NATIONAL INSTITUTE OF TECHNOLOGY
JAMSHEDPUR

MILITARY DATABASE MANAGEMENT PROJECT

DEPARTMENT OF COMPUTER SCIENCE

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2019UGCS037

Problem Statement :-

In this project, we have designed a database management system to store information about the Indian Military. The database will contain important information about the Army and will be accessible to Army Officials and the Government.

This database will contain the personal details of the soldiers, posting of soldiers, information about the various battalions of the Army, inventory list and medical supplies of military bases, military vehicles, information about soldiers martyred during the war, awards and honors conferred upon the soldiers for their contributions on and off the battlefield, etc.

This database management system will help the Government and the Military Administration to access various types of information quickly and provide resources to the military on time. Assignment of troops to the warfront and formation of special task forces can be done quickly. They can keep track of the weapons and supplies during wartime and assess how many more weapons will be needed. They can efficiently find soldiers who are currently serving in a particular regiment and also the soldiers who have served in previous operations.

Contents:

Tables :-

1. SOLDIER

Attribute	Datatype	Constraints and Characteristics
SoldierID	VARCHAR2(20)	Primary key
Sname	VARCHAR2(20)	Not null
DOB	DATE	Not null
DOJ	DATE	Not null
Height	INT	Not null
Weight	INT	Not null
Gender	CHAR	Not null
District	VARCHAR2(20)	Foreign key, Not null
RegimentCode	VARCHAR2(20)	Foreign key, Not null
OperationCode	VARCHAR2(20)	Foreign key, Not null
Srank	VARCHAR2(20)	Foreign key, Not null

2. REGIMENT

Attribute	Datatype	Constraints and Characteristics
RegimentCode	VARCHAR2(20)	Primary key
Rname	VARCHAR2(20)	Not null
HQCity	VARCHAR2(20)	Not null
CurrStrength	INT	Not null

MaxStrength	INT	Not null
CommanderID	VARCHAR2(20)	Not null

3. LOCATION

Attribute	Datatype	Constraints and Characteristics
District	VARCHAR2(20)	Primary key
State	VARCHAR2(20)	Not null
Country	VARCHAR2(20)	Not null

4. FAMILY

Attribute	Datatype	Constraints and Characteristics
FatherName	VARCHAR2(20)	Primary key(1)
SoldierID	VARCHAR2(20)	Primary key(2), Foreign key
Children	INT	-
Marital Status	CHAR	Not null

5. POSTING

Attribute	Datatype	Constraints and Characteristics
FromDate	DATE	Not null
TillDate	DATE	Not null
SoldierID	VARCHAR2(20)	Foreign key, not null
District	VARCHAR2(20)	Foreign key, not null

6. MEDALS

Attribute	Datatype	Constraints and Characteristics
MedalID	VARCHAR2(20)	Primary key
MedalName	VARCHAR2(20)	Not null
Prize	INT	Not null

7. HONORS

Attribute	Datatype	Constraints and Characteristics
MedalID	VARCHAR2(20)	Foreign key, Not null
SoldierID	VARCHAR2(20)	Foreign key, Not null

8. SALARY

Attribute	Datatype	Constraints and Characteristics
sRank	VARCHAR2(20)	Primary key
Salary	INT	Not null

9. WEAPONS_INVENTORY

Attribute	Datatype	Constraints and Characteristics
RegimentCode	VARCHAR2(20)	Primary key(1), Foreign key
WeaponID	VARCHAR2(20)	Primary key(2), Foreign key
Quantity	INT	Not null

10. VEHICLE_INVENTORY

Attribute	Datatype	Constraints and Characteristics
RegimentCode	VARCHAR2(20)	Primary key(1), Foreign key
VehicleID	VARCHAR2(20)	Primary key(2), Foreign key
Quantity	INT	Not null

11. EQUIPMENTS_INVENTORY

Attribute	Datatype	Constraints and Characteristics
RegimentCode	VARCHAR2(20)	Primary key(1), Foreign key
EquipmentID	VARCHAR2(20)	Primary key(2), Foreign key
Quantity	INT	Not null

12. WEAPON

Attribute	Datatype	Constraints and Characteristics
WeaponID	VARCHAR2(20)	Primary key
Wname	VARCHAR2(20)	Not null
Wtype	VARCHAR2(20)	Not null

13. VEHICLE

Attribute	Datatype	Constraints and Characteristics
VehicleID	VARCHAR2(20)	Primary key
Vname	VARCHAR2(20)	Not null
Vtype	VARCHAR2(20)	Not null
FuelType	VARCHAR2(20)	Not null
ManYear	INT	Not null

14. EQUIPMENT

Attribute	Datatype	Constraints and Characteristics
EquipmentID	VARCHAR2(20)	Primary key
Ename	VARCHAR2(20)	Not null
Etype	VARCHAR2(20)	Not null

