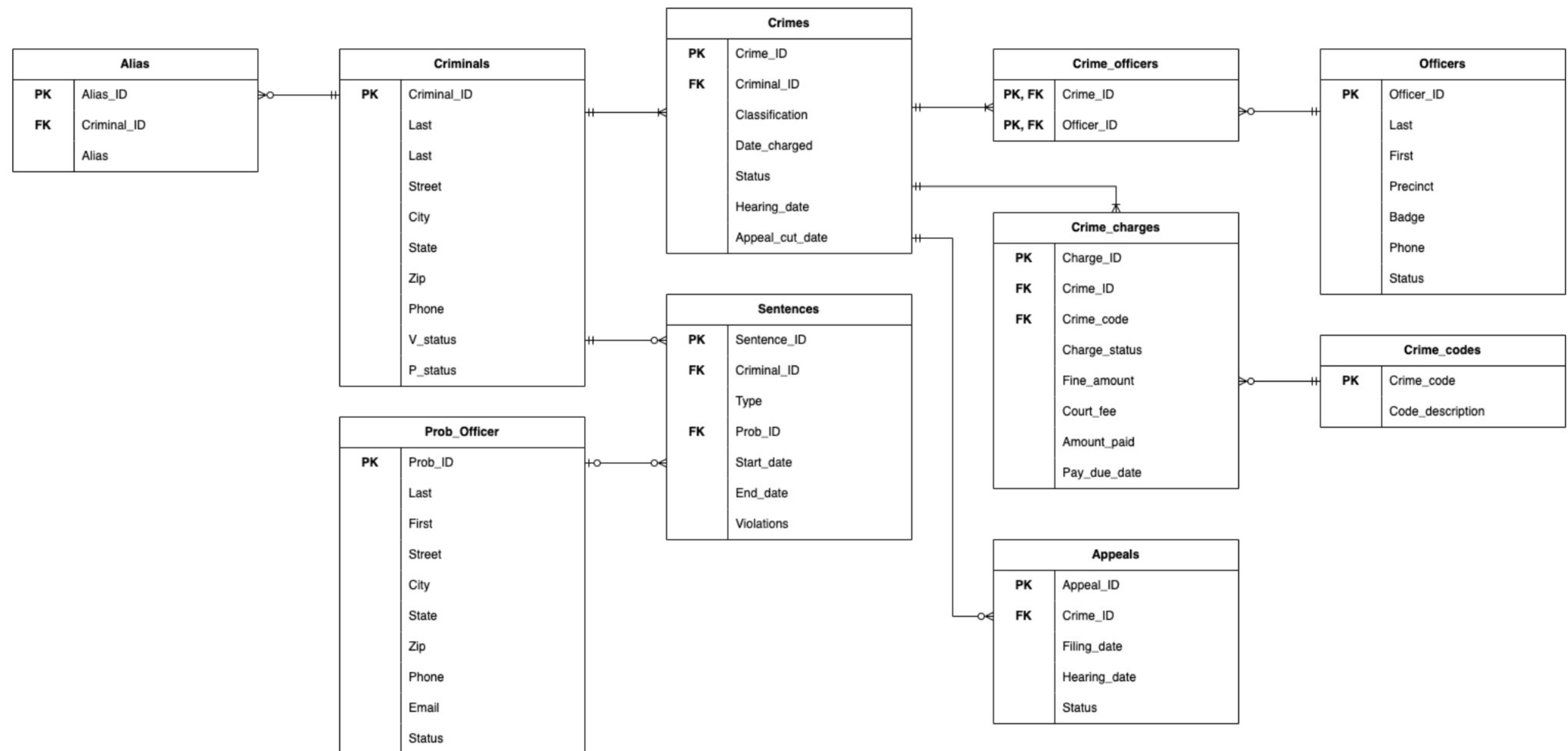


## Updated E-R Diagram



## Database Server

We plan to host a MySQL database on DigitalOcean.

