

CPSC 304 Project Cover Page

Milestone #: 2

Date: 10/10/2024

Group Number: 34

Name	Student Number	CS Alias (Userid)	Preferred E-mail Address
Elliott Au	95639712	b1w6b	elliott.au00@gmail.com
Devin Huang	35660307	j5w0s	chengminghuang369@gmail.com
David Lin	38496840	n2y9t	lindavid5922@gmail.com

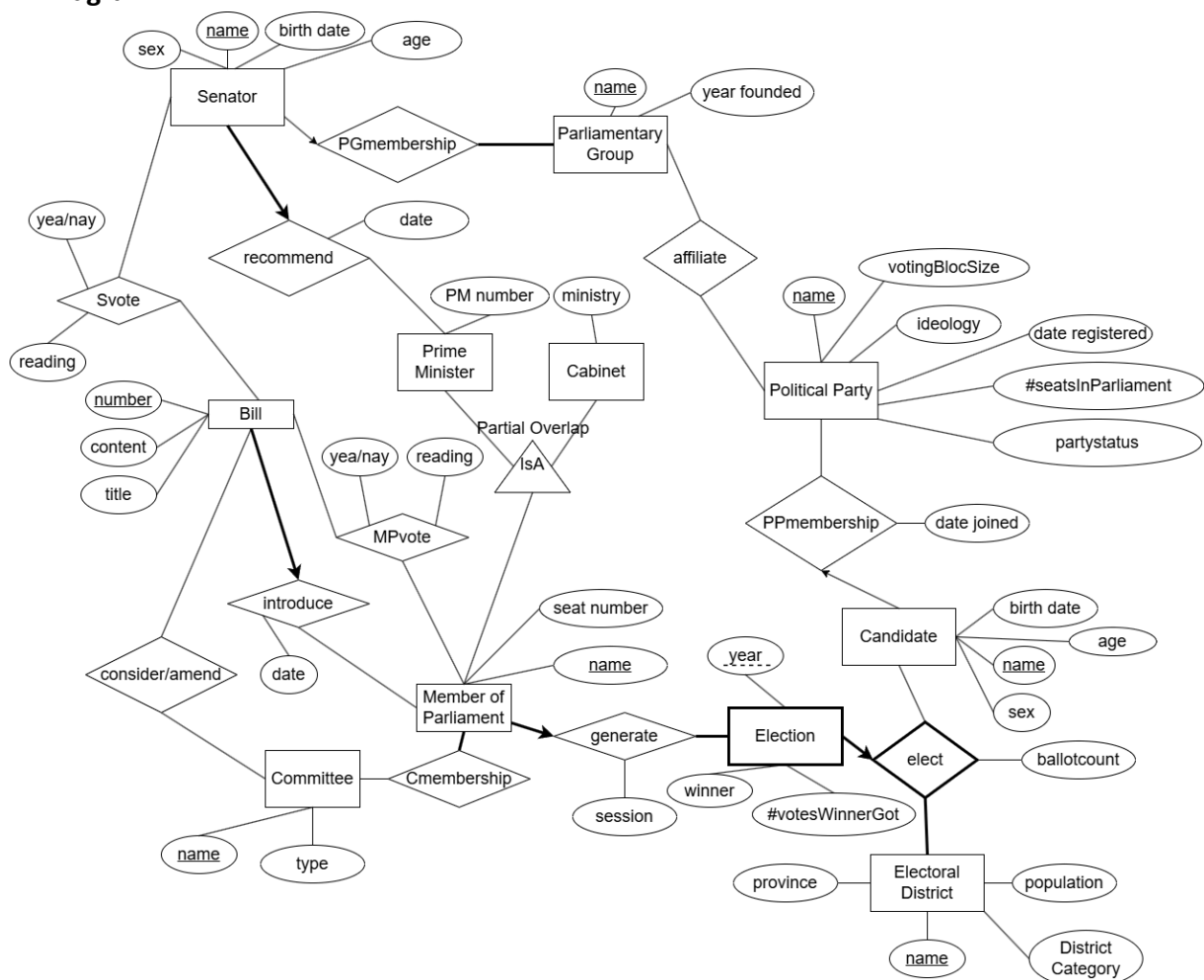
By typing our names and student numbers in the above table, we certify that the work in the attached assignment was performed solely by those whose names and student IDs are included above. (In the case of Project Milestone 0, the main purpose of this page is for you to let us know your e-mail address,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

Summary:

This project is a database about Canada's Parliament. This database will store information about our cabinet members, MPs, and senators and their voting records on specific bills, along with past election data. The system will be available for anyone so they can easily and quickly find information about what policies certain politicians have supported, and not supported in the past in order to make more informed decisions during elections so the people can ensure the politicians they vote for align with their personal values.

