**University of British Columbia, Vancouver**
Department of Computer Science

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# CPSC 304 Project Cover Page

Milestone #: ____2____

Date: ___Feb 27, 2023____

Group Number: ___90_____

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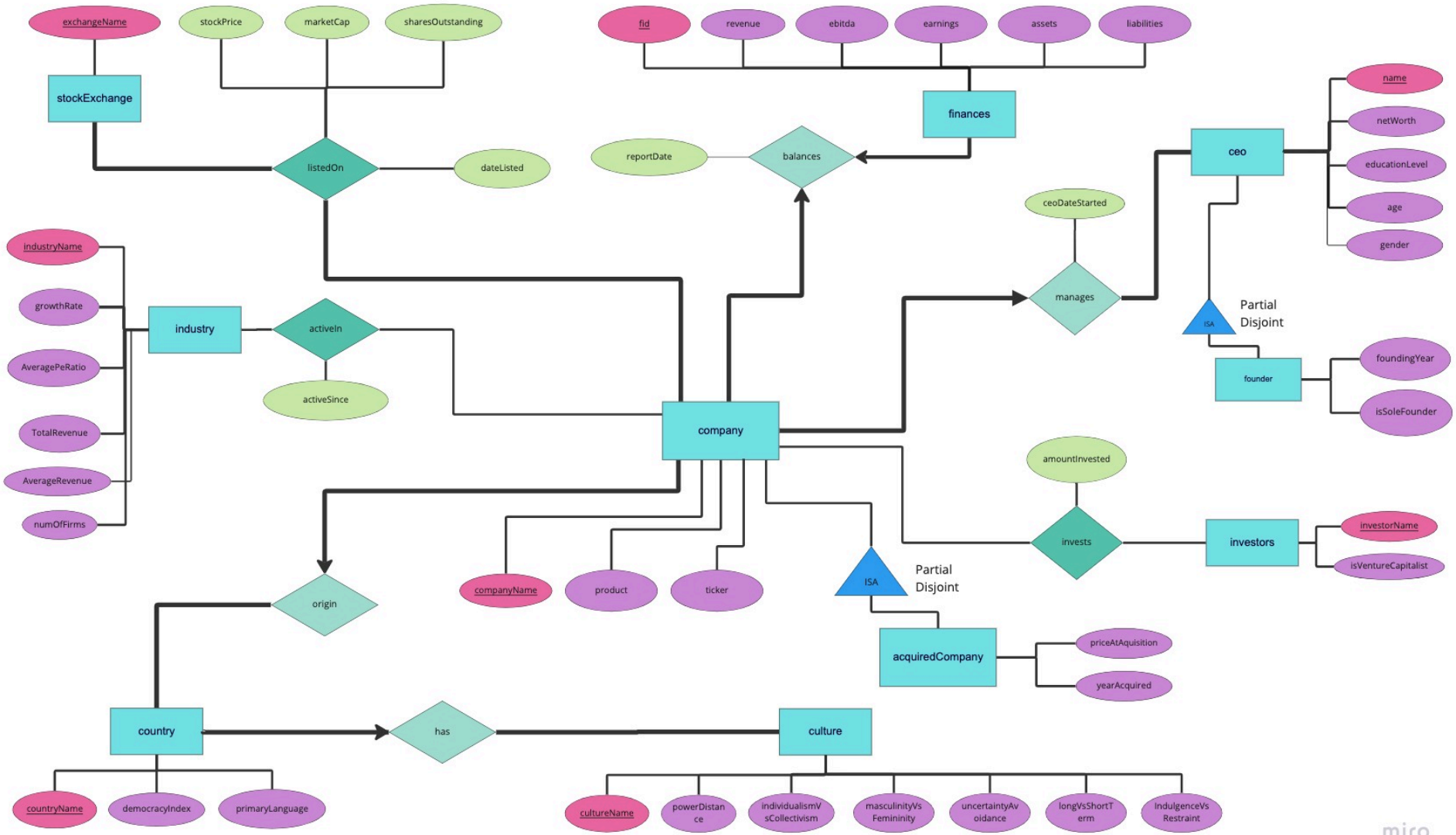
By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address, and then let us assign you to a TA for your project supervisor.)