### Table Schemas (a)

SQL localhost:3306 ssl SQL > DESC Aliases;					
Field	Type	Null	Key	Default	Extra
Alias_ID	decimal(6,0)	NO	PRI	NULL	
Criminal_ID	decimal(6,0)	YES	MUL	NULL	
Alias	varchar(20)	YES		NULL	

3 rows in set (0.0021 sec)

SQL localhost:3306 ssl SQL > DESC Criminals;					
Field	Type	Null	Key	Default	Extra
Criminal_ID	decimal(6,0)	NO	PRI	NULL	
Last	varchar(15)	YES		NULL	
First	varchar(10)	YES		NULL	
Street	varchar(30)	YES		NULL	
City	varchar(20)	YES		NULL	
State	char(2)	YES		NULL	
Zip	char(5)	YES		NULL	
Phone	char(10)	YES		NULL	
V_status	char(1)	YES		N	
P_status	char(1)	YES		N	

Stickies

Field	Type	Null	Key	Default	Extra
Crime_ID	decimal(9,0)	NO	PRI	NULL	
Criminal_ID	decimal(6,0)	YES	MUL	NULL	
Classification	char(1)	YES		U	
Date_charged	date	YES		NULL	
Status	char(2)	NO		NULL	
Hearing_date	date	YES		NULL	
Appeal_cut_date	date	YES		NULL	

Field	Type	Null	Key	Default	Extra
Sentence_ID	decimal(6,0)	NO	PRI	NULL	
Criminal_ID	decimal(6,0)	YES	MUL	NULL	
Type	char(1)	YES		NULL	
Prob_ID	decimal(5,0)	YES	MUL	NULL	
Start_date	date	YES		NULL	
End_date	date	YES		NULL	
Violations	decimal(3,0)	NO		NULL	

Field	Type	Null	Key	Default	Extra
Prob_ID	decimal(5,0)	NO	PRI	NULL	
Last	varchar(15)	YES		NULL	
First	varchar(10)	YES		NULL	
Street	varchar(30)	YES		NULL	
City	varchar(20)	YES		NULL	
State	char(2)	YES		NULL	
Zip	char(5)	YES		NULL	
Phone	char(10)	YES		NULL	
Email	varchar(30)	YES		NULL	
Status	char(1)	NO		NULL	

Field	Type	Null	Key	Default	Extra
Charge_ID	decimal(10,0)	NO	PRI	NULL	
Crime_ID	decimal(9,0)	YES	MUL	NULL	
Crime_code	decimal(3,0)	YES	MUL	NULL	
Charge_status	char(2)	YES		NULL	
Fine_amount	decimal(7,2)	YES		NULL	
Court_fee	decimal(7,2)	YES		NULL	
Amount_paid	decimal(7,2)	YES		NULL	
Pay_due_date	date	YES		NULL	

5 rows in set (0.001 sec)						
Field	Type	Null	Key	Default	Extra	
Crime_ID	decimal(9,0)	NO	PRI	NULL		
Officer_ID	decimal(8,0)	NO	PRI	NULL		

5 rows in set (0.001 sec)						
Field	Type	Null	Key	Default	Extra	
Officer_ID	decimal(8,0)	NO	PRI	NULL		
Last	varchar(15)	YES		NULL		
First	varchar(10)	YES		NULL		
Precinct	char(4)	NO		NULL		
Badge	varchar(14)	YES	UNI	NULL		
Phone	char(10)	YES		NULL		
Status	char(1)	YES		A		

5 rows in set (0.001 sec)						
Field	Type	Null	Key	Default	Extra	
Appeal_ID	decimal(5,0)	NO	PRI	NULL		
Crime_ID	decimal(9,0)	YES	MUL	NULL		
Filling_date	date	YES		NULL		
Hearing_date	date	YES		NULL		
Status	char(1)	YES		P		

5 rows in set (0.001 sec)						
Field	Type	Null	Key	Default	Extra	
Crime_code	decimal(3,0)	NO	PRI	NULL		
Code_description	varchar(30)	NO	UNI	NULL		

## Table Schemas (b)

Your SQL query has been executed successfully.

```
SELECT COUNT(*) from aliases;
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

Extra options

COUNT(\*)

10

Your SQL query has been executed successfully.