ER Diagram



Changes:

We decided to follow the advice given in milestone 1. Firstly, we fixed the convention in our ER diagram, as we did not underline the key for weak entities with a dashed line. We also made sure that every entity had at least 1 non-PK attribute along with the primary key. On top of that,

University of British Columbia, Vancouver

Department of Computer Science

in order to make the diagram more clear, we amended some duplicate names like “Membership” and “Vote”. In addition, to make sure we have non-PK/CK functional dependencies, we added extra attributes to Electoral district (district category), Election(#votesWinnerGot), Candidate(age), Senator(age) and PoliticalParty(ideology, votingBlocSize, #seatsInParliament, partystatus).

Relational Schema

1. ElectoralDistrict

```
ElectoralDistrict(  
  name: VARCHAR(255),  
  province: VARCHAR(255),  
  population: INT,  
  district_category: VARCHAR(100)  
)
```

Primary Key (PK): name

Candidate Key (CK): name

Constraints:

- name is NOT NULL and UNIQUE

2. PoliticalParty

```
PoliticalParty(  
  name: VARCHAR(255),  
  votingBlocSize: INT,  
  ideology: VARCHAR(100),  
  date_registered: DATE,  
  #seatsInParliament: INT,  
  partystatus: VARCHAR(100)  
)
```

Primary Key (PK): name

Candidate Key (CK): name

Constraints:

- name is NOT NULL and UNIQUE

3. Candidate_PPmembership

```
Candidate_PPmembership(  
  name: VARCHAR(255),  
  birth_date: DATE,
```

```
age: INT,  
sex: CHAR(1),  
date: DATE  
)
```

Primary Key (PK): name

Constraints:

- name is NOT NULL and UNIQUE
- date is NOT NULL

4. Election elect

```
Election_elect(  
    year: INT,  
    electoral_district_name: VARCHAR(255),  
    ballot_count: INT,  
    votes_winner_got: INT,  
    winner: VARCHAR(255)  
)
```

Primary Key (PK): (year, electoral_district_name)

Foreign Key (FK): electoral_district_name REFERENCES ElectoralDistrict(name)

Constraints:

- year is NOT NULL
- electoral_district_name is NOT NULL
- winner is NOT NULL

5. MemberOfParliament Generate

```
MemberOfParliament_Generate(  
    name: VARCHAR(255),  
    seat_number: INT,  
    electoral_district_name: VARCHAR(255),  
    year: INT,  
    session: VARCHAR(255)  
)
```

Primary Key (PK): (name, electoral_district_name, year)

Foreign Keys (FK):

- electoral_district_name REFERENCES ElectoralDistrict(name)
- year REFERENCES Election_elect(year)

Constraints:

University of British Columbia, Vancouver

Department of Computer Science

- name, electoral_district_name, and year are NOT NULL
- electoral_district_name and year are part of the Primary Key

6. PrimeMinister (ISA relationship with MemberOfParliament)

```
PrimeMinister(  
    mp_name: VARCHAR(255),  
    PM_number: INT  
)
```

Primary Key (PK): mp_name

Foreign Key (FK): mp_name REFERENCES MemberOfParliament(name)

Constraints:

- mp_name is NOT NULL and UNIQUE
- PM_number is NOT NULL and UNIQUE

7. Cabinet (ISA relationship with MemberOfParliament)

```
Cabinet(  
    mp_name: VARCHAR(255),  
    ministry: VARCHAR(255)  
)
```

Primary Key (PK): mp_name

Foreign Key (FK): mp_name REFERENCES MemberOfParliament(name)

Constraints:

