



Escuela Técnica Superior de Ingenierías Informática y de Telecomunicación
Máster Profesional en Ingeniería Informática

Curso 2020/2021

PRÁCTICA 3

Cloud Computing: Servicios y Aplicaciones

Breve descripción

Consultas en MongoDB

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RESUMEN

Esta práctica consiste en realizar una serie de consultas a una base de datos documental en “*MongoDB*”. Se envía adjunto el código “*Python*” solución.

Los datos de origen son:

https://raw.githubusercontent.com/manuparra/MasterCyberSec_Practice/master/dataset/mongodb/SacramentocrimeJanuary2006.csv

Para realizar la práctica es necesario instalar “*MongoDB*”, cargar el conjunto de datos en “*MongoDB*” y luego realizar las consultas siguientes:

1. **Totalizar el número de delitos por cada tipo**
2. **Franja horaria (o franjas) con más número de delitos**

Se envía adjunto el código “*Python*” solución.



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1 EJERCICIO 1

Para totalizar el número de delitos por cada tipo he realizado he realizado la siguiente operación:

```
def count_different_crimes():
    print("\nTotalizar el número de delitos por cada tipo")
    collection = login()
    result = collection.aggregate(
        [{"group": {"_id": "$crimedescr", "count": {"$sum": 1}}}, {"sort": {"count": 1}}]
    )
    i = 0
    for res in result:
        print(res)
        i += 1
    print("Total de resultados: " + str(i))
```

Ilustración 1 - Código para el segundo ejercicio

Básicamente lo que hago es agrupar los delitos por su tipo con un agregado y contar cuantos hay de cada uno.

1.1 Solución

Hay un total de 304 tipos de delitos distintos. A continuación, se muestra el nombre de cada uno de ellos “_id” y el número de veces que se ha repetido “count”.