```
SELECT COUNT(*) from appeals;
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

Extra options

**COUNT(\*)**

10

Your SQL query has been executed successfully.

```
SELECT COUNT(*) from crimes;
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

Extra options

**COUNT(\*)**

10

Your SQL query has been executed successfully.

```
SELECT COUNT(*) from crime_charges;
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

Extra options

**COUNT(\*)**

10

Your SQL query has been executed successfully.

```
SELECT COUNT(*) from crime_codes;
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

Extra options

**COUNT(\*)**

10

Your SQL query has been executed successfully.

```
SELECT COUNT(*) from crime_officers;
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

Extra options

**COUNT(\*)**

10

Your SQL query has been executed successfully.

```
SELECT COUNT(*) from criminals;
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

Extra options

**COUNT(\*)**

10

Your SQL query has been executed successfully.

```
SELECT COUNT(*) from officers;
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

Extra options

**COUNT(\*)**

10

Your SQL query has been executed successfully.

```
SELECT COUNT(*) from prob_officers;
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

Extra options

**COUNT(\*)**

10

Your SQL query has been executed successfully.

```
SELECT COUNT(*) from sentences;
```

Profiling [ Edit inline ] [ Edit ] [ Explain SQL ] [ Create PHP code ] [ Refresh ]

Extra options

**COUNT(\*)**

10

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## Data Sample

Alias_ID	Criminal_ID	Alias
200001	100001	Johnny
200002	100002	JJ
200003	100003	Jimbo
200004	100004	Lindy
200005	100005	Bobby
200006	100006	Ria
200007	100007	Mike
200008	100008	Sue

200009	100009	Pepe
200010	100010	Angie

Appeal_ID	Crime_ID	Filling_date	Hearing_date	Status
90001	300000001	2023-03-21	2023-04-21	P
90002	300000002	2023-03-23	2023-04-23	A
90003	300000003	2023-03-25	2023-04-25	D
90004	300000004	2023-03-27	2023-04-27	P
90005	300000005	2023-03-29	2023-04-29	A
90006	300000006	2023-04-01	2023-05-01	D
90007	300000007	2023-04-03	2023-05-03	P
90008	300000008	2023-04-05	2023-05-05	A
90009	300000009	2023-04-07	2023-05-07	D
90010	300000010	2023-04-09	2023-05-09	P

Crime_ID	Criminal_ID	Classification	Date_charged	Status	Hearing_date	Appeal_cut_date
300000001	100001	F	2023-01-10	CL	2023-02-20	2023-03-20
300000002	100002	M	2023-01-12	CA	2023-02-22	2023-03-22
300000003	100003	O	2023-01-14	IA	2023-02-24	2023-03-24
300000004	100004	U	2023-01-16	CL	2023-02-26	2023-03-26
300000005	100005	F	2023-01-18	CA	2023-02-28	2023-03-28
300000006	100006	M	2023-01-20	IA	2023-03-02	2023-04-02
300000007	100007	O	2023-01-22	CL	2023-03-04	2023-04-04
300000008	100008	U	2023-01-24	CA	2023-03-06	2023-04-06
300000009	100009	F	2023-01-26	IA	2023-03-08	2023-04-08
300000010	100010	M	2023-01-28	CL	2023-03-10	2023-04-10

Charge_ID	Crime_ID	Crime_code	Charge_status	Fine_amount	Court_fee	Amount_paid	Pay_due_date