- mp_name is NOT NULL and UNIQUE
- ministry is NOT NULL

8. Senator Recommend PGmembership

```
Senator_Recommend_PGmembership(  
    name: VARCHAR(255), -- Senator's name  
    birth_date: DATE,  
    sex: CHAR(1),  
    age: INT,  
    pm_name: VARCHAR(255), -- Prime Minister's name (who recommends the Senator)  
    pg_name: VARCHAR(255), -- Parliamentary Group name (PGmembership)  
    date: DATE -- Date of recommendation or appointment  
)
```

Primary Key (PK): name

Foreign Keys (FK):

University of British Columbia, Vancouver

Department of Computer Science

- pm_name REFERENCES PrimeMinister(name)
- pg_name REFERENCES ParliamentaryGroup(name)

Constraints:

- name is NOT NULL and UNIQUE
- pm_name is NOT NULL
- pg_name is NOT NULL
- date is NOT NULL

9. ParliamentaryGroup

```
ParliamentaryGroup(  
    name: VARCHAR(255),  
    year_founded: DATE  
)
```

Primary Key (PK): name

Candidate Key (CK): name

Constraints:

- name is NOT NULL and UNIQUE

10. Cmembership (Committee Membership)

```
Cmembership(  
    mp_name: VARCHAR(255),  
    committee_name: VARCHAR(255),  
    committee_type: VARCHAR(255)  
)
```

Primary Key (PK): (mp_name, committee_name)

Foreign Key (FK): mp_name REFERENCES MemberOfParliament(name)

Constraints:

- mp_name and committee_name are NOT NULL
- mp_name and committee_name are part of the Primary Key

11. Svote (Senator Vote)

```
Svote(  
    yea_nay: CHAR(1),  
    reading: INT  
)
```

Constraints:

- yea_nay is NOT NULL
- reading is NOT NULL

- senator_name and bill_number are part of the Primary Key

12. MPvote (MP Vote)

```
MPvote(  
    yea_nay: CHAR(1),  
    reading: INT  
)
```

Constraints:

- yea_nay is NOT NULL
- reading is NOT NULL

13. Bill Introduce

```
Bill_Introduce(  
    mp_name: VARCHAR(255),  
    bill_number: INT,  
    content: TEXT,  
    title: VARCHAR(255),  
    date: DATE  
)
```

Primary Key (PK): (mp_name, bill_number)

Foreign Key (FK): mp_name REFERENCES MemberOfParliament(name)

Constraints:

- mp_name and bill_number are NOT NULL
- mp_name and bill_number are part of the Primary Key
- date is NOT NULL

14. Consider Amend

```
Consider_Amend(  
    committee_name: VARCHAR(255),  
    bill_number: INT  
)
```

Primary Key (PK): (committee_name, bill_number)

Foreign Keys (FK):

- committee_name REFERENCES Committee(name)
- bill_number REFERENCES Bill(number)

Constraints:

- committee_name and bill_number are NOT NULL
- committee_name and bill_number are part of the Primary Key

15. Affiliate

Affiliate(

political_party_name: VARCHAR(255),
parliamentary_group_name: VARCHAR(255)

)

Primary Key (PK): (political_party_name, parliamentary_group_name)

Foreign Keys (FK):

- political_party_name REFERENCES PoliticalParty(name)
- parliamentary_group_name REFERENCES ParliamentaryGroup(name)

Constraints:

- political_party_name and parliamentary_group_name are NOT NULL
- political_party_name and parliamentary_group_name are part of the Primary Key

Functional Dependency

1. ElectoralDistrict

PK-based FD: name → population, district_category, province

Non-PK FD: population → district_category

2. PoliticalParty

PK-based FD: name → ideology, votingBlocSize, date_registered, seatsInParliament, partystatus

Non-PK FDs:

- ideology → votingBlocSize
- seatsInParliament → partystatus

3. Candidate

PK-based FD: name → birth_date, age, sex, date

Non-PK FD: birth_date → age

4. Election_elect

PK-based FD: (year, electoral_district_name) → ballot_count, votes_winner_got, winner

University of British Columbia, Vancouver

Department of Computer Science

Non-PK FD: votes_winner_got \rightarrow winner

5. MemberOfParliament

PK-based FD: (name, electoral_district_name, year) \rightarrow seat_number, session

