5 where deptno=50;

select \* from employee;

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 100 | Jon | Hamm | 2000.00 | 10 |
| 67 | Tom | Cruise | 3000.00 | 30 |
| 38 | Hugh | Laurie | 7500.00 | 20 |
| 44 | Tom | Hanks | 750.00 | 30 |
| 42 | Johnny | Depp | 1300.00 | 30 |
| 67 | Hugh | Grant | 850.00 | 30 |
| 58 | Ben | Affleck | 75.00 | 40 |
| 200 | George | Clooney | 10000.00 | 40 |
| 180 | Henry |  | 3000.00 | 50 |
| 50 | Gregory | House | 3500.00 | 50 |
| 1100 | Jean | Hackman | 2700.00 | 10 |

**10. Create a unique, hash index on the emp\_id column.**

create index hidx on employee(empid);

|  |  |  |
| --- | --- | --- |
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