15. OPERATION

Attribute	Datatype	Constraints and Characteristics
OperationCode	VARCHAR2(20)	Primary key
Oname	VARCHAR2(20)	Not null
StartDate	DATE	Not null
EndDate	DATE	-
Outcome	VARCHAR2(20)	-

ER Model Assumptions-

- A Soldier can participate in at most one operation while an operation can involve multiple numbers of soldiers. Each Operation must involve some soldier hence Total participation.
- A Soldier is given a salary on the basis of his Rank/Position in the Army.
- Multiple Soldiers are grouped to form a regiment. Each Soldier must be a part of one or the other regiment hence there is a total participation of Soldiers in this relationship.
- A Soldier can be honored by multiple medals and a particular medal can be awarded to multiple numbers of Soldiers hence there is a M:N relationship between the two entities.
- Each Soldier has a family whose details are stored in the form of Father's name, Number of children and his/her marital status.
- There are three inventories which belong to a particular regiment namely – Weapons inventory, Vehicle Inventory and Equipment Inventory.
- A Soldier's posting information involves the period of time for which he/she was or will be posted in that particular region. The period of time for which the Soldier is posted will already be predefined by the Army (We already know the deadline date in the future).
- There is a Location table which will serve two purposes – Storing the detailed address of the Soldier and storing the detailed address of all the places where a Soldier has been posted.

Functional Dependencies and Primary Key

1) Soldier -

SoldierID -> {Sname, DOB, DOJ, Weight, Height, Gender, District, RegimentCode, Srank}

Since all the fields depend on SoldierID, $(SoldierID)^+$ -> R.

Hence, SoldierID is the Primary Key.

2) Regiment -

RegimentCode -> {Rname, HQCity, CurrStrength, MaxStrength, CommanderID} {Rname, HQCity} -> {CurrStrength, MaxStrength}

Since all the fields depend on RegimentCode,

$(RegimentCode)^+$ -> R. Hence, RegimentCode is Primary Key.

3) Location -

District -> {State, Country}

Since all the fields depend on District, $(District)^+$ -> R.

Hence, the District is Primary Key.

4) Family-

{FatherName, SoldierID} -> {Children, MaritalStatus}

Since all the fields depend on {FatherName, SoldierID},

$(\{FatherName, SoldierID\})^+$ -> R.

Hence, {FatherName, SoldierID} is Primary Key.

5) Posting relation

6) Medals

MedalID -> {MedalName, Prize}

Since all the fields depend on MedalID, $(MedalID)^+$ -> R.

Hence, MedalID is the Primary Key.

7) Honors relation

8) Salary

Srank->salary

Since all the fields depend on Srank, $(Srank)^+$ -> R.

Hence, Srank is Primary Key.

9) Weapons_Inventory

{RegimentCode, WeaponID} -> Quantity

Since all the fields depend on {RegimentCode, WeaponID},

$(\{RegimentCode, WeaponID\})^+$ -> R.

Hence, {RegimentCode, WeaponID} is Primary Key.

10) Vehicle_Inventory

{RegimentCode, VehicleID} -> Quantity

Since all the fields depend on {RegimentCode, VehicleID},

$(\{RegimentCode, VehicleID\})^+$ -> R.

Hence, {RegimentCode, VehicleID} is Primary Key.

11) Equipment_Inventory

{RegimentCode, VehicleID} -> Quantity

Since all the fields depend on {RegimentCode, VehicleID},

$(\{RegimentCode, VehicleID\})^+$ -> R.

Hence, {RegimentCode, VehicleID} is Primary Key.

12) Weapon

WeaponID->{Wname, Wtype}

Since all the fields depend on WeaponID, $(WeaponID)^+$ -> R.

Hence, WeaponID is the Primary Key.

13) Vehicle

VehicleID->{Vname, Vtype, FuelType, ManYear}

{Vname, Vtype} -> {FuelType, ManYear}

Since all the fields depend on VehicleID, $(VehicleID)^+$ -> R.

Hence, VehicleID is the Primary Key.

14) Equipment

EquipmentID -> {Ename, Etype}

Since all the fields depend on EquipmentID,

$(EquipmentID)^+$ -> R. Hence, EquipmentID is Primary Key.

15) Operations

OperationCode->{Oname, StartDate, EndDate,Outcome}

Since all the fields depend on OperationCode,

$(OperationCode)^+$ -> R. Hence, OperationCode is Primary Key.

Normalisation

1) **Soldier**

Primary key: SoldierID
All attributes depend on the SoldierID, hence the table is 2NF.
All attributes depend directly on SoldierID, hence the table is in 3NF.
All determinants(SoldierID) are candidate keys, hence the table is in BCNF.