In addition, we indicate that we are fully aware of the rules and consequences of plagiarism, as set forth by the Department of Computer Science and the University of British Columbia


exchangeName
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ISA
founder
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industryName
growthRate
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amountInvested
invests
investors
investorName
isVentureCapitalist
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ISA
Partial
Disjoint
acquiredCompany
priceAtAquisition
yearAcquired
country
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culture
countryName
democracyIndex
primaryLanguage
cultureName
powerDistance
individualismVsCollectivism
masculinityVsFemininity
uncertaintyAvoidance
longVsShortTerm
IndulgenceVsRestraint

# CPSC 304 Project

## Summary

Our database models publicly traded companies, and would allow users to query relevant information about to make their own evaluations of companies of their interest. The information our database holds is related to how companies fit and perform in their respective markets, allowing users to analyze companies beyond the scope of the stock price.

### What we changed about the ER diagram:

- As per the feedback in Milestone 1, we removed the primary keys for relationships from the ER diagram, to adhere to the correct ER diagram style
- As per the feedback in Milestone 1, we defined both ISA entity sets to be disjoint and partial (for both), to clarify the nature of the ISA entity sets
- We added the “averageRevenue” to the industry entity set to generate more meaningful FDs

## ER Diagram to Relational Model Translation

Note: All table definitions are listed below, along with denoting PKs, CKs, FKs, and other constraints underneath each relation. Also, we merged many one-to-many relations, including: company + origin and company + manages, country + has, finances + balances

```
Company(companyName CHAR(80), product: CHAR(80) , ticker: CHAR(10), country: CHAR(80), ceo: CHAR(80), ceoDateStarted: DATE)
-> ceo FK references CEO, ceo not null
-> country references Country, country not null
-> ticker is CK

Country(countryName: CHAR(80), democracyIndex: INT, primaryLanguage: : CHAR(80), culture: CHAR(80))
-> culture FK references Culture, culture not null

Culture(cultureName: CHAR(80), powerDistance: INT, IndividualismVsCollectivism: INT, masculinityVsFemininity: INT, uncertainty

Investors(investorName: CHAR(80), isVentureCapitalist: BINARY)

CEO(name: CHAR(80), netWorth: INT, educationLevel: CHAR(80), age: INT, gender: CHAR(80))

Founder(name: CHAR(80), foundingYear: DATE, isSoleFounder: BINARY)
-> name FK references CEO

Finances(fid: INT, revenue: INT, ebtida: INT, earnings: INT, assets: INT, liabilities: INT, reportDate: DATE, company: CHAR(80
-> company FK references Company, company not null

Industry(industryName: CHAR(80), growthRate: INT, averagePERatio: INT, totalRevenue: INT, numofFirms: INT, averageRevenue: INT

StockExchange(exchangeName: CHAR(80))

AcquiredCompany(name: CHAR(80), priceAtAqusition: INT, yearAquired: DATE)
-> name FK references CEO

ActiveIn(industryName: CHAR(80), companyName: CHAR(80), activeSince: DATE)
-> industryName FK references Industry
-> companyName FK references Company

ListedOn(exchangeName: CHAR(80), companyName: CHAR(80), dateListed: DATE, stockPrice: FLOAT, marketCap: INT, sharesOutstanding
```

```
-> exchangeName FK references StockExchange
-> companyName FK references Company

Invests(investorName: CHAR(80), companyName: CHAR(80), amountInvested: INT)
-> investorName FK references Investors
-> companyName FK references Company
```