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{'_id': '12303.3 PC FIRE BOMB INT INJ', 'count': 1}
{'_id': '13.10.200 SCC DUMP PUB PLACES', 'count': 1}
{'_id': 'FILE-UNABLE TO DEFINE - I RPT', 'count': 1}
{'_id': '647(A) PC LEWD CONDUCT', 'count': 1}
{'_id': '836.6(B) PC ESCAPE FROM ARREST', 'count': 1}
{'_id': '278.5(A)DEPRIVE RIGHT OF CUSTO', 'count': 1}
{'_id': 'TRAFFIC ARREST FOR DA-I RPT', 'count': 1}
{'_id': '11358 HS CULTIVATE MARIJUANA', 'count': 1}
{'_id': '5.136.050 NO TAXICAB PERMIT', 'count': 1}
{'_id': '9.44.220 SCC ANIMAL AT LARGE', 'count': 1}
{'_id': '12303.3 PC DEST DVC INTENT INJ', 'count': 1}
{'_id': '602.1(A)TRES OBST BUSIN OPERAT', 'count': 1}
{'_id': '12025(A)2)CONCL GUN ON PER/MSD', 'count': 1}
{'_id': '197 JUSTIFIABLE HOMI-CIVILIAN', 'count': 1}
{'_id': '187(A) HOMICIDE', 'count': 1}
{'_id': '487(D) PC GRAND THEFT AUTO', 'count': 1}
{'_id': '243(C)(1)BATT EMERG PERSON-INJ', 'count': 1}
```

{'_id': '664/187(A) ATTEMPTED HOMICIDE', 'count': 1}

{'_id': '602.5 PC ENTRY OF PROPERTY', 'count': 1}

{'_id': '148.4(A)PC TAMPER FIRE PROT EQ', 'count': 1}

{'_id': '506 PC EMBEZZLEMENT/CONTRACTOR', 'count': 1}

{'_id': '290(A)(1)(A) FAIL REG-CHG ADD', 'count': 1}

{'_id': '496(A) PC REC STOLEN AUTO PART', 'count': 1}

{'_id': '9.04.050C POSS OPEN CONTAINER', 'count': 1}

{'_id': '212.5(B) ROB-VICINITY OF ATM', 'count': 1}

{'_id': '11351 HS POSS/SALE OPIATE/NARC', 'count': 1}

{'_id': '290(G)(1) FAIL TO REG SEX OFFE', 'count': 1}

{'_id': '25662(A)BP POSS ALC BY MINOR', 'count': 1}

{'_id': 'INTOX REPORT/ADMIN PER - I RPT', 'count': 1}

{'_id': 'VICE/GAMBLING ACT - I RPT', 'count': 1}

{'_id': 'FORGERY-COUNTERFEITING', 'count': 1}

{'_id': 'ABANDONED VEHICLE - I RPT', 'count': 1}

{'_id': '243(C)2 PC BATT/PO WITH INJURY', 'count': 1}

{'_id': '11366 HS MAINTN PLACE TO SELL', 'count': 1}

{'_id': 'JUVENILE OFFENDER-PROBATION', 'count': 1}

{'_id': '587C PC EVADE PAYMENT RAILFARE', 'count': 1}

{'_id': '498(B)(5) THEFT OF ELECTRICITY', 'count': 1}

{'_id': '9.04.070 URINATE/DEFECATE PUB', 'count': 1}

{'_id': '211 PC ROBBERY-BANK', 'count': 1}

{'_id': '12671 HS SALE/POSS ILLGL FRWRK', 'count': 1}

{'_id': 'HOMICIDE ASSAULT - I RPT', 'count': 1}

{'_id': '374.3(A) PC ILLEGAL DUMPING', 'count': 1}

{'_id': '14601(A) VC LIC SUSP NEGLIGENT', 'count': 1}

{'_id': '626.2 PC UNAUTH ENTRY CAMPUS', 'count': 1}

{'_id': '12025(B)6 UNREG/CONCLED FIREAR', 'count': 1}

{'_id': '23550.5 VC 4+DUI IN 10 YEARS', 'count': 1}

{'_id': '32 PC ACCESSORY TO A CRIME', 'count': 1}

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{'_id': '452(D)PC CAUSE FIRE OF PROPERT', 'count': 1}
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 {'_id': '245(C) AWDW/NO FIREARM/OFFICER', 'count': 1}
 {'_id': '11378 HS POSS CNTRL SUB/SALE', 'count': 1}
 {'_id': '25632 BP CONSM ALC AFT CLOSING', 'count': 1}
 {'_id': '12420 PC SELL/TRANSP TEAR GAS', 'count': 1}
 {'_id': '203 PC MAYHEM', 'count': 1}
 {'_id': '32210 EC WILFL DISTURB PUB SCH', 'count': 1}
 {'_id': 'BAIT CAR 10851 VC TAKE VEHICLE', 'count': 1}
 {'_id': '10.48.150 E FALSIFY PKG PERMIT', 'count': 1}
 {'_id': '470 PC FORGERY', 'count': 1}
 {'_id': '136.1(C)(1) PC DISSUADE V/W', 'count': 1}
 {'_id': '4574(A)WEAPON/TEAR GAS IN JAIL', 'count': 1}
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 {'_id': '31 VC FALSE INFO TO OFFICER', 'count': 1}
 {'_id': '12022(A)(1)PC ARMED COMM FEL', 'count': 1}
 {'_id': '1767.3 WI CYA PAROLE HOLD', 'count': 1}
 {'_id': '11352(B)HS TRANS SUBST TO CNTY', 'count': 1}
 {'_id': '507', 'count': 1}
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 {'_id': '12101(B)1)PC MINOR POSS AMMO', 'count': 1}
 {'_id': '12403.7(G) PC ILLGL POSS TRGAS', 'count': 1}
 {'_id': '11379(A)HS SALE/TRAN CNTRL SUB', 'count': 1}
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 {'_id': 'FALSE PERSONATION - I RPT', 'count': 1}
 {'_id': 'DAMAGE - I RPT', 'count': 1}
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 {'_id': 'LOST PROPERTY-MATRICULA I RPT', 'count': 1}
 {'_id': '11361(B)HS ADLT FURN MNR MARIJ', 'count': 1}

{'_id': '12031(A)(1)PC LOADED GUN/PUB-M', 'count': 1}
 {'_id': 'COLLISION/ACCIDENT BOATS', 'count': 1}
 {'_id': '602(N)TRESP DRIVE ON PRIVATE P', 'count': 1}
 {'_id': '243.3 BATT TRANS PERS/PASS/INJ', 'count': 1}
 {'_id': '241(B) ASSAULT ON POLICE OFFIC', 'count': 1}