2) **Regiment**

Primary key: RegimentCode
All attributes depend on the SoldierID, hence the table is 2NF.
All attributes depend directly on SoldierID, hence the table is in 3NF.
All determinants(SoldierID) are candidate keys, hence the table is in BCNF.

3) **Location**

Primary key: District
All attributes depend on the District, hence the table is 2NF.
All attributes depend directly on the District, hence the table is in 3NF. All determinants(District) are candidate keys, hence the table is in BCNF.z

4) **Family**

Primary key: {FatherName, SoldierID}
All attributes depend on the {FatherName, SoldierID}, hence the table is 2NF.
All attributes depend directly on {FatherName, SoldierID}, hence the table is in 3NF. All determinants({FatherName, SoldierID}) are candidate keys, hence the table is in BCNF.

5) **Posting**

Primary key: {SoldierID, District}
All attributes depend on the {SoldierID, District}, hence the table is 2NF. All attributes depend directly on {SoldierID, District}, hence the table is in 3NF.
All determinants({SoldierID, District}) are candidate keys, hence the table is in BCNF.

6) **Medals**

Primary key: MedalID
All attributes depend on the MedalID, hence the table is 2NF.
All attributes depend directly on MedalID, hence the table is in 3NF. All determinants(MedalID) are candidate keys, hence the table is in BCNF.

7) **Salary**

Primary key: sRank
All attributes depend on the sRank, hence the table is 2NF.
All attributes depend directly on sRank, hence the table is in 3NF.
All determinants(sRank) are candidate keys, hence the table is in BCNF.

8) Weapons inventory

Primary key: {RegimentCode, WeaponID}

All attributes depend on the {RegimentCode, WeaponID}, hence the table is 2NF. All attributes depend directly on {RegimentCode, WeaponID}, hence the table is in 3NF.

All determinants{RegimentCode, WeaponID} are candidate keys, hence the table is in BCNF.

9) Vehicle Inventory

Primary key: {RegimentCode, VehicleID}

All attributes depend on the {RegimentCode, VehicleID}, hence the table is 2NF. All attributes depend directly on {RegimentCode, VehicleID}, hence the table is in 3NF.

All determinants{RegimentCode, VehicleID} are candidate keys, hence the table is in BCNF.

10) Equipment inventory

Primary key: {RegimentCode, EquipmentID}

All attributes depend on the {RegimentCode, EquipmentID}, hence the table is 2NF. All attributes depend directly on {RegimentCode, EquipmentID }, hence the table is in 3NF.

All determinants{RegimentCode, EquipmentID } are candidate keys, hence the table is in BCNF.

11) Weapon

Primary key: WeaponID

All attributes depend on the WeaponID, hence the table is 2NF.

All attributes depend directly on WeaponID, hence the table is in 3NF. All determinants (WeaponID) are candidate keys, hence the table is in BCNF.

12) Vehicle

Primary key: VehicleID

All attributes depend on the VehicleID, hence the table is 2NF.

All attributes depend directly on VehicleID, hence the table is in 3NF. All determinants (VehicleID) are candidate keys, hence the table is in BCNF.

13) Equipment

Primary key: EquipmentID

All attributes depend on the EquipmentID, hence the table is 2NF.

All attributes depend directly on EquipmentID, hence the table is in 3NF. All determinants (EquipmentID) are candidate keys, hence the table is in BCNF.