## Functional Dependencies and Normalization to BCNF

```
Company BCNF
(PK) companyName -> product, ticker, country, ceo, ceoDateStarted
(CK) Ticker -> companyName, product, country, ceo, ceoDateStarted
```

```
Country NOT BCNF,
(PK) countryName -> democracyIndex, primaryLanguage, culture
primaryLanguage -> culture

Country TO BCNF:
1 -> Language(primaryLanguage, c50ulture), Country(countryName, democracyIndex, primaryLanguage)

Result
Language(primaryLanguage, culture),
Country(countryName, democracyIndex, primaryLanguage)
```

```
Culture NOT BCNF
(PK) cultureName -> powerDistance, IndividualismVsCollectivism, masculinityVsFemininity, uncertaintyAvoidance, longVsShortTerm
masculinityVsFemininity -> powerDistance, IndividualismVsCollectivism
longVsShortTerm -> uncertaintyAvoidance

Conversion of Culture TO BCNF
1 -> mvfToIvcPd(masculinityVsFemininity, IndividualismVsCollectivism, powerDistance), Culture(cultureName, masculinityVsFemini
2 -> lvSToUa(longVsShortTerm, uncertaintyAvoidance), Culture(cultureName, masculinityVsFemininity, longVsShortTerm, indulgence

Result
Culture(cultureName, masculinityVsFemininity, longVsShortTerm, indulgenceVsRestraint),
lvSToUa(longVsShortTerm, uncertaintyAvoidance),
mvfToIvcPd(masculinityVsFemininity,IndividualismVsCollectivism, powerDistance)
```

```
Investors BCNF
(PK) investorName -> isVentureCapitalist
```

```
CEO NOT BCNF
(PK) name -> netWorth, educationLevel, age, gender
educationLevel -> netWorth

CEO TO BCNF
1 -> Education(educationLevel, netWorth), CEO(name, educationLevel, age, gender)

Result
Education(educationLevel, netWorth)
CEO(name, educationLevel, age, gender)
```

```
Founder BCNF
(PK) name -> foundingYear, isSoleFounder
```

```
Finances NOT BCNF
(PK) fid -> revenue, ebtida, earnings, assets, liabilities, reportDate, companyName
revenue -> earnings
assets -> liabilities

Finances TO BCNF
1 -> Earnings(revenue, earnings), Finances(fid, revenue, ebtida, assets, liabilities, reportDate, companyName
2 -> Liabilities(assets, liablilites), Finances(fid, revenue, ebtida, assets, reportDate, companyName)

Result
Liabilities(assets, liablilites),
Finances(fid, revenue, ebtida, assets, reportDate, companyName),
Earnings(revenue, earnings)
```

```
Industry
(PK) industryName -> growthRate, averagePERatio, totalRevenue, numofFirms, averageRevenue
AverageRevenue -> TotalRevenue
AverageRevenue -> NumOfFirms

Industry Conversion to BCNF
1-> Revenue(AverageRevenue, TotalRevenue), Industry(industryName, growthRate, averagePERatio, numOfFirms, averageRevenue)
2-> Firms(AverageRevenue, NumOfFirms), Industry(industryName, growthRate, averagePERatio, averageRevenue)

Result
Revenue(AverageRevenue, TotalRevenue)
Firms(AverageRevenue, NumOfFirms)
Industry(industryName, growthRate, averagePERatio, averageRevenue)
```

```
StockExchange BCNF
(PK) Trivial
```

```
AcquiredCompany BCNF
(PK) name -> priceAtAqusition, yearAquired
```

```
ActiveIn BCNF
(PK) industryName, companyName -> activeSince
```

```
ListedOn NOT BCNF
(PK) exchangeName, companyName -> dateListed, stockPrice, marketCap, sharesOutstanding
stockPrice -> sharesOutstanding
stockPrice -> marketCap

ListedOn TO BCNF
1 -> StockInfo(stockPrice, sharesOutstanding, marketCap), ListedOn(exchangeName, CompanyName, dateListed, stockPrice)

Result
StockInfo(stockPrice, sharesOutstanding, marketCap),
ListedOn(exchangeName, companyName, dateListed, stockPrice)
```

```
Invests BCNF
(PK) investorName, companyName -> amountInvested
```