 {'_id': '21200.5 VC BICYCLE DUI', 'count': 1}
 {'_id': '538D PC IMPERSON PEACE OFFICER', 'count': 1}
 {'_id': '99170 PUBLIC UTILITIES CODE', 'count': 1}
 {'_id': '415.5(A)(1) PC FIGHT SCHOOL GR', 'count': 1}
 {'_id': '11360(A)HS SALE/TRANSP MARIJ', 'count': 1}
 {'_id': '12.72.060I ADULT LOITER PLYGRD', 'count': 1}
 {'_id': '417.4 PC BRANDISH IMIT FIREARM', 'count': 1}
 {'_id': '647(I) PEEPING TOM-INHAB DWELL', 'count': 1}
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 {'_id': '368(B)(1) CRUELTY/ELDER/ W/INJ', 'count': 1}
 {'_id': 'FORGERY-PASSING COUNTERFEIT', 'count': 1}
 {'_id': '601(A) WI JUVENILE INCORRIGIBL', 'count': 2}
 {'_id': '10853 VC MALIC MISCHIEF TO VEH', 'count': 2}
 {'_id': 'SHOOT INTO OCCUP DWELL - I RPT', 'count': 2}
 {'_id': '314.1 PC INDECENT EXPOSURE', 'count': 2}
 {'_id': '1053', 'count': 2}
 {'_id': '12316(B)(1)FELON POSSESS AMMO', 'count': 2}
 {'_id': '246.3 PC NEGL DISCH FIREARM', 'count': 2}
 {'_id': 'HAZARDOUS SITUATION - I RPT', 'count': 2}
 {'_id': 'CAR CLOUT - I RPT', 'count': 2}
 {'_id': '11377(A)HS POSS CNTRL SUBST', 'count': 2}
 {'_id': '558', 'count': 2}
 {'_id': '368(E) THEFT OF ELDER <\$400', 'count': 2}
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 {'_id': '25661 BP FALSE EVIDENCE OF AGE', 'count': 2}

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{'_id': '23152(B) VC DUI BA .08 OR MORE', 'count': 2}

{'_id': '415(3) PC DIST PEACE OFF WORDS', 'count': 2}

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{'_id': '484E(A)PC THEFT OF CREDIT CARD', 'count': 2}

{'_id': 'FRAUD-SWINDLE', 'count': 2}

{'_id': '11357(C)HS POSS +28.5GR MARIJ', 'count': 2}

{'_id': 'RPT # CANCELLED- I RPT', 'count': 2}

{'_id': '148.1(A)PC FALSE REPT OF BOMB', 'count': 2}

{'_id': '374.4(A) LITTERING', 'count': 2}

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{'_id': '12025(A)2)CNCLD GUN ON PER/FEL', 'count': 2}

{'_id': '484 PETTY THEFT-PURSE SNATCH', 'count': 2}

{'_id': '1705 US DESTRUCT OF MAIL RECEP', 'count': 2}

{'_id': '603 FORCED ENTRY/PROP DAMAGE', 'count': 2}

{'_id': '192(C)(2)VEH MAN W/O GROSS NEG', 'count': 2}

{'_id': '4463(A)(1) VC ALTER REG', 'count': 2}

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{'_id': '1654', 'count': 2}

{'_id': '647(F) PC PUB INTOX-DETOX ONLY', 'count': 3}

{'_id': '10855 VC LSE/RENT NOT RETURNED', 'count': 3}

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{'_id': 'FRAUDULENT DOCUMENTS- I RPT', 'count': 3}

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{'_id': '1644', 'count': 3}

{'_id': '653K PC POSS/SELL SWITCHBLADE', 'count': 3}

{'_id': '11357(E) MNR POSS MARIJ SCHOOL', 'count': 3}

{'_id': '12022.1 PC COMMIT FEL ON BAIL', 'count': 3}

{'_id': '240 PC ASSAULT/SIMPLE-CIVILIAN', 'count': 3}

{'_id': 'TRAFFIC OFFENSE', 'count': 3}
{'_id': '602(L)(1)TRESPASS REFUSE TO LV', 'count': 3}
{'_id': '537(A)(1) DEFRAUD INKEEP/->400', 'count': 3}
{'_id': '10852 VC VEHICLE TAMPERING', 'count': 3}
{'_id': '9.40.020(A) JUVENILE CURFEW', 'count': 3}
{'_id': '4462.5 VC FALSE TAB/AVOID REG', 'count': 3}
{'_id': 'TERRORIST THREATS - I RPT', 'count': 3}
{'_id': '368(D) THEFT-ELDER >400', 'count': 3}
{'_id': '487(C) PC GRAND THEFT-PERSON', 'count': 4}
{'_id': '503 PC EMBEZZLEMENT', 'count': 4}
{'_id': '532 PC FRAUD OBTAIN MONEY ETC', 'count': 4}
{'_id': 'BUSINESS PERMITS - I RPT', 'count': 4}
{'_id': '487(A) GRAND THEFT-COIN MACHIN', 'count': 4}
{'_id': '602(K)TRESPASS:INJURE PROPERTY', 'count': 4}
{'_id': 'BOMBS/THREATS/EXPLOSIV- I RPT', 'count': 4}
{'_id': 'ABC LICENSE VIO/INFO - I RPT', 'count': 4}
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{'_id': 'FOUND EVIDENCE-NON NARC -I RPT', 'count': 4}
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{'_id': '626.10(A) PC POSS WPN SCHL ZN', 'count': 4}
{'_id': '243.6 BATTERY SCHOOL EMPLOYEE', 'count': 4}
{'_id': '594.3(A)VANDAL/PLACE OF WORSHI', 'count': 4}
{'_id': '484 PC PETTY THEFT AUTO PART', 'count': 4}
{'_id': '417(A)2) PC BRANDISH FIREARM', 'count': 5}
{'_id': 'POSSIBLE MENTAL - I RPT', 'count': 5}
{'_id': '247(B) PC SHOOT UNOCC BLDG/VEH', 'count': 5}
{'_id': 'RECOVERED PROPERTY - I RPT', 'count': 5}
{'_id': '1054', 'count': 5}
{'_id': '3056 PC PAROLE VIOLATION', 'count': 5}
{'_id': '530 PC FALSE PERS. REC PROP', 'count': 5}
{'_id': 'GRAFFITI PROBLEMS- I RPT', 'count': 5}