7000000001	300000001	101	PD	500.00	150.00	650.00	2023-03-20
7000000002	300000002	102	GL	1000.00	200.00	1200.00	2023-03-22
7000000003	300000003	103	NG	1500.00	250.00	0.00	2023-03-24
7000000004	300000004	104	PD	2000.00	300.00	2300.00	2023-03-26
7000000005	300000005	105	GL	2500.00	350.00	2850.00	2023-03-28
7000000006	300000006	106	NG	3000.00	400.00	0.00	2023-04-02
7000000007	300000007	107	PD	3500.00	450.00	3950.00	2023-04-04
7000000008	300000008	108	GL	4000.00	500.00	4500.00	2023-04-06
7000000009	300000009	109	NG	4500.00	550.00	0.00	2023-04-08
7000000010	300000010	110	PD	5000.00	600.00	5600.00	2023-04-10

Crime_code	Code_description
109	Arson
103	Assault
101	Burglary
107	Drug Possession
106	Fraud
110	Kidnapping
104	Murder
102	Robbery

105 Theft

108 Vandalism

Crime_ID	Officer_ID
300000001	80000001
300000002	80000002
300000003	80000003
300000004	80000004
300000005	80000005
300000006	80000006
300000007	80000007
300000008	80000008
300000009	80000009
300000010	80000010

Criminal_ID	Last	First	Street	City	State	Zip	Phone	V_status	P_status
100001	Smith	John	123 Elm St	Springfield	IL	62704	2175550123	Y	N
100002	Johnson	Jane	456 Oak St	Decatur	IL	62521	2175550145	N	Y
100003	Williams	James	789 Pine St	Chicago	IL	60607	3125550198	Y	N
100004	Brown	Linda	101 Maple St	Aurora	IL	60506	6305550133	N	Y
100005	Jones	Robert	202 Birch St	Naperville	IL	60540	6305550110	Y	N
100006	Garcia	Maria	303 Cedar St	Peoria	IL	61602	3095550155	N	Y
100007	Miller	Michael	404 Spruce St	Elgin	IL	60120	8475550187	Y	N
100008	Davis	Susan	505 Aspen St	Rockford	IL	61101	8155550122	N	Y
100009	Rodriguez	Jose	606 Fir St	Joliet	IL	60431	8155550144	Y	N
100010	Martinez	Angela	707 Elm St	Springfield	IL	62704	2175550166	N	Y

Officer_ID	Last	First	Precinct	Badge	Phone	Status
80000001	Hart	Kevin	1234	BADGE1234	3125550001	A
80000002	Black	Jack	5678	BADGE5678	3125550002	I
80000003	King	Regina	9101	BADGE9101	3125550003	A
80000004	Smith	Will	1123	BADGE1123	3125550004	I
80000005	Jones	Felicity	4567	BADGE4567	3125550005	A
80000006	Brown	Chris	8910	BADGE8910	3125550006	I
80000007	Davis	Viola	2134	BADGE2134	3125550007	A
80000008	Wilson	Russell	5679	BADGE5679	3125550008	I
80000009	Taylor	James	9112	BADG9112	3125550009	A
80000010	Moore	Julianne	1135	BADGE1135	3125550010	I

Prob_ID	Last	First	Street	City	State	Zip	Phone	Email	Status
40001	Anderson	Bill	111 A St	Springfield	IL	62701	2175550200	banderson@example.com	A
40002	Thompson	Karen	222 B St	Decatur	IL	62522	2175550220	kthompson@example.com	I
40003	Jackson	Steve	333 C St	Chicago	IL	60601	3125550240	sjackson@example.com	A
40004	White	Nancy	444 D St	Aurora	IL	60505	6305550260	nwhite@example.com	I
40005	Harris	Laura	555 E St	Naperville	IL	60565	6305550280	lharris@example.com	A
40006	Martin	Gary	666 F St	Peoria	IL	61601	3095550300	gmartin@example.com	I
40007	Clark	Diane	777 G St	Elgin	IL	60123	8475550320	dclark@example.com	A
40008	Lewis	Frank	888 H St	Rockford	IL	61107	8155550340	flewis@example.com	I

40009	Walker	Julie	999 I St	Joliet	IL	60435	8155550360	jwalker@example.com	A