# SQL DDL:

```
CREATE TABLE Company (
  companyName CHAR(80),
  product CHAR(80),
  ticker CHAR(10),
  country CHAR(80) NOT NULL,
  ceo CHAR(80) NOT NULL,
  ceoDateStarted DATE
  PRIMARY KEY (companyName),
  UNIQUE ticker
  FOREIGN KEY (country) references Country(countryName) ON DELETE CASCADE
  FOREIGN KEY (ceo) references Ceo(name) ON DELETE CASCADE
);

INSERT INTO Company(companyName, product, ticker, country, ceo, ceoDateStarted)
VALUES('Apple', 'Technological Hardware', 'AAPL', 'USA', 'Tim Cook', '24-AUG-2011');

INSERT INTO Company(companyName, product, ticker, country, ceo, ceoDateStarted)
VALUES('Microsoft', 'Technological Software', 'MSFT', 'USA', 'Satya Nadella', '04-FEB-2014');

INSERT INTO Company(companyName, product, ticker, country, ceo, ceoDateStarted)
VALUES('Google', 'Technological Software', 'GOOGL', 'USA', 'Sundar Pichai', '02-OCT-2015');

INSERT INTO Company(companyName, product, ticker, country, ceo, ceoDateStarted)
VALUES('Tesla', 'Automobiles', 'TSLA', 'USA', 'Elon Musk', '02-OCT-2008');

INSERT INTO Company(companyName, product, ticker, country, ceo, ceoDateStarted)
VALUES('Rivian', 'Automobiles', 'RIVN', 'USA', 'RJ Scaringe', '07-AUG-2009');

INSERT INTO Company(companyName, product, ticker, country, ceo, ceoDateStarted)
VALUES('Instagram', 'Social Media', 'META', 'USA', 'Adam Mosseri', '01-OKT-2018');

INSERT INTO Company(companyName, product, ticker, country, ceo, ceoDateStarted)
VALUES('Oculus', 'Technological Hardware', 'META', 'USA', 'Mark Zuckerberg', '04-FEB-2004');

INSERT INTO Company(companyName, product, ticker, country, ceo, ceoDateStarted)
VALUES('Shazam', 'Technological Software', 'AAPL', 'USA', 'Tim Cook', '24-AUG-2011');

INSERT INTO Company(companyName, product, ticker, country, ceo, ceoDateStarted)
VALUES('Android', 'Technological Software', 'GOOGL', 'USA', 'Sundar Pichai', '02-OKT-2015');

INSERT INTO Company(companyName, product, ticker, country, ceo, ceoDateStarted)
VALUES('YouTube', 'Sociam Media', 'GOOGL', 'USA', 'Sundar Pichai', '02-OKT-2015');
```

```
CREATE TABLE Country (
  countryName CHAR(80),
  democracyIndex INT,
  primaryLanguage CHAR(80) NOT NULL,
  PRIMARY KEY (countryName),
  FOREIGN KEY (primaryLanguage) references Language(name) ON DELETE CASCADE
);

INSERT INTO Country(countryName, democracyIndex, primaryLanguage)
VALUES('USA', 8.88, 'English');

INSERT INTO Country(countryName, democracyIndex, primaryLanguage)
VALUES('Canada', 7.85, 'English');

INSERT INTO Country(countryName, democracyIndex, primaryLanguage)
VALUES('England', 8.28, 'English');

INSERT INTO Country(countryName, democracyIndex, primaryLanguage)
VALUES('Turkey', 4.35, 'Turkish');

INSERT INTO Country(countryName, democracyIndex, primaryLanguage)
VALUES('Portugal', 7.95, 'Portuguese');
```

```
CREATE TABLE Language (
  name CHAR(80),
  culture CHAR(80) NOT NULL,
  PRIMARY KEY (name),
  FOREIGN KEY (culture) references Culture(cultureName) ON DELETE CASCADE
);

INSERT INTO Language(name, culture)
VALUES('English', 'Western');

INSERT INTO Language(name, culture)
VALUES('Turkish', 'Islamic');

INSERT INTO Language(name, culture)
VALUES('Portuguese', 'Roman Catholic');

INSERT INTO Language(name, culture)
VALUES('Spanish', 'Western European');

INSERT INTO Language(name, culture)
VALUES('Arabic', 'Islamic');
```

```
CREATE TABLE Culture (
  cultureName CHAR(80),