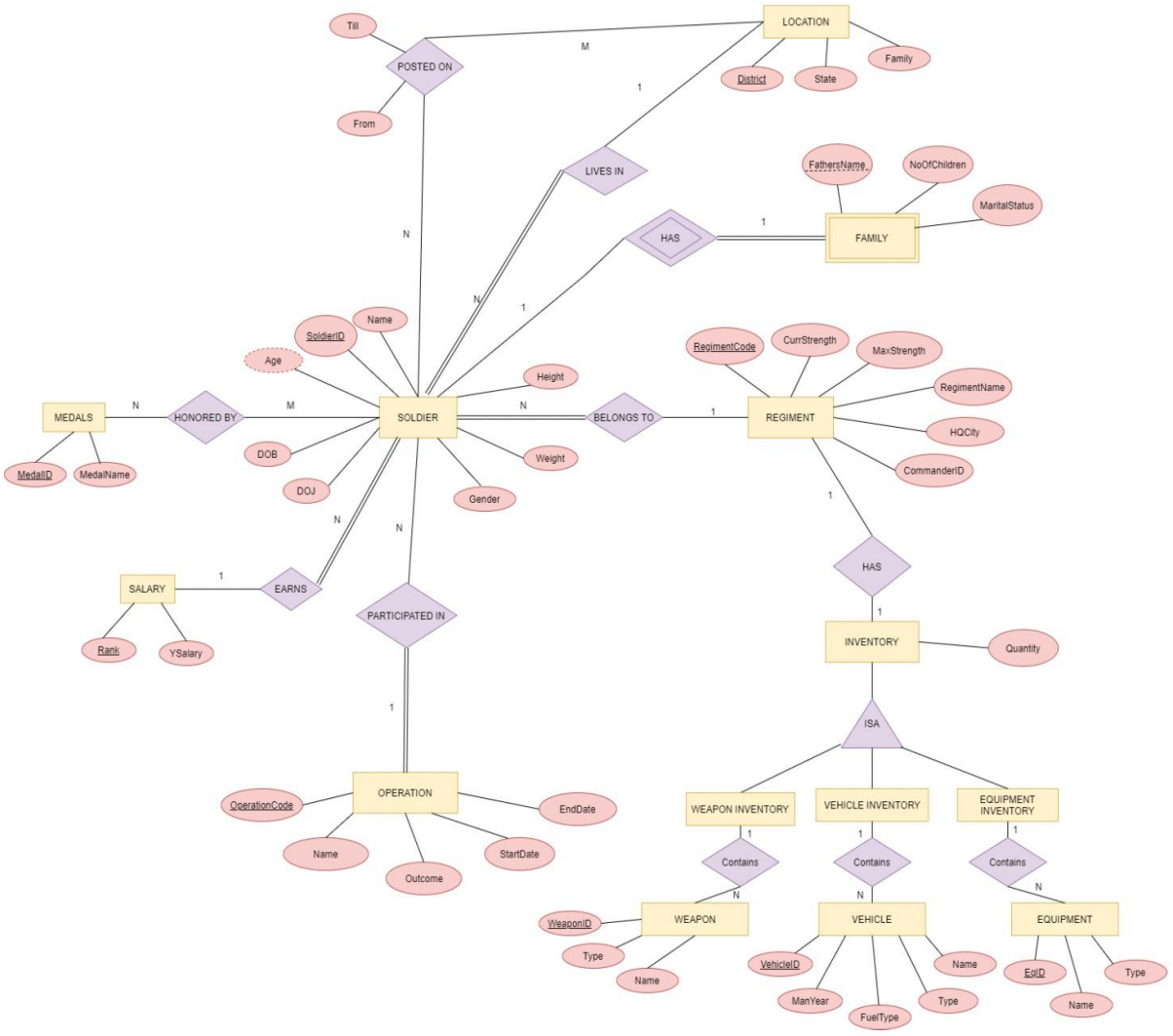
14) Operations

Primary key: OperationCode

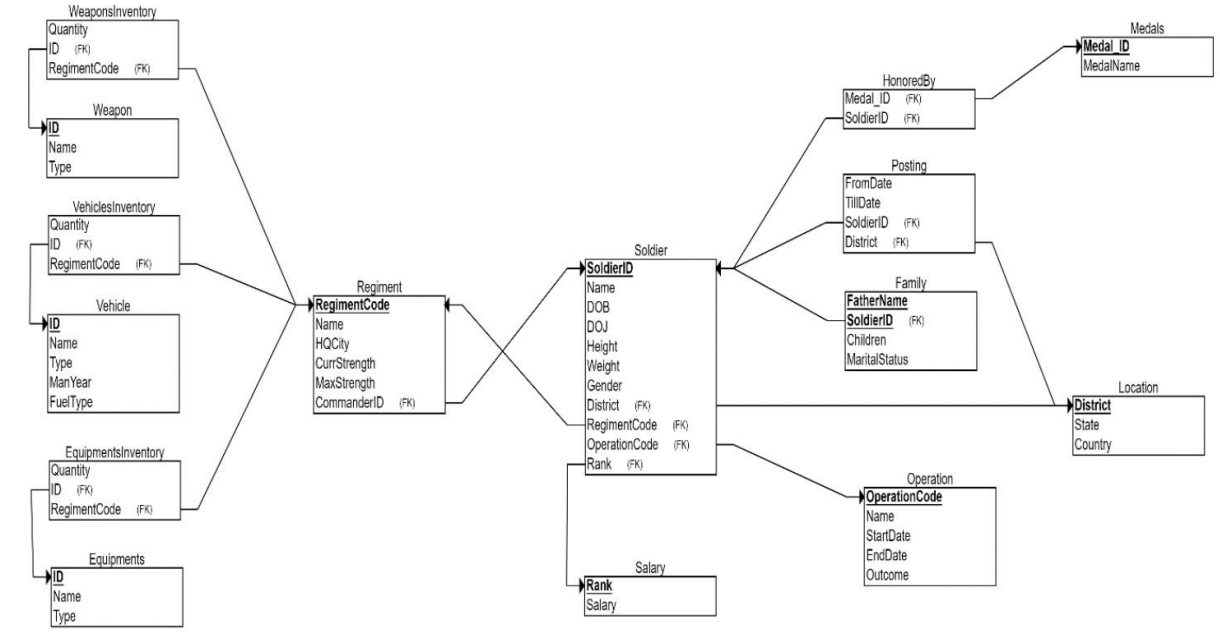
All attributes depend on the OperationCode, hence the table is 2NF.

