**CREATE TABLE STATEMENTS**

create table [Smith.Alumnus](

uID CHAR(8) NOT NULL,

alumFName VARCHAR(20),

alumLName VARCHAR(20),

alumDOB DATE,

alumCity VARCHAR(20),

alumBatch CHAR(10),

alumEmail VARCHAR(50),

alumGender VARCHAR(15),

constraint pk\_uid primary key(uID)

)

create table [Smith.Company](

compID CHAR(10) NOT NULL,

compName VARCHAR(50),

compType VARCHAR(50),

constraint pk\_compID primary key(compID)

)

create table [Smith.Project](

projID CHAR(10) NOT NULL,

projName VARCHAR(200),

projDesc VARCHAR(200),

projStartDate DATE,

projEndDate DATE,

constraint pk\_projID primary key(projID)

)

create table [Smith.Event](

eventID CHAR(10) NOT NULL,

eventName VARCHAR(50),

eventDate DATE,

constraint pk\_eventid primary key(eventID)

)

create table [Smith.Donate](

projID CHAR(10) NOT NULL,

uID CHAR(8) NOT NULL,

transID CHAR(10) NOT NULL,

donationAmount DECIMAL(10),

donationDate DATE,

constraint pk\_donate primary key (projID,uID),

constraint fk\_projid foreign key(projID)

references [Smith.Project](projID)

on update cascade on delete no action,

constraint fk\_uid foreign key(uID)

references [Smith.Alumnus](uID)

on update cascade on delete no action

)

create table [Smith.EventsAttendance](

uID CHAR(8) NOT NULL,

eventID CHAR(10) NOT NULL,

constraint pk\_attendance primary key(uID,eventID),

constraint fk\_euid foreign key(uID)

references [Smith.Alumnus](uID)

on update cascade on delete cascade,

constraint fk\_eventid foreign key(eventID)

references [Smith.Event](eventID)

on update cascade on delete cascade

)

create table [Smith.Work](

uID CHAR(8) NOT NULL,

compID CHAR(10) NOT NULL,

workStartDate DATE,

workEndDate DATE,

workPosition CHAR(50),

workLoc CHAR(20),

constraint pk\_work primary key (uID,compID),

constraint fk\_wuid foreign key(uID)

references [Smith.Alumnus](uID)

on update cascade on delete cascade,

constraint fk\_compid foreign key(compID)

references [Smith.Company](compID)

on update cascade on delete no action

)

create table [Smith.AlumnusSkill](

uID CHAR(8) NOT NULL,

skill VARCHAR(50) NOT NULL,

constraint pk\_skill primary key (uID,skill),

constraint fk\_auid foreign key(uID)

references [Smith.Alumnus](uID)

on update cascade on delete cascade

)

create table [Smith.Certification](

certID CHAR(10) NOT NULL,

uID CHAR(8) NOT NULL,

certName CHAR(50),

expiryDate DATE,

constraint pk\_certid primary key(certID),

constraint fk\_cuid foreign key(uID)

references [Smith.Alumnus](uID)

on update cascade on delete cascade

)

**DROP TABLE STATEMENTS**

DROP table [Smith.Certification]

DROP table [Smith.AlumnusSkill]

DROP table [Smith.EventsAttendance]

DROP table [Smith.Donate]

DROP table [Smith.Event]

DROP table [Smith.Work]

DROP table [Smith.Project]

DROP table [Smith.Company]

DROP table [Smith.Alumnus]

DROP view [Work\_Exp]

**CREATE VIEW STATEMENTS**

create view Work\_Exp as

select uID,compID,workStartDate,workEndDate, YEAR(workEndDate) - YEAR(workStartDate) as 'Work\_Experience'

from [Smith.Work]

**INSERT STATEMENTS**

insert into [Smith.Alumnus] values

(11778908,'Denise','Agarwal','7/25/1990','Seattle','2017','denise.agarwal@rhsmith.umd.edu','Female');

insert into [Smith.Alumnus] values

(11654328,'Yu','Chen','10/20/1994','Ohio','2016','yu.chen@rhsmith.umd.edu','Female');

insert into [Smith.Alumnus] values

(11768942,'John','Fouedje','6/16/1992','New York','2014','john.fouedje@rhsmith.umd.edu','Male');

insert into [Smith.Alumnus] values

(11892534,'Brian','Brown','8/28/1993','Washington','2016','brian.brown@rhsmith.umd.edu','Male');