  masculinityVsFemininity INT NOT NULL,
  longVsShortTerm INT NOT NULL,
  indulgenceVsRestraint INT,
  PRIMARY KEY (cultureName),
  FOREIGN KEY (masculinityVsFemininity) references mvfToIvcPd(masculinityVsFemininity) ON DELETE CASCADE,
  FOREIGN KEY (longVsShortTerm) references lvStoUa(longVsShortTerm) ON DELETE CASCADE
);

INSERT INTO Country(cultureName, masculinityVsFemininity, longVsShortTerm, indulgenceVsRestraint)
VALUES('Western', 62, 29, 83);

INSERT INTO Country(cultureName, masculinityVsFemininity, longVsShortTerm, indulgenceVsRestraint)
VALUES('Islamic', 52, 12, 60);

INSERT INTO Country(cultureName, masculinityVsFemininity, longVsShortTerm, indulgenceVsRestraint)
VALUES('Roman Catholic', 31, 19, 57);

INSERT INTO Country(cultureName, masculinityVsFemininity, longVsShortTerm, indulgenceVsRestraint)
VALUES('Western European', 42, 29, 76);

INSERT INTO Country(cultureName, masculinityVsFemininity, longVsShortTerm, indulgenceVsRestraint)
VALUES('Han', 66, 118, 39);
```

```
CREATE TABLE lvStoUa (
  longVsShortTerm INT,
  uncertaintyAvoidance INT
  PRIMARY KEY (longVsShortTerm)
);

INSERT INTO lvStoUa(longVsShortTerm, uncertaintyAvoidance)
VALUES(29, 46);

INSERT INTO lvStoUa(longVsShortTerm, uncertaintyAvoidance)
VALUES(12, 54);

INSERT INTO lvStoUa(longVsShortTerm, uncertaintyAvoidance)
VALUES(19, 44);

INSERT INTO lvStoUa(longVsShortTerm, uncertaintyAvoidance)
VALUES(39, 42);

INSERT INTO lvStoUa(longVsShortTerm, uncertaintyAvoidance)
VALUES(118, 40);
```

```
CREATE TABLE mvfToIvcPd (
  masculinityVsFemininity INT,
  IndividualismVsCollectivism INT,
  powerDistance INT
  PRIMARY KEY (masculinityVsFemininity)
);

INSERT INTO mvfToIvc(masculinityVsFemininity, IndividualismVsCollectivism, powerDistance)
VALUES(62, 91, 40);

INSERT INTO mvfToIvc(masculinityVsFemininity, IndividualismVsCollectivism, powerDistance)
VALUES(52, 38, 80);

INSERT INTO mvfToIvc(masculinityVsFemininity, IndividualismVsCollectivism, powerDistance)
VALUES(31, 27, 63);

INSERT INTO mvfToIvc(masculinityVsFemininity, IndividualismVsCollectivism, powerDistance)
VALUES(42, 51, 57);

INSERT INTO mvfToIvc(masculinityVsFemininity, IndividualismVsCollectivism, powerDistance)
VALUES(66, 20, 80);
```

```
CREATE TABLE Investors (
  investorName CHAR(80),
  isVentureCapitalist BINARY
  PRIMARY KEY (investorName)
);

INSERT INTO Investors(investorName, isVentureCapitalist)
VALUES('Warren Buffett', 'F');

INSERT INTO Investors(investorName, isVentureCapitalist)
VALUES('Philip Fisher', 'F');

INSERT INTO Investors(investorName, isVentureCapitalist)
VALUES('Benjamin Graham', 'F');

INSERT INTO Investors(investorName, isVentureCapitalist)
VALUES('Bain Capital', 'T');

INSERT INTO Investors(investorName, isVentureCapitalist)
VALUES('GV', 'T');
```

```
CREATE TABLE Education (
  educationLevel CHAR(80),
  netWorth INT
  PRIMARY KEY (educationLevel)
);

INSERT INTO Education(educationLevel, netWorth)
VALUES('Highschool Diploma', 3500000);

INSERT INTO Education(educationLevel, netWorth)
VALUES('Bachelors Degree', 2500000);

INSERT INTO Education(educationLevel, netWorth)
VALUES('Masters Degree', 2400000);

INSERT INTO Education(educationLevel, netWorth)
VALUES('Doctorate', 2000000);

INSERT INTO Education(educationLevel, netWorth)
VALUES('Apprenticeship Certificate', 1500000);
```

```
CREATE TABLE CEO (
  name CHAR(80),
  age INT,