All attributes depend directly on OperationCode, hence the table is in 3NF. All determinants (OperationCode) are candidate keys, hence the table is in BCNF.

ER Diagram :-


Till
POSTED ON
From
LOCATION
District
State
Family
M
1
LIVES IN
N
N
1
FathersName
NoOfChildren
MaritalStatus
HAS
1
FAMILY
Name
SoldierID
Age
Height
RegimentCode
CurrStrength
MaxStrength
RegimentName
HQCity
CommanderID
MEDALS
N
HONORED BY
M
SOLDIER
N
BELONGS TO
1
REGIMENT
MedalID
MedalName
DOB
DOJ
Weight
Gender
N
N
1
SALARY
1
EARNS
PARTICIPATED IN
HAS
1
INVENTORY
Quantity
Rank
YSalary
ISA
1
OPERATION
OperationCode
EndDate
Name
Outcome
StartDate
WEAPON INVENTORY
VEHICLE INVENTORY
EQUIPMENT INVENTORY
1
1
1
Contains
Contains
Contains
N
N
N
WeaponID
WEAPON
VEHICLE
EQUIPMENT
Type
Name
VehicleID
ManYear
FuelType
Name
Type
EqID
Name
Type

Relational Schema with Normalised Tables :-



SQL Code:

/* CREATE ALL THE TABLES */

```
create table regiment (
   regimentcode varchar(20) Primary key,
   rname varchar(20) not null,
   hqcity varchar(20) not null,
   currstrength int not null,
   maxstrength int not null,
   commanderid varchar(20) not null
);

create table location (
   district varchar(20) primary key,
   state varchar(20) not null,
   country varchar(20) not null
);

create table salary(
   sRank varchar(20) Primary key,
   salary INT not null
);

create table operation (
   operationcode varchar(20) primary key,
   oname varchar(20) not null,
   startdate date not null,
   enddate date not null,
   outcome varchar(20) not null
);

create table soldier (
   soldierid varchar(20) Primary key,
   sname varchar(20) not null,
   dob date not null,
   doj date not null,
   height int not null,
   weight int not null,
   gender char not null,
```

```
   district varchar(20) not null,
   regimentcode varchar(20),
   operationcode varchar(20),
   srank varchar(20) not null,
   foreign key(district) references location(district),
   foreign key (regimentcode) references regiment(regimentcode),
   foreign key (operationcode) references
operation(operationcode),
   foreign key (srank) references salary(srank)
);

create table weapon (
   weaponid varchar(20) Primary key,
   wname varchar(20) not null,
   wtype varchar(20) not null
);

create table vehicle (
   vehicleid varchar(20) Primary key,
   vname varchar(20) not null,
   vtype varchar(20) not null,
   fueltype varchar(20) not null,
   manyear int not null
);

create table equipment (
   equipmentid varchar(20) Primary key,
   ename varchar(20) not null,
   etype varchar(20) not null
);

create table weaponsinventory (
   quantity int not null,
   regimentcode varchar(20) not null,
   weaponid varchar(20) not null,
   foreign key (regimentcode) references regiment
(regimentcode),
   foreign key (weaponid) references weapon(weaponid)
);

create table vehiclesinventory (
   quantity int not null,
```

```
   regimentcode varchar(20) not null,
   vehicleid varchar(20) not null,
   foreign key (regimentcode) references regiment
(regimentcode),
   foreign key (vehicleid) references vehicle(vehicleid)
);

create table equipmentsinventory (
   quantity int not null,
   regimentcode varchar(20) not null,
   equipmentid varchar(20) not null,
   foreign key (regimentcode) references regiment
(regimentcode),
   foreign key (equipmentid) references equipment(equipmentid)
);

create table medals (
   medalid varchar(20) primary key,
   medalname varchar(20) not null,
   prize INT not null
);

create table honors (
   medalid varchar(20) not null,
   soldierid varchar(20) not null,
   foreign key (medalid) references medals(medalid),
   foreign key (soldierid) references soldier (soldierid)
);

create table posting (
   pfrom date not null,
   ptill date not null,
   soldierid varchar(20) not null,
   district varchar(20) not null,
   foreign key(soldierid) references soldier(soldierid),
   foreign key(district) references location(district)
);

create table family (
   fathername varchar(20) not null,
   soldierid varchar(20) not null,
   children int not null,
```

```
   maritalstatus char not null,
   foreign key (soldierid) references soldier (soldierid),
   primary key(soldierid, fathername)
);
```