insert into [Smith.Alumnus] values

(11679824,'Margaret','Jacob','8/12/1988','New Jersey','2011','margaret.jacob@rhsmith.umd.edu','Female');

insert into [Smith.Alumnus] values

(11298365,'Raymond','Ling','2/16/1985','Denver','2010','raymond.ling@rhsmith.umd.edu','Male');

insert into [Smith.Alumnus] values

(11172638,'Varsha','Singh','3/10/1992','Michigan','2016','varsha.singh@rhsmith.umd.edu','Female');

insert into [Smith.Alumnus] values

(11278634,'Charles','Penninger','7/10/1990','Ohio','2016','charles.penninger@rhsmith.umd.edu','Male');

insert into [Smith.Alumnus] values

(11678254,'Varun','Srinivasan','4/18/1980','Chicago','2010','varun.srinivasan@rhsmith.umd.edu','Male');

insert into [Smith.Alumnus] values

(11026354,'Laura','Sakaria','1/29/1991','Austin','2014','laura.sakaria@rhsmith.umd.edu','Female');

insert into [Smith.Company] values

('C1980','EY','Auditing');

insert into [Smith.Company] values

('C2987','Amazon.com','E-Commerce');

insert into [Smith.Company] values

('C863562','Deloitte LLP','Consulting');

insert into [Smith.Company] values

('S8426','Sony','Electronics');

insert into [Smith.Company] values

('M16725','HealthCare Solutions','Healthcare');

insert into [Smith.Company] values

('S9865','Goldman Sachs & Company','Business');

insert into [Smith.Project] values

('P1','University Ranking System','A website to rank the Universities in US as per their courses','11/2/2014','12/15/2014');

insert into [Smith.Project] values

('P50','Smith Alumni Management','A website to manage the data of Alumni who had IS major','10/15/2016','12/10/2016');

insert into [Smith.Project] values

('P20','IS Internships and career opportunities','A system to keep record of internships and job opportunities offered by different companies','10/20/2015','1/15/2016');

insert into [Smith.Project] values

('P100','Programming languages and tools','A website to give details about all the programming languages and different tools that support them','11/10/2017','1/20/2018');

insert into [Smith.Event] values

('E-5-2016','Basic R Workshop','10/15/2016');

insert into [Smith.Event] values

('E-8-2014','Python Workshop','11/2/2014');

insert into [Smith.Event] values

('E-10-2015','Advanced R Workshop','3/20/2015');

insert into [Smith.Event] values

('E-4-2013','Big Data Meet','9/10/2013');

insert into [Smith.Event] values

('E-2-2011','Career Readiness Course','9/12/2011');

insert into [Smith.Event] values

('E-3-2017','Interview Prep','4/10/2017');

insert into [Smith.Event] values

('E-5-2015','SAR Session','2/10/2016');

insert into [Smith.Event] values

('E-3-2013','Networking','9/10/2013');

insert into [Smith.EventsAttendance] values

(11778908,'E-5-2016');

insert into [Smith.EventsAttendance] values

(11654328,'E-5-2016');

insert into [Smith.EventsAttendance] values

(11654328,'E-3-2017');

insert into [Smith.EventsAttendance] values

(11172638,'E-3-2017');

insert into [Smith.EventsAttendance] values

(11172638,'E-5-2016');

insert into [Smith.EventsAttendance] values

(11026354,'E-10-2015');

insert into [Smith.EventsAttendance] values

(11026354,'E-5-2016');

insert into [Smith.EventsAttendance] values

(11026354,'E-5-2015');

insert into [Smith.EventsAttendance] values

(11679824,'E-3-2013');

insert into [Smith.EventsAttendance] values

(11278634,'E-3-2017');

insert into [Smith.EventsAttendance] values

(11278634,'E-5-2015');

insert into [Smith.EventsAttendance] values

(11298365,'E-2-2011');

insert into [Smith.EventsAttendance] values

(11678254,'E-2-2011');

insert into [Smith.EventsAttendance] values

(11679824,'E-2-2011');

insert into [Smith.Certification] values

('C100','11778908','Basic R','12/31/2020');

insert into [Smith.Certification] values

('C101','11778908','Advanced R','12/31/2022');

insert into [Smith.Certification] values

('C102','11768942','Python for Data Science','1/31/2019');

insert into [Smith.Certification] values

('C110','11768942','Project Management','4/30/2021');