  gender CHAR(80),
  educationLevel CHAR(80)
  PRIMARY KEY(name)
  FOREIGN KEY(educationLevel) references Education
);

INSERT INTO CEO(name, age, gender, educationLevel)
VALUES('Sundar Pichai', 50, "male", "Masters Degree");

INSERT INTO CEO(name, age, gender, educationLevel)
VALUES('Tim Cook', 62, "male", "Masters Degree");

INSERT INTO CEO(name, age, gender, educationLevel)
VALUES('Mary Barra', 61, "female", "Masters Degree");

INSERT INTO CEO(name, age, gender, educationLevel)
VALUES('Bill Gates', 67, "male");

INSERT INTO CEO(name, age, gender, educationLevel)
VALUES('Andrew Witty', 58, "male", "Bachelors Degree");

INSERT INTO CEO(name, age, gender, educationLevel)
VALUES('Adam Mosseri', 40, "male", "Bachelors Degree");

INSERT INTO CEO(name, age, gender, educationLevel)
VALUES('Mark Zuckerberg', 42, "male", "Masters Degree");

INSERT INTO CEO(name, age, gender, educationLevel)
VALUES('Elon Musk', 45, "male", "Masters Degree");

INSERT INTO CEO(name, age, gender, educationLevel)
VALUES('Kiichiro Toyoda', 95, "male", "Backelors Degree");

INSERT INTO CEO(name, age, gender, educationLevel)
VALUES('John Warnock', 67, "male", "Backelors Degree");

INSERT INTO CEO(name, age, gender, educationLevel)
VALUES('Diane Greene', 57, 'female', "Masters Degree");
```

```
CREATE TABLE Founder (
  name CHAR(80) NOT NULL
  foundingYear DATE
  isSoleFounder BINARY
  PRIMARY KEY (name)
  FOREIGN KEY (name) references CEO ON DELETE CASCADE
);

INSERT INTO Founder(name, foundingYear, isSoleFounder)
VALUES('Mark Zuckerberg', '2004', 'F');

INSERT INTO Founder(name, foundingYear, isSoleFounder)
VALUES('Elon Musk', '2002', 'T');

INSERT INTO Founder(name, foundingYear, isSoleFounder)
VALUES('Kiichiro Toyoda', '1937', 'T');

INSERT INTO Founder(name, foundingYear, isSoleFounder)
VALUES('John Warnock', '1982', 'F');

INSERT INTO Founder(name, foundingYear, isSoleFounder)
VALUES('Diane Greene', '1998', 'F');
```

```
CREATE TABLE Liabilities (
  assets INT
  liabilities INT NOT NULL
  PRIMARY KEY (assets)
);

INSERT INTO Liabilities(assets, liabilites)
VALUES(100, 10000000);

INSERT INTO Liabilities(assets, liabilites)
VALUES(235, 21000000);

INSERT INTO Liabilities(assets, liabilites)
VALUES(55, 520000);

INSERT INTO Liabilities(assets, liabilites)
VALUES(70, 700000);

INSERT INTO Liabilities(assets, liabilites)
VALUES(180, 20000000);
```

```
CREATE TABLE Finances (
  fid INT
  revenue INT NOT NULL
  assets INT NOT NULL
  ebtida INT
  reportDate DATE
  companyName CHAR(80)
  PRIMARY KEY(fid)
  FOREIGN KEY (revenue) references Earnings ON DELETE CASCADE
  FOREIGN KEY (assets) references Liabilities ON DELETE CASCADE
  FOREIGN KEY (companyName) references Company ON DELETE CASCADE
);

INSERT INTO Finances(fid, revenue, assets, ebtida, reportDate, companyName)
VALUES(100, 10000000, 70, 11000000, '2015-7-12', 'Apple');

INSERT INTO Finances(fid, revenue, assets, ebtida, reportDate, companyName)
VALUES(101, 9000000, 55, 10500000, '2016-3-17', 'Google');

INSERT INTO Finances(fid, revenue, assets, ebtida, reportDate, companyName)
VALUES(102, 23000000, 180, 25000000, '2020-9-7', 'Meta');

INSERT INTO Finances(fid, revenue, assets, ebtida, reportDate, companyName)
VALUES(103, 22000000, 100, '2021-11-19', 'Amazon');

INSERT INTO Finances(fid, revenue, assets, ebtida, reportDate, companyName)
VALUES(104, 2000000, 235, 2500000, '2021-11-19', 'Netflix');