/* INSERT VALUES IN THE TABLE */

```
INSERT INTO
   regiment
VALUES
   (
       "R01", "Kumaon Regiment", "Ranikhet",57,85, "S12"
   ),
   ( "R02", "Rajput Regiment", "Fatehgarh",61,100, "S05"
   ),
   ( "R03", "Sikh Regiment", "Ramgarh", 75, 120, "S10"
   ),
   ( "R04", "Jat Regiment", "Bareilly", 51, 95, "S18"
   );

INSERT INTO
   operation
VALUES
   ( "O01", "Operation Sahyog", '2018-09-24', '2018-11- 17',
"Successful"
   ),
   ( "O02", "Operation Calm Down", '2016-05-11', '2016- 08-02',
"Successful"
   ),
   ( "O03", "Operation All Out", '2015-06-13', '2015-07- 22',
"Unsuccessful"
   ),
   ( "O04", "Operation Maitri", '2015-02-02', '2015-05- 07',
"Successful"
   );

INSERT INTO
   salary
VALUES
   ("Soldier", 25000),
```

```
   ("Major", 58000),
   ("Captain", 47500),
   ("Colonel", 65000),
   ("Brigadier", 73000),
   ("Lieutenant", 35000);

INSERT INTO
   location
VALUES
   ("Lucknow", "Uttar Pradesh", "India"),
   ("Bhopal", "Madhya Pradesh", "India"),
   ("Meerut", "Uttar Pradesh", "India"),
   ("Patna", "Bihar", "India"),
   ("Jalandhar", "Punjab", "India"),
   ("Almora", "Uttarakhand", "India"),
   ("Chandigarh", "Punjab", "India"),
   ("Tehri", "Uttarakhand", "India"),
   ("Indore", "Madhya Pradesh", "India"),
   ("Allahabad", "Uttar Pradesh", "India");

INSERT INTO
   soldier
VALUES
   ( "S01", "Arjun Pratap", '1987-12-12', '2009-03-13',
       176,
       72, 'M', "Bhopal", "R02", "O03", "Colonel"
   ),
   ( "S02", "Saurabh Pandit", '1980-02-15', '2008-12-09',
       179,
       73, 'M', "Meerut", "R02", "O02", "Soldier"
   ),
   ( "S03", "Shubham Verma", '1990-02-24', '2011-04-15',
       182,
       76, 'M', "Bhopal", "R01", "O01", "Soldier"
   ),
   ( "S04", "Mayank Kumvat", '1978-06-14', '2011-09-21',
       163,
       69, 'M', "Almora", "R03", "O01", "Lieutenant"
   ),
   ( "S05", "Satveer Thakur", '1980-04-20', '2004-10-19',
       162,
       65, 'M', "Jalandhar", "R02", "O03", "Major"
```

```
),
( "S06", "Hamid Ahmed", '1976-06-10', '2004-02-24',
    168,
    70, 'M', "Chandigarh", "R01", "O01", "Brigadier"
),
( "S07", "Ajay Singh", '1984-04-12', '2003-07-09',
    175,
    79, 'M', "Chandigarh", "R04", "O04", "Lieutenant"
),
( "S08", "Avantika Kulkarni", '1990-04-26', '2009-08-18',
    164,
    62, 'F', "Indore", "R04", "O02", "Soldier"
),
( "S09", "Abhishek Saxena", '1975-05-12', '2012-05-16',
    181,
    76, 'M', "Tehri", "R01", "O01", "Brigadier"
),
( "S10", "Rajveer Singh", '1969-02-15', '2000-03-25',
    173,
    70, 'M', "Allahabad", "R03", "O02", "Captain"
),
( "S11", "Karan Jagtap", '1988-02-05', '2011-09-02',
    167,
    70, 'M', "Allahabad", "R04", "O03", "Captain"
),
( "S12", "Vinay Kumar", '1972-07-07', '2004-04-01',
    169,
    65, 'M', "Meerut", "R01", "O04", "Colonel"
),
( "S13", "Rajat Talesra", '1976-09-19', '2007-10-24',
    172,
    76, 'M', "Patna", "R02", "O03", "Colonel"
),
( "S14", "Ankur Ranjan", '1969-10-11', '2001-07-22',
    169,
    64, 'M', "Almora", "R03", "O01", "Captain"
),
( "S15", "Disha Singh", '1983-09-18', '2008-02-28',
    165,
    65, 'F', "Lucknow", "R04", "O04", "Brigadier"
),
( "S16", "Niranjan Arya", '1971-12-04', '2010-10-21',
```

```
        171,
        69, 'M', "Lucknow", "R02", "O02", "Lieutenant"
    ),
    ( "S17", "Dheeru Sachdev", '1981-01-19', '2015-12-31',
        168,
        66, 'M', "Tehri", "R03", "O01", "Soldier"
    ),
    ( "S18", "Vipul Yadav", '1975-06-05', '2004-01-24',
        179,
        74, 'M', "Indore", "R04", "O03", "Major"
    ),
    ( "S19", "Brijmohan Singh", '1998-11-25', '2014-02-12',
        173,
        65, 'M', "Lucknow", "R01", "O04", "Soldier"