insert into [Smith.Certification] values

('C200','11679824','Python edX','10/31/2016');

insert into [Smith.Certification] values

('C201','11172638','Ruby on Rails','8/10/2020');

insert into [Smith.Certification] values

('C210','11172638','Web Development','10/15/2022');

insert into [Smith.Certification] values

('C300','11678254','Tableau','5/25/2016');

insert into [Smith.Certification] values

('C310','11298365','MS Office','11/20/2020');

insert into [Smith.Certification] values

('C320','11026354','MS Office','1/18/2022');

insert into [Smith.Donate] values

('P50',11679824,'TX100',2000,'10/20/2016');

insert into [Smith.Donate] values

('P50',11298365,'TX110',2500,'10/25/2016');

insert into [Smith.Donate] values

('P1',11298365,'TX210',1500,'11/5/2014');

insert into [Smith.Donate] values

('P20',11768942,'TX300',2000,'11/1/2015');

insert into [Smith.Donate] values

('P100',11892534,'TX1000',3000,'11/11/2017');

insert into [Smith.Work] values

(11778908,'C1980','8/1/2017',CURRENT\_TIMESTAMP,'Manager of Analytics','San Francisco');

insert into [Smith.Work] values

(11654328,'C863562','5/6/2017',CURRENT\_TIMESTAMP,'Senior Data Engineer','Washington');

insert into [Smith.Work] values

(11768942,'C863562','10/6/2015','5/31/2017','Junior Data Engineer','New Jersey');

insert into [Smith.Work] values

(11768942,'S9865','2/6/2017',CURRENT\_TIMESTAMP,'Senior Data Engineer','Austin');

insert into [Smith.Work] values

(11892534,'S9865','2/6/2018',CURRENT\_TIMESTAMP,'Associate','Seattle');

insert into [Smith.Work] values

(11679824,'S8426','1/15/2013','6/10/2016','Jr Data Analyst','Baltimore');

Insert into [Smith.Work] values

(11679824,'C2987','6/15/2016',CURRENT\_TIMESTAMP,'Sr Data Analyst','Seattle');

insert into [Smith.Work] values

(11298365,'C2987','6/15/2012',CURRENT\_TIMESTAMP,'Data Scientist','Seattle');

insert into [Smith.Work] values

(11172638,'M16725','6/15/2018',CURRENT\_TIMESTAMP,'Systems Analyst','Michigan');

insert into [Smith.Work] values

(11278634,'M16725','8/10/2018',CURRENT\_TIMESTAMP,'Jr Consultant','Michigan');

insert into [Smith.Work] values

(11678254,'C1980','8/10/2012','6/10/2015','Jr Data Analyst','McLean');

insert into [Smith.Work] values

(11678254,'S8426','6/20/2015',CURRENT\_TIMESTAMP,'Operations Analyst','San Francisco');

insert into [Smith.Work] values

(11026354,'S8426','4/10/2016',CURRENT\_TIMESTAMP,'Lead Business Analyst','San Francisco');

insert into [Smith.AlumnusSkill] values

(11778908,'R');

insert into [Smith.AlumnusSkill] values

(11778908,'Python');

insert into [Smith.AlumnusSkill] values

(11654328,'R');

insert into [Smith.AlumnusSkill] values

(11654328,'Tableau');

insert into [Smith.AlumnusSkill] values

(11768942,'Java');

insert into [Smith.AlumnusSkill] values

(11768942,'Python');

insert into [Smith.AlumnusSkill] values

(11892534,'Salesforce');

insert into [Smith.AlumnusSkill] values

(11679824,'Cloud Computing');

insert into [Smith.AlumnusSkill] values

(11679824,'Machine Learning');

insert into [Smith.AlumnusSkill] values

(11298365,'Big Data');

insert into [Smith.AlumnusSkill] values

(11172638,'Public speaking');

insert into [Smith.AlumnusSkill] values

(11172638,'Logical reasoning');

insert into [Smith.AlumnusSkill] values

(11278634,'C Programming');

insert into [Smith.AlumnusSkill] values

(11678254,'Neural networks');

insert into [Smith.AlumnusSkill] values

(11678254,'Management');

insert into [Smith.AlumnusSkill] values

(11026354,'Database management');