```

```
CREATE TABLE Earnings (
  revenue INT
  earnings INT
  PRIMARY KEY (revenue)
);

INSERT INTO Earnings(revenue, earnings)
VALUES(10000000, 5000000);

INSERT INTO Earnings(revenue, earnings)
VALUES(23000000, 11000000);

INSERT INTO Earnings(revenue, earnings)
VALUES(9000000, 450000);

INSERT INTO Earnings(revenue, earnings)
VALUES(2000000, 1000000);
```

```
INSERT INTO Earnings(revenue, earnings)
VALUES(22000000, 1200000);
```

```
CREATE TABLE Revenue (
  averageRevenue INT
  totalRevenue INT
  PRIMARY KEY (averageRevenue)
);

INSERT INTO Revenue(averageRevenue, totalRevenue)
VALUES(20000, 100000);

INSERT INTO Revenue(averageRevenue, totalRevenue)
VALUES(15000, 75000);

INSERT INTO Revenue(averageRevenue, totalRevenue)
VALUES(8000, 32000);

INSERT INTO Revenue(averageRevenue, totalRevenue)
VALUES(12000, 60000);

INSERT INTO Revenue(averageRevenue, totalRevenue)
VALUES(9000, 36000);
```

```
CREATE TABLE Firms (
  averageRevenue INT
  numOfFirms INT
  PRIMARY KEY (averageRevenue)
);

INSERT INTO Firms(averageRevenue, numOfFirms)
VALUES(20000, 5);

INSERT INTO Firms(averageRevenue, numOfFirms)
VALUES(15000, 5);

INSERT INTO Firms(averageRevenue, numOfFirms)
VALUES(8000, 4);

INSERT INTO Firms(averageRevenue, numOfFirms)
VALUES(12000, 5);

INSERT INTO Firms(averageRevenue, numOfFirms)
VALUES(9000, 4);
```

```
CREATE TABLE Industry (
  industryName CHAR(80),
  growthRate INT,
  averagePERatio INT,
  averageRevenue INT,
  PRIMARY KEY (industryName)
);

INSERT INTO Industry(industryName, growthRate, averagePERatio, averageRevenue)
VALUES('Mining', 0.05, 17, 20000);

INSERT INTO Industry(industryName, growthRate, averagePERatio, averageRevenue)
VALUES('Health', 0.1, 25, 15000);

INSERT INTO Industry(industryName, growthRate, averagePERatio, averageRevenue)
VALUES('Defense', 0.02, 13, 8000);

INSERT INTO Industry(industryName, growthRate, averagePERatio, averageRevenue)
VALUES('Technology', 0.15, 23, 12000);

INSERT INTO Industry(industryName, growthRate, averagePERatio, averageRevenue)
```

```
VALUES('Real Estate', 0.03, 10, 9000);

INSERT INTO Industry(industryName, growthRate, averagePERatio, averageRevenue)
VALUES('Automobiles', 0.03, 13, 20000);
```

```
CREATE TABLE StockExchange(
  exchangeName CHAR(80),
  PRIMARY KEY (exchangeName)
);

INSERT INTO StockExchange(exchangeName)
VALUES('New York Stock Exchange');

INSERT INTO StockExchange(exchangeName)
VALUES('Nasdaq');

INSERT INTO StockExchange(exchangeName)
VALUES('Shanghai Stock Exchange');

INSERT INTO StockExchange(exchangeName)
VALUES('Euronext');

INSERT INTO StockExchange(exchangeName)
VALUES('Japan Exchange Group');
```

```
CREATE TABLE AcquiredCompany(
  name CHAR(80),
  priceAtAqusition INT,
  yearAquired DATE,
  PRIMARY KEY (name)
  FOREIGN KEY (name) REFERENCES CEO
);

INSERT INTO AcquiredCompany(name, priceAtAqusition, yearAquired)
VALUES('Instagram', 1000, 2012);

INSERT INTO AcquiredCompany(name, priceAtAqusition, yearAquired)
VALUES('Oculus', 3000, 2014);

INSERT INTO AcquiredCompany(name, priceAtAqusition, yearAquired)
VALUES('Shazam', 400, 2018);

INSERT INTO AcquiredCompany(name, priceAtAqusition, yearAquired)
VALUES('Android', 50, 2005);

INSERT INTO AcquiredCompany(name, priceAtAqusition, yearAquired)
VALUES('YouTube', 1650, 2006);
```

```
CREATE TABLE ActiveIn(
  companyName: CHAR(80),