Non-PK FD: electoral_district_name \rightarrow seat_number

6. PrimeMinister

PK-based FD: name \rightarrow PM_number

7. Senator_Recommend_PGmembership

PK-based FD: name \rightarrow birth_date, sex, age, pm_name, pg_name, date

Non-PK FD: pg_name \rightarrow date

8. Cabinet

PK-based FD: name \rightarrow ministry

9. ParliamentaryGroup

PK-based FD: name \rightarrow year_founded

10. Cmembership

PK-based FD: (mp_name, committee_name) \rightarrow committee_type

Non-PK FD: committee_name \rightarrow committee_type

11. Svote

No meaningful non-PK/CK FDs (only trivial dependencies exist).

12. MPvote

No meaningful non-PK/CK FDs (only trivial dependencies exist).

13. Bill_Introduce

PK-based FD: (mp_name, bill_number) \rightarrow title, content, date

Non-PK FDs:

- bill_number \rightarrow title, date
- title \rightarrow content

14. Consider_Amend

PK-based FD: (committee_name, bill_number) \rightarrow (no non-PK FDs)

15. Affiliate

PK-based FD: (political_party_name, parliamentary_group_name)

No meaningful non-PK/CK FDs in this relation.

Normalization

1. ElectoralDistrict

PK-based FD: name \rightarrow population, district_category, province

Non-PK FD: population \rightarrow district_category

No decomposition needed

2. PoliticalParty

PK-based FD: name \rightarrow ideology, votingBlocSize, date_registered, seatsInParliament, partystatus

Non-PK FDs:

- ideology \rightarrow votingBlocSize

- seatsInParliament \rightarrow partystatus

Decomposition:

- PoliticalParty1: name \rightarrow ideology, date_registered, seatsInParliament

- PoliticalParty2: ideology \rightarrow votingBlocSize

- PoliticalParty3: seatsInParliament \rightarrow partystatus

3. Candidate

PK-based FD: name \rightarrow birth_date, age, sex, date

Non-PK FD: birth_date \rightarrow age

Decomposition:

- Candidate1: name \rightarrow birth_date, sex, date

- Candidate2: birth_date \rightarrow age

4. Election_elect

PK-based FD: (year, electoral_district_name) \rightarrow ballot_count, votes_winner_got, winner

Non-PK FD: votes_winner_got \rightarrow winner

Decomposition:

- Election_elect1: (year, electoral_district_name) \rightarrow ballot_count, votes_winner_got

- Election_elect2: votes_winner_got \rightarrow winner

5. MemberOfParliament

PK-based FD: (name, electoral_district_name, year) \rightarrow seat_number, session

Non-PK FD: electoral_district_name \rightarrow seat_number

Decomposition:

- MemberOfParliament1: (name, electoral_district_name, year) \rightarrow session

- MemberOfParliament2: electoral_district_name \rightarrow seat_number

6. PrimeMinister

PK-based FD: name \rightarrow PM_number

No decomposition needed

7. Senator_Recommend_PGmembership

PK-based FD: name \rightarrow birth_date, sex, age, pm_name, pg_name, date

Non-PK FD: pg_name \rightarrow date

Decomposition:

- Senator_Recommend_PGmembership1: name \rightarrow birth_date, sex, age, pm_name, pg_name

- Senator_Recommend_PGmembership2: pg_name \rightarrow date

8. Cabinet

PK-based FD: name \rightarrow ministry

No decomposition needed

9. ParliamentaryGroup

PK-based FD: name \rightarrow year_founded

No decomposition needed

10. Cmembership

PK-based FD: (mp_name, committee_name) \rightarrow committee_type

Non-PK FD: committee_name \rightarrow committee_type

Decomposition:

- Cmembership1: (mp_name, committee_name) \rightarrow committee_type

- Cmembership2: committee_name \rightarrow committee_type

11. Svote

No meaningful non-PK/CK FDs

No decomposition needed

12. MPvote

No meaningful non-PK/CK FDs

No decomposition needed

13. Bill_Introduce

PK-based FD: (mp_name, bill_number) \rightarrow title, content, date

Non-PK FDs:

- bill_number \rightarrow title, date

- title \rightarrow content

Decomposition:

- Bill_Introduce1: (mp_name, bill_number) \rightarrow title, date

- Bill_Introduce2: title \rightarrow content

14. Consider_Amend

PK-based FD: (committee_name, bill_number) \rightarrow (no non-PK FDs)

No decomposition needed

15. Affiliate

PK-based FD: (political_party_name, parliamentary_group_name)

No meaningful non-PK/CK FDs

No decomposition needed

SQL DDL

```
CREATE TABLE ElectoralDistrict (  
    name VARCHAR(255) PRIMARY KEY,  
    population INT NOT NULL,  
    district_category VARCHAR(100) NOT NULL,  
    province VARCHAR(255) NOT NULL  
);
```

```
CREATE TABLE PoliticalParty1 (  
    name VARCHAR(255) PRIMARY KEY,  
    ideology VARCHAR(100) NOT NULL,  
    date_registered DATE NOT NULL,  
    seatsInParliament INT NOT NULL  
);
```

```
CREATE TABLE PoliticalParty2 (  
    ideology VARCHAR(100) PRIMARY KEY,  
    votingBlocSize INT NOT NULL  
);
```

```
CREATE TABLE PoliticalParty3 (  
    seatsInParliament INT PRIMARY KEY,  
    partystatus VARCHAR(100) NOT NULL  
);
```

```
CREATE TABLE Candidate1 (  
    name VARCHAR(255) PRIMARY KEY,  
    birth_date DATE NOT NULL,  
    sex CHAR(1) NOT NULL,  
    date DATE NOT NULL  
);
```

```
CREATE TABLE Candidate2 (  
    birth_date DATE PRIMARY KEY,  
    age INT NOT NULL  
);
```

```
CREATE TABLE Election_elect1 (  
    year INT NOT NULL,
```

University of British Columbia, Vancouver

Department of Computer Science

```
electoral_district_name VARCHAR(255) NOT NULL,  
ballot_count INT NOT NULL,  
votes_winner_got INT NOT NULL,  
PRIMARY KEY (year, electoral_district_name),  
FOREIGN KEY (electoral_district_name) REFERENCES ElectoralDistrict(name)  
);
```

```
CREATE TABLE Election_elect2 (  
    votes_winner_got INT PRIMARY KEY,  
    winner VARCHAR(255) NOT NULL  
);
```

```
CREATE TABLE MemberOfParliament1 (  
    name VARCHAR(255) NOT NULL,  
    electoral_district_name VARCHAR(255) NOT NULL,  
    year INT NOT NULL,  
    session VARCHAR(255) NOT NULL,  
    PRIMARY KEY (name, electoral_district_name, year),  
    FOREIGN KEY (electoral_district_name) REFERENCES ElectoralDistrict(name)  
);
```

```
CREATE TABLE MemberOfParliament2 (  
    electoral_district_name VARCHAR(255) PRIMARY KEY,  
    seat_number INT NOT NULL,  
    FOREIGN KEY (electoral_district_name) REFERENCES ElectoralDistrict(name)  
);
```

```
CREATE TABLE PrimeMinister (  
    name VARCHAR(255) PRIMARY KEY,  
    PM_number INT NOT NULL  
);
```

```
CREATE TABLE Senator_Recommend_PGmembership1 (  
    name VARCHAR(255) PRIMARY KEY,  
    birth_date DATE NOT NULL,  
    sex CHAR(1) NOT NULL,  
    age INT NOT NULL,  
    pm_name VARCHAR(255) NOT NULL,  
    pg_name VARCHAR(255) NOT NULL,  
    FOREIGN KEY (pm_name) REFERENCES PrimeMinister(name),  
    FOREIGN KEY (pg_name) REFERENCES ParliamentaryGroup(name)  
);
```