    ),
    ( "S20", "Harminder Kaur", '1971-12-17', '2015-11-25',
        165,
        62, 'F', "Patna", "R02", "O04", "Colonel"
    );

INSERT INTO
    weapon
VALUES
    ("W01", "Glock 17", "Pistol"),
    ("W02", "SPAS 15", "Shotgun"),
    ("W03", "Micro UZI", "SMG"),
    ("W04", "MP5", "SMG"),
    ("W05", "Steyr AUG", "AR"),
    ("W06", "AKM", "AR"),
    ("W07", "Barrett M95", "Sniper Rifle"),
    ("W08", "M4A1 Carbine", "AR"),
    ("W09", "Steyr SSG", "Sniper Rifle"),
    ("W10", "M249", "Machine Gun");

INSERT INTO
    vehicle
VALUES
    (  "V01",  "Force Gurkha",  "Ligh Utility",  "Petrol", 2001
    ),
    ("V02", "AL Stallion", "Carrier", "Diesel", 2008),
    (  "V03",  "Sisu Nasu",  "All Terrain",  "Diesel", 1999
    ),
```

```
   ("V04", "Isuzu F", "Carrier", "Diesel", 2007),
   (  "V05",  "Arjun MBT",  "Battle Tank",  "Petrol", 1990
   ),
   ("V06", "Ajeya", "Battle Tank", "Diesel", 1996),
   (  "V07",  "Sarath",  "Infantry combat",  "Diesel", 2011
   ),
   (  "V08",  "Mazda R1",  "Light Utility",  "Petrol", 2009
   );

INSERT INTO
   equipment
VALUES
   ("E01", "MKU Helmet", "Protective gear"),
   ("E02", "Kevlar Vest", "Protective gear"),
   ("E03", "Nigh Vision Goggle", "Utility"),
   ("E04", "HE Grenade", "Utility"),
   ("E05", "Health Pack", "Medicine"),
   ("E06", "First Aid Kit", "Medicine");

INSERT INTO
   weaponsinventory
VALUES
   (12, "R01", "W01"),
   (8, "R01", "W02"),
   (6, "R01", "W03"),
   (8, "R01", "W04"),
   (7, "R01", "W05"),
   (5, "R01", "W06"),
   (4, "R01", "W07"),
   (3, "R01", "W08"),
   (8, "R01", "W09"),
   (4, "R01", "W10"),
   (15, "R02", "W01"),
   (10, "R02", "W02"),
   (5, "R02", "W03"),
   (8, "R02", "W04"),
   (6, "R02", "W05"),
   (4, "R02", "W06"),
   (6, "R02", "W07"),
   (8, "R02", "W08"),
   (4, "R02", "W09"),
   (3, "R02", "W10"),
```

```
   (20, "R03", "W01"),
   (10, "R03", "W02"),
   (9, "R03", "W03"),
   (5, "R03", "W04"),
   (6, "R03", "W05"),
   (7, "R03", "W06"),
   (8, "R03", "W07"),
   (10, "R03", "W08"),
   (4, "R03", "W09"),
   (5, "R03", "W10"),
   (16, "R04", "W01"),
   (8, "R04", "W02"),
   (10, "R04", "W03"),
   (8, "R04", "W04"),
   (6, "R04", "W05"),
   (6, "R04", "W06"),
   (8, "R04", "W07"),
   (4, "R04", "W08"),
   (8, "R04", "W09"),
   (5, "R04", "W10");

INSERT INTO
   vehiclesinventory
VALUES
   (5, "R01", "V01"),
   (2, "R01", "V03"),
   (8, "R01", "V04"),
   (3, "R01", "V05"),
   (3, "R02", "V01"),
   (6, "R02", "V08"),
   (4, "R02", "V02"),
   (8, "R02", "V06"),
   (2, "R03", "V02"),
   (6, "R03", "V03"),
   (8, "R03", "V04"),
   (4, "R03", "V06"),
   (3, "R04", "V08"),
   (7, "R04", "V04"),
   (6, "R04", "V06"),
   (2, "R04", "V03");

INSERT INTO
```

```
   equipmentsinventory
VALUES
   (54, "R01", "E01"),
   (37, "R01", "E02"),
   (46, "R01", "E03"),
   (42, "R01", "E04"),
   (40, "R01", "E05"),
   (42, "R01", "E06"),
   (44, "R02", "E01"),
   (57, "R02", "E02"),
   (56, "R02", "E03"),
   (62, "R02", "E04"),
   (40, "R02", "E05"),
   (72, "R02", "E06"),
   (44, "R03", "E01"),
   (32, "R03", "E02"),
   (39, "R03", "E03"),
   (60, "R03", "E04"),
   (45, "R03", "E05"),
   (35, "R03", "E06"),
   (50, "R04", "E01"),
   (30, "R04", "E02"),
   (25, "R04", "E03"),
   (58, "R04", "E04"),
   (27, "R04", "E05"),
   (38, "R04", "E06");

INSERT INTO
   medals
VALUES
   ("M01", "Param Vir Chakra", 75000),
   ("M02", "Ashok Chakra", 65000),
   ("M03", "Kirti Chakra", 50000),
   ("M04", "Sarvottam Seva Medal", 42500),
   ("M05", "Uttam Seva Medal", 35550),
   ("M06", "Sena Medal", 15000);

INSERT INTO
   honors
VALUES
   ("M03", "S04"),
   ("M06", "S10"),
```