  industryName CHAR(80),
  activeSince: DATE,
  PRIMARY KEY (companyName, industryName),
  FOREIGN KEY (companyName) REFERENCES company,
  FOREIGN KEY (industryName) REFERENCES Industry
);

INSERT INTO ActiveIn(companyName, industryName, activeSince)
VALUES('Apple', 'Technology', '1-MAR-1976');

INSERT INTO ActiveIn(companyName, industryName, activeSince)
VALUES('Microsoft', 'Technology', '4-JUL-1975');

INSERT INTO ActiveIn(companyName, industryName, activeSince)
```

```
VALUES('Google', 'Technology', '4-SEP-1998');

INSERT INTO ActiveIn(companyName, industryName, activeSince)
VALUES('Tesla', 'Automobiles', '1-JUL-2003');

INSERT INTO ActiveIn(companyName, industryName, activeSince)
VALUES('Rivian', 'Automobiles', '8-JUN-2009');
```

```
CREATE TABLE StockInfo(
  stockPrice FLOAT,
  sharesOutstanding INT,
  marketCap INT,
  PRIMARY KEY (stockPrice)
);

INSERT INTO StockCap(stockPrice, sharesOutstanding, marketCap)
VALUES(1.12,12333456,1408877771);

INSERT INTO StockCap(stockPrice, sharesOutstanding, marketCap)
VALUES(2.82,854037536,13822370);

INSERT INTO StockCap(stockPrice, sharesOutstanding, marketCap)
VALUES(87.82,745494,2420148299);

INSERT INTO StockCap(stockPrice, sharesOutstanding, marketCap)
VALUES(0.98,1434958316,8879417430);

INSERT INTO StockCap(stockPrice, sharesOutstanding, marketCap)
VALUES(9.57,927538852,65409821);
```

```
CREATE TABLE ListedOn(
  exchangeName CHAR(80),
  companyName CHAR(80),
  dateListed DATE,
  stockPrice FLOAT,
  PRIMARY KEY (exchangeName, companyName)
  FOREIGN KEY (exchangeName) REFERENCES StockExchange
  FOREIGN KEY (companyName) REFERENCES Company
  FOREIGN KEY (stockPrice) REFERENCES StockInfo
);

INSERT INTO ListedOn(exchangeName, companyName, dateListed, stockPrice)
VALUES('New York Stock Exchange', 'Apple', '24-AUG-2011', 1.12);

INSERT INTO ListedOn(exchangeName, companyName, dateListed, stockPrice)
VALUES('New York Stock Exchange', 'Microsoft', '04-FEB-2014', 2.82);

INSERT INTO ListedOn(exchangeName, companyName, dateListed, stockPrice)
VALUES('New York Stock Exchange', 'Google', '02-OCT-2015', 87.82);

INSERT INTO ListedOn(exchangeName, companyName, dateListed, stockPrice)
VALUES('New York Stock Exchange', 'Tesla', '02-OCT-2008', 0.98);

INSERT INTO ListedOn(exchangeName, companyName, dateListed, stockPrice)
VALUES('New York Stock Exchange', 'Rivian', '07-AUG-2009', 9.57);
```

```
CREATE TABLE Invests(
  investorName CHAR(80),
  companyName CHAR(80),
  amountInvested: INT
  PRIMARY KEY (investorName, companyName)
  FOREIGN KEY investorName REFERENCES Investors
  FOREIGN KEY companyName REFERENCES Company
);
```

```
INSERT INTO Invests(investorName, companyName, amountInvested)
VALUES('Warren Buffett', 'Apple', 10000);

INSERT INTO Invests(investorName, companyName, amountInvested)
VALUES('Warren Buffett', 'Microsoft', 3000);

INSERT INTO Invests(investorName, companyName, amountInvested)
VALUES('Warren Buffett', 'Google', 8530);

INSERT INTO Invests(investorName, companyName, amountInvested)
VALUES('Warren Buffett', 'Tesla', 200);

INSERT INTO Invests(investorName, companyName, amountInvested)
VALUES('Philip Fisher', 'Apple', 7210);

INSERT INTO Invests(investorName, companyName, amountInvested)
VALUES('Philip Fisher', 'Instagram', 42068);

INSERT INTO Invests(investorName, companyName, amountInvested)
VALUES('Bain Capital', 'Tesla', 42069);
```