University of British Columbia, Vancouver

Department of Computer Science

```
CREATE TABLE Senator_Recommend_PGmembership2 (  
    pg_name VARCHAR(255) PRIMARY KEY,  
    date DATE NOT NULL,  
    FOREIGN KEY (pg_name) REFERENCES ParliamentaryGroup(name)  
);
```

```
CREATE TABLE Cabinet (  
    name VARCHAR(255) PRIMARY KEY,  
    ministry VARCHAR(255) NOT NULL,  
    FOREIGN KEY (name) REFERENCES MemberOfParliament1(name)  
);
```

```
CREATE TABLE ParliamentaryGroup (  
    name VARCHAR(255) PRIMARY KEY,  
    year_founded DATE NOT NULL  
);
```

```
CREATE TABLE Cmembership1 (  
    mp_name VARCHAR(255) NOT NULL,  
    committee_name VARCHAR(255) NOT NULL,  
    committee_type VARCHAR(255) NOT NULL,  
    PRIMARY KEY (mp_name, committee_name),  
    FOREIGN KEY (mp_name) REFERENCES MemberOfParliament1(name)  
);
```

```
CREATE TABLE Cmembership2 (  
    committee_name VARCHAR(255) PRIMARY KEY,  
    committee_type VARCHAR(255) NOT NULL  
);
```

```
CREATE TABLE Svote (  
    yea_nay CHAR(1) NOT NULL,  
    reading INT NOT NULL  
);
```

```
CREATE TABLE MPvote (  
    yea_nay CHAR(1) NOT NULL,  
    reading INT NOT NULL  
);
```

```
CREATE TABLE Bill_Introduce1 (  
    mp_name VARCHAR(255) NOT NULL,  
    bill_number INT NOT NULL,
```

University of British Columbia, Vancouver

Department of Computer Science

```
    title VARCHAR(255) NOT NULL,  
    date DATE NOT NULL,  
    PRIMARY KEY (mp_name, bill_number),  
    FOREIGN KEY (mp_name) REFERENCES MemberOfParliament1(name)  
);
```

```
CREATE TABLE Bill_Introduce2 (  
    title VARCHAR(255) PRIMARY KEY,  
    content TEXT NOT NULL  
);
```

```
CREATE TABLE Consider_Amend (  
    committee_name VARCHAR(255) NOT NULL,  
    bill_number INT NOT NULL,  
    PRIMARY KEY (committee_name, bill_number),  
    FOREIGN KEY (committee_name) REFERENCES Cmembership2(committee_name),  
    FOREIGN KEY (bill_number) REFERENCES Bill_Introduce1(bill_number)  
);
```

```
CREATE TABLE Affiliate (  
    political_party_name VARCHAR(255) NOT NULL,  
    parliamentary_group_name VARCHAR(255) NOT NULL,  
    PRIMARY KEY (political_party_name, parliamentary_group_name),  
    FOREIGN KEY (political_party_name) REFERENCES PoliticalParty1(name),  
    FOREIGN KEY (parliamentary_group_name) REFERENCES ParliamentaryGroup(name)  
);
```


University of British Columbia, Vancouver

Department of Computer Science

INSERT statements

INSERT INTO PrimeMinister (name, PM_number)

VALUES ('Justin Trudeau', 23),

 ('Stephen Harper', 22),

 ('Paul Martin', 21),

 ('Jean Chrétien', 20),

 ('Kim Campbell', 19);

INSERT INTO ElectoralDistrict (name, population, district_category, province)

VALUES ('Papineau', 110750, 'Urban', 'Quebec'),

 ('Toronto Centre', 103570, 'Urban', 'Ontario'),

 ('Vancouver Quadra', 120500, 'Urban', 'British Columbia'),

 ('Calgary Heritage', 135000, 'Urban', 'Alberta'),

 ('St. John's East', 87000, 'Rural', 'Newfoundland and Labrador');

-- PoliticalParty1 (Main party details)

INSERT INTO PoliticalParty1 (name, ideology, date_registered, seatsInParliament)

VALUES ('Liberal Party', 'Liberalism', '1867-07-01', 160),

 ('Conservative Party', 'Conservatism', '2003-12-08', 119),

 ('New Democratic Party', 'Social democracy', '1961-08-03', 25),

 ('Bloc Québécois', 'Quebec nationalism', '1991-06-15', 32),

 ('Green Party', 'Green politics', '1983-07-01', 2);

-- PoliticalParty2 (Voting bloc sizes by ideology, total = 100)

INSERT INTO PoliticalParty2 (ideology, votingBlocSize)

VALUES ('Liberalism', 40),

 ('Conservatism', 35),

 ('Social democracy', 15),

 ('Quebec nationalism', 7),

 ('Green politics', 3);

-- PoliticalParty3 (Seats in Parliament to party status)

