

## Video 3: Mastering Complex Queries

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## Mastering Complex Queries

1. Learn to create master queries
2. Learn complex expressions
3. Learn strategies to study trends (“StatsByYear” queries, etc.)

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# Master Queries

Field:	CallNum	ArrestNum	WarrantNum	IncidentNum	TypeOfArrest	ReportedDate	ArrestDate
Table:	Master_Arrest_Table	Master_Arrest_Table	Master_Arrest_Table	Master_Arrest_Table	Master_Arrest_Table	Master_Arrest_Table	Master_Arrest_Table
Sort:							Descending
Show:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Criteria:							>="20150101"
or:							

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# Master Queries Needed

## Master Crash Query

Provides an unduplicated count of crashes with details

## Master Crimes Query

Provides an unduplicated count of crimes with details and provides FI and events data.

## Master CAD Query

Provides an unduplicated count of calls for service

## Master Arrest Query

Provides all arrests reports and bases the IBR Description on hierarchy (duplicated in more than one person was arrested during one incident)

## Master Enforcement Query

Provides all enforcement activities

## Master Drug Arrest Query

Provides all Drug Arrests regardless of other crime committed

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# Complex Expressions

## If statements

**SuspectLocal?:** Iif([Town]="Nashua" or [Town]="Merrimack","Yes","No")

- Reads if town is Nashua or Merrimack, then make this field equal yes. If not, then make the field equal no.

**Shift:** Iif([CallTime] Between "0700" And "1500","Shift1",Iif([CallTime] Between "1501" And "2300","Shift2","Shift3"))

- Reads if the data in the field named call time is between 0700 and 1500, then call it shift 1. If the data in the field named call time is between 1501 and 2300, then call it shift 2. Otherwise, all others should be called shift 3.

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# Complex Expressions

## If statements

**Block:** Iif([CallTime] Between "0000" And "0359","0000-0400",Iif([CallTime] Between "0400" And "0759","0400-0800",Iif([CallTime] Between "0800" And "1159","0800-1200",Iif([CallTime] Between "1200" And "1559","1200-1600",Iif([CallTime] Between "1600" And "1959","1600-2000","2000-2400"))))))))

- Reads if the data in the field called call time is between 0000 and 0359, then call the field 0000-0400. If the data in the field call time is between 0400 and 0759, then call field 0400-0800...

DayOfWeek	0000-0400	0400-0800	0800-1200	1200-1600	1600-2000	2000-2400
Friday	1802	767	2821	2669	3148	2578
Monday	1408	775	2996	2717	2804	2083
Saturday	2188	580	2032	2281	2703	2486
Sunday	2076	458	1583	2055	2333	2028
Thursday	1581	861	3120	2827	3157	2336
Tuesday	1575	843	3087	2735	2916	2209
Wednesday	1666	896	3306	2677	2997	2223

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## Complex Expressions

### 1. Calculating ages

**Age: Int(([DateOfReport]-[DOB])/365.25)**

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## Complex Expressions

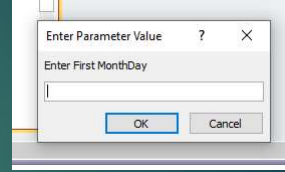
### 1. Calculating ages

**Age: Int(([DateOfReport]-[DOB])/365.25)**

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# Strategies to Study Trends

## 1. Stats By Year



Field:	IBRDescription	YEAR: Year([ReptDate])	Total: IIf(Count(*) Is Null,0,Count(*)	Format([ReptDate],\"mddd')
Table:	Master_Crimes_Table			
Total:	Group By	Group By	Expression	Where
Crosstab:	Row Heading	Column Heading	Value	
Sort:				
Criteria:				Between [Enter First MonthDay] And [Enter Last MonthDay]
or:				

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# Strategies to Study Trends

## 1. Stats By Year

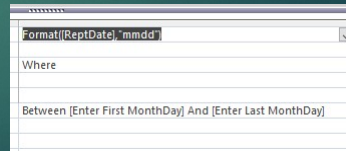
**Total: IIf(Count(\*) Is Null,0,Count(\*)**

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# Strategies to Study Trends

## 1. Stats By Year

`Format([ReptDate], "mmdd")`



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# Strategies to Study Trends

## 1. Stats By Year

IBRDescription	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
	113	389	331	397	525	0	469	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	3
a	0	0	0	0	0	0	0	0	0	1	0	0
Aggravated Assault	17	29	16	18	17	18	18	11	24	15	19	17
All Other Larceny	36	65	53	58	38	44	28	69	65	34	18	207
All Other Offenses	99	99	88	94	100	124	134	149	147	121	109	110
Arson	4	9	2	3	3	3	1	11	3	3	0	2
Bad Checks	2	3	3	3	4	2	2	1	0	1	4	2
Burglary / Breaking and Entering	80	71	102	73	77	70	58	105	66	56	28	30
Counterfeiting / Forgery	26	12	11	15	10	8	12	18	30	7	17	13
Credit Card / ATM Fraud	20	8	11	15	6	18	9	16	15	14	9	26
Destruction / Damage / Vandalism of Property	172	195	194	191	153	186	102	180	134	118	65	82
Disorderly Conduct	25	65	28	53	30	28	31	42	39	26	29	32

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# Strategies to Study Trends

## 1. Stats By Year for Threshold

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	IncidentType	2015	2016	2017	2018	2019	2020	Avg	Wtd. Avg.	St Dev	Normal Range	Change	Z Score
2	Rape	2	1	2	1	2	1	1.6	1.60	0.4899	1-2	-38%	-1.22
3	Indecent Assault	6	1	1	4	5	1	3.4	3.47	2.05913	1-5	-71%	-1.17
4	Peeping & Spying	0	0	1	0	0	2	0.2	0.20	0.4	0-1	900%	4.50
5	Aggravated Assault	11	14	6	5	8	11	8.8	7.80	3.31059	5-12	25%	0.66
6	Simple Assault	44	41	40	33	33	49	38.2	36.20	4.44522	34-43	28%	2.43
7	Robbery	5	0	3	2	3	2	2.6	2.47	1.62481	1-4	-23%	-0.37
8	Threats	32	23	26	12	16	31	21.8	18.93	7.11056	15-29	42%	1.29
9	Violation of RO	15	14	9	14	9	4	12.2	11.40	2.63818	10-15	-67%	-3.11
10	Housebreak	11	12	16	16	18	18	14.6	15.80	2.6533	12-17	23%	1.28
11	Commercial Break	15	11	12	14	12	8	12.8	12.60	1.46969	11-14	-38%	-3.27
12	Larceny from MV	61	73	67	62	43	90	61.2	58.07	10.0479	51-71	47%	2.87