

University of British Columbia, Department of Computer Science

CPSC 304

Winter 2018 Term 2

Project Part 2

Group Members:

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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 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

SQL DDL

```
CREATE TABLE Officer (  
    ID            INTEGER,  
    Address       CHAR(30),  
    Name          CHAR(20),  
    PRIMARY KEY (ID) )
```

FD: ID -> Address, Name

Closure: ID+ = ID, Address, Name

The table is in BCNF, we don't have any FDs that violates BCNF

```
CREATE TABLE Record (  
    ID            INTEGER,  
    Description   CHAR(100),  
    PRIMARY KEY (ID) )
```

FD: ID -> Description

Closure: ID+ = ID, Description

The table is in BCNF, we don't have any FDs that violates BCNF

```
CREATE TABLE Charge (  
    officerID     INTEGER,  
    recordID      INTEGER,  
    PRIMARY KEY (officerID, recordID)  
    FOREIGN KEY (offierID) REFERENCES Officer )
```

FD: None,

Key: officerID, recordID

The table is in 2NF

//

```
Create table peopleInvolved (  
    //connect record id with SIN  
    recordID      INTEGER foreign key references record(ID),  
    Sin           INTEGER foreign key references people(SIN),  
    Primary key(record id, sin)  
  
)
```

```
CREATE TABLE People (  
    PhoneNumber   CHAR (15),
```

SIN INTEGER,
Name CHAR (20),
Address CHAR (20),
PRIMARY KEY (SIN))

FD: SIN -> PhoneNumber, Name, Address

Closure : SIN+ = SIN, PhoneNumber, Name, Address

The table is in BCNF

CREATE TABLE Court (
 RecordID INTEGER,
 CourtID INTEGER,
 Judge CHAR(20),
 Description CHAR(300),
 Result CHAR(300),
 PRIMARY KEY (CourtID),
 FOREIGN KEY (RecordID) references Record) ON UPDATE CASCADE)

FD: CourtID -> Judge, RecordID, Description, Result

Closure: CourtID+ = CourtID, Judge, RecordID, Description, Result

The table is in 3NF

CREATE TABLE CriminalType (
 TypeName CHAR(10),
 Frequency INTEGER,
 PRIMARY KEY (TypeName, Frequency))

FD: None

The table is in 2NF

CREATE TABLE CriminalRecordType (
 RecordID INTEGER,
 TypeName CHAR(10),
 PRIMARY KEY (RecordID, TypeName),
 FOREIGN KEY (RecordID) REFERENCES (Record),
 FOREIGN KEY (TypeName) REFERENCES (CriminalType)
)

FD: None

Keys: RecordID, TypeName. The table is in 3NF.

Tables

Officer

Address	<u>Officer ID</u>	Name
6482 Maple Dr.	45935828	Andrews, Reggie
333 York St.	12546322	Spaidel, Chris
7982 Coombs Blvd.	34565328	Krause, Darren
59 Alaska Way	24454532	Liu, Emilia
1778 Barrett Ave.	15565757	La Fleur, Sonia

Record

<u>Record ID</u>	Description
XTY-PHW	Olivia Champion, 1 Counts Homicide December 10, 2006
PSH-TED	Curtis Frisch, 2 Counts Arson July 11, 2008
MEP-HGF	John Yoder, 3 Counts Burglary, June 13, 2012
WEH-XQR	Bobby Johnson, 2 Counts Assault, May 7, 2016
LKS-PYT	Andrew Rice, 8 Counts Public Indecency, 2 Counts Homocide, September 22, 2017

Charge

Officer ID	Record ID
45935828	XTY-PHW
12546322	PSH-TED
34565328	MEP-HGF
24454532	WEH-XQR
15565757	LKS-PYT

Date

<u>year</u>	<u>month</u>	<u>day</u>	<u>time</u>
2003	02	15	15:30:46
2003	04	21	06:11:55
2005	01	18	10:24:03
2006	05	31	20:31:33
2006	06	08	17:45:32
2006	12	10	16:00:39
2008	07	11	12:42:54
2012	06	13	10:11:20
2016	05	07	18:42:44
2017	09	22	21:45:13

Officer Date

<u>Officer ID</u>	<u>year</u>	<u>month</u>	<u>day</u>	<u>time</u>
45935828	2003	02	15	15:30:46
12546322	2003	04	21	06:11:55
34565328	2005	01	18	10:24:03
24454532	2006	05	31	20:31:33
15565757	2006	06	08	17:45:32

Record Date

<u>Record ID</u>	<u>year</u>	<u>month</u>	<u>day</u>	<u>time</u>
XTY-PHW	2006	12	10	16:00:39
PSH-TED	2008	07	11	12:42:54
MEP-HGF	2012	06	13	10:11:20
WEH-XQR	2016	05	07	18:42:44
LKS-PYT	2017	09	22	21:45:13

People

Phone #	<u>SIN</u>	name	address
587-230-4753	362 551 764	Champion, Olivia	1395 Churchill Plaza
604-221-2683	360 978 753	Frisch, Curtis	2231 Glen Long Ave
403-879-2849	251 161 287	Yoder, John	4888 Dundas St
289-298-3966	580 372 514	Johnson, Bobby	2540 Maclaren St
289-857-7824	321 470 635	Rice, Andrew	1308 Bay St

Court

Record ID	Trial ID	Judge	Description
XTY-PHW	0864-1000	Jehangiri, Bashir	Olivia Champion was found guilty and charged with a first degree murder. Serving time: 15 years
PSH-TED	1244-8675	Dogar, Abdul Hameed	Curtis Fisch was found guilty and charged with arson - damage to property. Serving time: 3 months + 1 year community service
MEP-HGF	3672-3099	Rahman, Hamoodur	John Yonder was found not guilty
WEH-XQR	5987-1234	Cornelius, Alvin Robert	Bobby Johnson was charged with domestic assault and found guilty. Serving time: 8 months + \$20,000 fine
LKS-PYT	3517-8008	Mian, Ajmal	Andrew Rice was charged with public indecency and involuntary manslaughter and found guilty for both offences. Serving time: 14 months + \$100,000 fine

Involved

Record ID	SIN
XTY-PHW	362 551 764
PSH-TED	360 978 753
MEP-HGF	251 161 287
WEH-XQR	580 372 514
LKS-PYT	321 470 635

Criminal Type

Type Name	Frequency
Homicide	1
Homicide	2
Arson	2
Assault	2
Burglary	3
Public indecency	8