INSERT INTO PoliticalParty3 (seatsInParliament, partystatus)

VALUES (160, 'Majority'),

 (119, 'Opposition'),

 (25, 'Minority'),

 (32, 'Minority'),

 (2, 'Minority');

University of British Columbia, Vancouver

Department of Computer Science

-- Candidate1 (Personal details of candidates)

```
INSERT INTO Candidate1 (name, birth_date, sex, date)
VALUES ('Justin Trudeau', '1971-12-25', 'M', '2015-10-19'),
      ('Jagmeet Singh', '1979-01-02', 'M', '2019-10-21'),
      ('Erin O\Toole', '1973-01-22', 'M', '2021-09-20'),
      ('Yves-François Blanchet', '1965-04-16', 'M', '2019-10-21'),
      ('Annamie Paul', '1972-11-03', 'F', '2021-09-20');
```

-- Candidate2 (Mapping birth date to age)

```
INSERT INTO Candidate2 (birth_date, age)
VALUES ('1971-12-25', 51),
      ('1979-01-02', 44),
      ('1973-01-22', 50),
      ('1965-04-16', 59),
      ('1972-11-03', 52);
```

-- Election_elect1 (Election details)

```
INSERT INTO Election_elect1 (year, electoral_district_name, ballot_count, votes_winner_got)
VALUES (2019, 'Papineau', 50000, 30000),
      (2021, 'Toronto Centre', 45000, 28000),
      (2021, 'Vancouver Quadra', 60000, 40000),
      (2021, 'Calgary Heritage', 55000, 35000),
      (2021, 'St. John\'s East', 30000, 15000);
```

-- Election_elect2 (Election winners)

```
INSERT INTO Election_elect2 (votes_winner_got, winner)
VALUES (30000, 'Justin Trudeau'),
      (28000, 'Chrystia Freeland'),
      (40000, 'Joyce Murray'),
      (35000, 'Bob Benzen'),
      (15000, 'Mary Shortall');
```

-- MemberOfParliament1 (Personal details of MPs)

```
INSERT INTO MemberOfParliament1 (name, electoral_district_name, year, session)
VALUES ('Justin Trudeau', 'Papineau', 2021, '43rd'),
      ('Chrystia Freeland', 'Toronto Centre', 2021, '43rd'),
      ('Joyce Murray', 'Vancouver Quadra', 2021, '43rd'),
      ('Bob Benzen', 'Calgary Heritage', 2021, '43rd'),
      ('Mary Shortall', 'St. John\'s East', 2021, '43rd');
```

-- MemberOfParliament2 (Mapping electoral district to seat number)

```
INSERT INTO MemberOfParliament2 (electoral_district_name, seat_number)
VALUES ('Papineau', 1),
```

University of British Columbia, Vancouver

Department of Computer Science

```
('Toronto Centre', 2),  
('Vancouver Quadra', 3),  
('Calgary Heritage', 4),  
('St. John\'s East', 5);
```

```
-- Senator_Recommend_PGmembership1 (Personal details and party/group affiliation)  
INSERT INTO Senator_Recommend_PGmembership1 (name, birth_date, sex, age, pm_name,  
pg_name)  
VALUES ('Marc Gold', '1950-06-15', 'M', 73, 'Justin Trudeau', 'Independent Senators Group'),  
('Peter Boehm', '1954-04-27', 'M', 70, 'Justin Trudeau', 'Progressive Senate Group'),  
('Lucie Moncion', '1956-09-25', 'F', 67, 'Justin Trudeau', 'Independent Senators Group'),  
('Raymonde Saint-Germain', '1955-04-05', 'F', 69, 'Justin Trudeau', 'Independent Senators  
Group'),  
('René Cormier', '1957-12-27', 'M', 65, 'Justin Trudeau', 'Independent Senators Group');
```

```
-- Senator_Recommend_PGmembership2 (Parliamentary group membership dates)  
INSERT INTO Senator_Recommend_PGmembership2 (pg_name, date)  
VALUES ('Independent Senators Group', '2016-12-06'),  
('Progressive Senate Group', '2020-03-15'),  
('Canadian Senators Group', '2019-11-04'),  
('Conservative Party Senate Caucus', '2003-12-08'),  
('Liberal Party Senate Caucus', '1867-07-01');
```

```
-- Cabinet  
INSERT INTO Cabinet (name, ministry)  
VALUES ('Justin Trudeau', 'Prime Minister'),  
('Chrystia Freeland', 'Deputy Prime Minister'),  
('Joyce Murray', 'Minister of Fisheries, Oceans, and the Canadian Coast Guard'),  
('Bill Blair', 'Minister of National Defence'),  
('Anita Anand', 'President of the Treasury Board');
```

```
-- ParliamentaryGroup  
INSERT INTO ParliamentaryGroup (name, year_founded)  
VALUES ('Independent Senators Group', '2016-12-06'),  
('Progressive Senate Group', '2020-03-15'),  
('Canadian Senators Group', '2019-11-04'),  
('Conservative Party Senate Caucus', '2003-12-08'),  
('Liberal Party Senate Caucus', '1867-07-01');
```

```
-- Cmembership1 (MP committee membership)  
INSERT INTO Cmembership1 (mp_name, committee_name, committee_type)  
VALUES ('Justin Trudeau', 'Finance Committee', 'Standing'),  
('Chrystia Freeland', 'Foreign Affairs Committee', 'Standing'),
```

