create database research\_project;

use research\_project;

-- Funding Agencies Table

CREATE TABLE FundingAgency (

agency\_id INT PRIMARY KEY,

name VARCHAR(100) NOT NULL,

address VARCHAR(255)

);

-- Employees Table

CREATE TABLE Employee (

ssn CHAR(11) PRIMARY KEY, -- Format like '123-45-6789'

name VARCHAR(100) NOT NULL,

salary DECIMAL(10, 2)

);

-- Projects Table

CREATE TABLE Project (

project\_id INT PRIMARY KEY,

name VARCHAR(100) NOT NULL,

budget DECIMAL(12, 2),

duration\_years INT,

agency\_id INT,

manager\_ssn CHAR(11),

FOREIGN KEY (agency\_id) REFERENCES FundingAgency(agency\_id),

FOREIGN KEY (manager\_ssn) REFERENCES Employee(ssn),

UNIQUE (name, agency\_id) -- Project name is unique within an agency

);

-- Works\_On Table (Associative Table for Employee-Project many-to-many)

CREATE TABLE Works\_On (

ssn CHAR(11),

project\_id INT,

hours\_per\_week DECIMAL(4,1),

PRIMARY KEY (ssn, project\_id),

FOREIGN KEY (ssn) REFERENCES Employee(ssn),

FOREIGN KEY (project\_id) REFERENCES Project(project\_id)

);

-- FundingAgency data

INSERT INTO FundingAgency (agency\_id, name, address) VALUES

(1, 'ISRO', 'Antariksh Bhavan, Bangalore, India'),

(2, 'NASA', '300 E St SW, Washington, DC, USA'),

(3, 'DRDO', 'Metcalfe House, Delhi, India');

-- Employee data

INSERT INTO Employee (ssn, name, salary) VALUES

('101-11-1001', 'Ananya Reddy', 72000.00),

('102-22-2002', 'Rahul Verma', 85000.00),

('103-33-3003', 'Sneha Kapoor', 69000.00),

('104-44-4004', 'Amit Joshi', 76000.00);

-- Project data

INSERT INTO Project (project\_id, name, budget, duration\_years, agency\_id, manager\_ssn) VALUES

(501, 'Chandrayaan-3', 5500000.00, 3, 1, '101-11-1001'),

(502, 'Artemis I', 8000000.00, 4, 2, '102-22-2002'),

(503, 'Agni-V Upgrade', 4200000.00, 2, 3, '103-33-3003');

-- Works\_On data

INSERT INTO Works\_On (ssn, project\_id, hours\_per\_week) VALUES

('101-11-1001', 501, 20.0),

('102-22-2002', 502, 18.5),

('103-33-3003', 501, 10.0),

('104-44-4004', 503, 16.0);