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   ("M01", "S01"),
   ("M02", "S12"),
   ("M03", "S05"),
   ("M01", "S10"),
   ("M03", "S18"),
   ("M02", "S19"),
   ("M05", "S10"),
   ("M04", "S18"),
   ("M01", "S18"),
   ("M06", "S01"),
   ("M02", "S03"),
   ("M05", "S05"),
   ("M01", "S07"),
   ("M04", "S08"),
   ("M02", "S09"),
   ("M04", "S20"),
   ("M06", "S16"),
   ("M05", "S04"),
   ("M06", "S03"),
   ("M02", "S15"),
   ("M03", "S03");

INSERT INTO
   posting
VALUES
   ('2017-10-23', '2020-10-22', "S01", "Lucknow"),
   ('2015-09-13', '2020-10-24', "S02", "Almora"),
   ('2016-07-02', '2020-08-10', "S03", "Tehri"),
   ('2017-11-11', '2020-11-12', "S04", "Meerut"),
   ('2015-10-07', '2020-11-09', "S05", "Patna"),
   ('2018-12-18', '2020-12-26', "S06", "Meerut"),
   ('2016-06-12', '2020-07-15', "S07", "Allahabad"),
   ('2015-10-13', '2020-11-20', "S08", "Patna"),
   ('2017-12-20', '2020-09-29', "S08", "Lucknow"),
   ('2015-11-09', '2020-06-06', "S09", "Lucknow"),
   ('2018-01-01', '2020-09-07', "S10", "Tehri"),
   ('2018-10-02', '2020-09-15', "S10", "Jalandhar"),
   ('2016-02-08', '2020-07-12', "S11", "Chandigarh"),
   ('2017-05-16', '2020-11-09', "S12", "Bhopal"),
   ('2015-12-01', '2020-05-19', "S12", "Allahabad"),
   ('2018-04-28', '2020-10-17', "S13", "Jalandhar"),
   ('2016-12-12', '2020-06-19', "S14", "Lucknow"),
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   ('2017-07-19', '2020-05-18', "S15", "Bhopal"),
   ('2018-06-21', '2020-08-08', "S15", "Almora"),
   ('2016-07-16', '2020-02-12', "S16", "Chandigarh"),
   ('2017-03-21', '2020-04-12', "S16", "Tehri"),
   ('2015-05-11', '2020-06-04', "S16", "Lucknow"),
   ('2018-10-24', '2020-06-15', "S17", "Meerut"),
   ('2017-08-16', '2020-11-11', "S18", "Almora"),
   ('2015-04-21', '2020-07-15', "S19", "Allahabad"),
   ('2016-01-16', '2020-11-13', "S20", "Lucknow");

INSERT INTO
   family
VALUES
   ("Kuwar Pratap", "S01", 1, 'Y'),
   ("Ashok Pandit", "S02", 0, 'N'),
   ("Rajeev Verma", "S03", 0, 'Y'),
   ("Manas Kumvat", "S04", 0, 'N'),
   ("Nilesh Thakur", "S05", 0, 'Y'),
   ("Ajaz Ahmed", "S06", 0, 'N'),
   ("Shantanu Singh", "S07", 2, 'Y'),
   ("Mahesh Kulkarni", "S08", 2, 'Y'),
   ("Prateek Saxena", "S09", 2, 'Y'),
   ("Aman Singh", "S10", 3, 'Y'),
   ("Arjun Jagtap", "S11", 1, 'Y'),
   ("Vijay Kumar", "S12", 0, 'N'),
   ("Naman Talesra", "S13", 0, 'Y'),
   ("Aditya Ranjan", "S14", 1, 'Y'),
   ("Akbar Singh", "S15", 3, 'Y'),
   ("Dhirendra Arya", "S16", 0, 'N'),
   ("Harshvardhan Sachdev", "S17", 2, 'Y'),
   ("Umesh Yadav", "S18", 1, 'Y'),
   ("Balkishore Singh", "S19", 1, 'Y'),
   ("Jaspreet Kaur", "S20", 2, 'Y');
```