University of British Columbia, Vancouver

Department of Computer Science

```
('Joyce Murray', 'Environment Committee', 'Standing'),  
( 'Bob Benzen', 'Public Safety Committee', 'Standing'),  
( 'Mary Shortall', 'Health Committee', 'Standing');
```

-- Cmembership2 (Committee details)

```
INSERT INTO Cmembership2 (committee_name, committee_type)  
VALUES ('Finance Committee', 'Standing'),  
( 'Foreign Affairs Committee', 'Standing'),  
( 'Environment Committee', 'Standing'),  
( 'Public Safety Committee', 'Standing'),  
( 'Health Committee', 'Standing');
```

-- Svote

```
INSERT INTO Svote (yea_nay, reading)  
VALUES ('Y', 1),  
( 'N', 1),  
( 'Y', 2),  
( 'N', 2),  
( 'Y', 3);
```

-- MPvote

```
INSERT INTO MPvote (yea_nay, reading)  
VALUES ('Y', 1),  
( 'N', 1),  
( 'Y', 2),  
( 'N', 2),  
( 'Y', 3);
```

-- Bill_Introduce1 (Bill introduction details)

```
INSERT INTO Bill_Introduce1 (mp_name, bill_number, title, date)  
VALUES ('Justin Trudeau', 1, 'Climate Action Plan', '2021-12-10'),  
( 'Chrystia Freeland', 2, 'National Healthcare Strategy', '2021-11-15'),  
( 'Joyce Murray', 3, 'Ocean Protection Act', '2021-10-25'),  
( 'Bob Benzen', 4, 'Economic Recovery Act', '2021-09-30'),  
( 'Mary Shortall', 5, 'Workers Protection Act', '2021-08-15');
```

-- Bill_Introduce2 (Bill content)

```
INSERT INTO Bill_Introduce2 (title, content)  
VALUES ('Climate Action Plan', 'An act to address climate change through carbon pricing.'),  
( 'National Healthcare Strategy', 'An act to create a unified national healthcare strategy.'),  
( 'Ocean Protection Act', 'An act to protect Canadian waters and marine life.'),  
( 'Economic Recovery Act', 'An act to stimulate economic growth post-pandemic.'),
```

University of British Columbia, Vancouver

Department of Computer Science

('Workers Protection Act', 'An act to enhance rights and protections for Canadian workers.');

-- Consider_Amend

INSERT INTO Consider_Amend (committee_name, bill_number)

VALUES ('Finance Committee', 1),
('Foreign Affairs Committee', 2),
('Environment Committee', 3),
('Public Safety Committee', 4),
('Health Committee', 5);

-- Affiliate

INSERT INTO Affiliate (political_party_name, parliamentary_group_name)

VALUES ('Liberal Party', 'Liberal Party Senate Caucus'),
('Conservative Party', 'Conservative Party Senate Caucus'),
('Bloc Québécois', 'Canadian Senators Group'),
('Green Party', 'Independent Senators Group'),
('New Democratic Party', 'Progressive Senate Group');