40010	Allen	Tim	1010 J St	Springfield	IL	62702	2175550380	tallen@example.com	I

Sentence_ID	Criminal_ID	Type	Prob_ID	Start_date	End_date	Violations
500001	100001	J	40001	2023-03-01	2024-03-01	0
500002	100002	H	40002	2023-04-01	2024-04-01	1
500003	100003	P	40003	2023-05-01	2024-05-01	2
500004	100004	J	40004	2023-06-01	2024-06-01	0
500005	100005	H	40005	2023-07-01	2024-07-01	1
500006	100006	P	40006	2023-08-01	2024-08-01	2
500007	100007	J	40007	2023-09-01	2024-09-01	0
500008	100008	H	40008	2023-10-01	2024-10-01	1
500009	100009	P	40009	2023-11-01	2024-11-01	2
500010	100010	J	40010	2023-12-01	2024-12-01	0

### Basic SQL Commands

- CREATE TABLE Criminals
- CREATE TABLE Aliases
- CREATE TABLE Crimes
- CREATE TABLE Prob\_officers
- CREATE TABLE Sentences
- CREATE TABLE Crime\_codes
- CREATE TABLE Crime\_charges
- CREATE TABLE Officers
- CREATE TABLE Crime\_officers
- CREATE TABLE Appeals
- PROCEDURE insert\_criminal
- PROCEDURE insert\_alias
- PROCEDURE insert\_crime
- PROCEDURE insert\_prob\_officer
- PROCEDURE insert\_sentence
- PROCEDURE insert\_crime\_code
- PROCEDURE insert\_crime\_charge
- PROCEDURE insert\_officer
- PROCEDURE insert\_crime\_officer
- PROCEDURE insert\_appeal
- PROCEDURE get\_aliases\_by\_criminal\_id
- PROCEDURE get\_appeal\_by\_id
- PROCEDURE get\_appeals\_by\_crime\_id
- PROCEDURE get\_criminal\_by\_id
- PROCEDURE get\_criminal\_by\_name
- PROCEDURE get\_crime\_by\_id

- PROCEDURE get\_crimes\_by\_criminal\_id
  - PROCEDURE get\_crimes\_by\_officer\_id
  - PROCEDURE get\_crime\_code\_by\_charge\_id
  - PROCEDURE get\_prob\_officer\_by\_id
  - PROCEDURE get\_prob\_officer\_by\_name
  - PROCEDURE get\_sentence\_by\_id
  - PROCEDURE get\_sentences\_by\_criminal\_id
  - PROCEDURE get\_charges\_by\_id
  - PROCEDURE get\_charges\_by\_crime\_id
  - PROCEDURE get\_charges\_by\_crime\_code
  - PROCEDURE get\_officer\_by\_id
  - PROCEDURE get\_officer\_by\_name
  - PROCEDURE get\_officers\_by\_crime\_id
  - PROCEDURE update\_criminal\_by\_id
  - PROCEDURE update\_alias\_by\_id
  - PROCEDURE update\_crime\_by\_id
  - PROCEDURE update\_prob\_officer\_by\_id
  - PROCEDURE update\_sentence\_by\_id
  - PROCEDURE update\_crime\_code\_by\_id
  - PROCEDURE update\_crime\_charge\_by\_id
  - PROCEDURE update\_officer\_by\_id
  - PROCEDURE update\_appeal\_by\_id
  - PROCEDURE delete\_criminal\_by\_id
  - PROCEDURE delete\_alias\_by\_id
  - PROCEDURE delete\_crime\_by\_id
  - PROCEDURE delete\_prob\_officer\_by\_id
  - PROCEDURE delete\_sentence\_by\_id
  - PROCEDURE delete\_crime\_code\_by\_id
  - PROCEDURE delete\_crime\_charge\_by\_id
  - PROCEDURE delete\_officer\_by\_id
  - PROCEDURE delete\_crime\_officer\_by\_id
  - PROCEDURE delete\_appeal\_by\_id
- 

## Advanced SQL Commands

- CHECK Crimes (Hearing\_date > Date\_charged)
- CHECK Sentences (End\_date > Start\_date)
- FUNCTION get\_Total\_fines(criminalID) RETURNS DECIMAL
- TRIGGER update\_Crime\_after\_Appeal
- TRIGGER update\_Criminal\_Probation\_status