**COUNT(\*) Statements**

select count(\*) from [Smith.Alumnus]

select count(\*) from [Smith.Company]

select count(\*) from [Smith.Project]

select count(\*) from [Smith.Event]

select count(\*) from [Smith.EventsAttendance]

select count(\*) from [Smith.Certification]

select count(\*) from [Smith.Work]

select count(\*) from [Smith.Donate]

select count(\*) from [Smith.AlumnusSkill]

**Business Transactions**

1. **Display the First Name, Last Name, Contact,Gender and Work for Company Name who have graduated in 2017.**

select alumFName,alumLName,alumEmail,alumGender,compName

from [Smith.Alumnus] a

join [Smith.Work] w ON w.uID = a.uID

join [Smith.Company] c ON w.compID = c.compID

where a.alumBatch=2017

order by alumLName,alumFName

1. **Display the First Name, Last Name, Contact,Gender and Work information for Alumni who have worked/working for Deloitte.**

select alumFName,alumLName,alumEmail,alumGender,compName

from [Smith.Alumnus] a

join [Smith.Work] w ON w.uID = a.uID

join [Smith.Company] c ON w.compID = c.compID

where c.compName LIKE 'Deloitte LLP'

order by alumLName,alumFName

1. **Display the First Name, Last Name, Contact Information, Project Name, Project Details,Donation Amount for Alumni who have donated for the project ‘Smith Alumni Management’**

Select alumFName,alumLName,alumEmail,alumGender,projName,projDesc,donationAmount

from [Smith.Alumnus] a

join [Smith.Donate] d ON d.uID = a.uID

join [Smith.Project] p ON p.projID =d.projID

WHERE p.projName LIKE 'Smith Alumni Management'

order by alumLName,alumFName

1. **Display the skills the alumnus ‘Varsha Singh’ possesses.**

select alumFName,alumLName,skill

from [Smith.Alumnus] a,[Smith.AlumnusSkill]s

WHERE a.uID = s.uID AND alumFName+' '+alumLName LIKE 'Varsha Singh'

1. **Display the First Name, Last Name, Contact Information of Alumni who have a MS Office certification.**

select alumFName,alumLName,alumEmail

from [Smith.Alumnus] a,[Smith.Certification] c

WHERE a.uID = c.uID AND certName LIKE 'MS Office'

order by alumLName,alumFName

1. **Display the total work experience in years of ‘Margaret Jacob’ Alumnus**.

select (alumFName+ ' ' + alumLName) as 'Name', SUM(w.[Work\_Experience]) as 'Work Experience'

from [Smith.Alumnus] a

JOIN Work\_Exp w ON w.uID = a.uID

GROUP BY alumFName,alumLName

HAVING alumFName+ ' ' + alumLName LIKE 'Margaret Jacob'

1. **Display the First Name, Last Name, Contact Information of the alumni who have attended ‘Career Readiness Course’ event.**

select (alumFName+ ' ' + alumLName) as 'Name',alumEmail

from[Smith.Alumnus] a

JOIN [Smith.EventsAttendance] ea ON ea.uID = a.uID

JOIN [Smith.Event] e ON ea.eventID = e.eventID

where e.eventName LIKE 'Career Readiness Course'

order by alumLname,alumFName

1. **Display the First Name, Last Name, Contact Information, Company Name for the alumni who have worked working as a ‘Jr Data Analyst‘.**

select (alumFName+ ' ' + alumLName) as 'Name',alumEmail,compName

from[Smith.Alumnus] a

JOIN [Smith.Work] w ON w.uID = a.uID

JOIN [Smith.Company] c ON w.compID = c.compID

where w.workPosition LIKE 'Jr Data Analyst'

order by alumLName,alumFName

1. **Display the First Name, Last Name, Contact Information of the alumni who have worked in EY as position of ‘Manager of Analytics’.**

select (alumFName+ ' ' + alumLName) as 'Name',alumEmail

from[Smith.Alumnus] a

JOIN [Smith.Work] w ON w.uID = a.uID

JOIN [Smith.Company] c ON c.compID = w.compID

where c.compName LIKE 'EY' AND w.workPosition LIKE 'Manager of Analytics'

order by alumLName,alumFName

**10. Which alumni has more than 2 years of work experience?**

select (alumFName+ ' ' + alumLName) as 'Name', SUM(w.[Work\_Experience]) as 'Work Experience'

from [Smith.Alumnus] a

JOIN Work\_Exp w ON w.uID = a.uID

GROUP BY alumFName,alumLName,w.[Work\_Experience]

HAVING w.[Work\_Experience] > 2

order by alumLName,alumFName