```
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{'_id': '11532(A)HS LOITER DRG ACTIVITY', 'count': 5}
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{'_id': 'POSS STOLEN VEHICLE- I RPT', 'count': 5}
{'_id': '2800.2(A) VC EVADING/RECKLESS', 'count': 5}
{'_id': 'TRESPASS OR PROWLER- I RPT', 'count': 6}
{'_id': 'GRAND THEFT - I RPT', 'count': 6}
{'_id': '308(B) PC MINOR POSS TOBACCO', 'count': 6}
{'_id': '487(A) PC GRAND THEFT-SHOPLIFT', 'count': 6}
{'_id': '14601.1(A) VC LIC SUSP OTHER', 'count': 6}
{'_id': '484G(A)PC USE FORGED CARD', 'count': 6}
{'_id': '1084', 'count': 6}
{'_id': '466 PC POSS OF BURG TOOLS', 'count': 6}
{'_id': 'SUSPICIOUS VEHICLE - I RPT', 'count': 6}
{'_id': '484 PC THEFT-LIC PLATE TABS', 'count': 6}
{'_id': 'PROB VIOLA/FEL-MISD - I RPT', 'count': 7}
{'_id': '12020(A)(4) PC DIRK/DAGGER', 'count': 7}
{'_id': 'HIT AND RUN /SUSPECTS- I RPT', 'count': 7}
{'_id': 'ELDER ABUSE/PHYS/MENTAL-I RPT', 'count': 7}
{'_id': '12.52.030 SCC UNLAWFUL CAMPING', 'count': 7}
{'_id': '22435.2(A) BP POSS SHOP CART', 'count': 7}
{'_id': '484 PC-PETTY THEFT-COIN MACHIN', 'count': 7}
{'_id': 'JUVENILE DISURBANCE - I RPT', 'count': 7}
{'_id': '417(A)1) PC BRANDISH NON-GUN', 'count': 8}
{'_id': '9.04.050 A DRINKING IN PUBLIC', 'count': 8}
{'_id': '212.5(A)ROBBERY-INHAB DWELLING', 'count': 8}
{'_id': '1064', 'count': 8}
{'_id': '290(A)(1)(D) FAIL TO REG-5 DAY', 'count': 8}
{'_id': '12021(A)(1)PC FELON POSS FRARM', 'count': 8}
{'_id': '487(D)GRAND THEFT FIREARM/ANIM', 'count': 8}
{'_id': 'PETTY THEFT - I RPT', 'count': 8}
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{'_id': '11359 HS POSS FOR SALE MARIJ', 'count': 8}
{'_id': '487(A) GRAND THEFT-AUTO PARTS', 'count': 8}
{'_id': '23103(A) RECKLESS ON HIGHWAY', 'count': 8}
{'_id': '290(F)1 W/I 5 DAYS ADD CHANGE', 'count': 8}
{'_id': '415(1) PC DISTURB PEACE/FIGHT', 'count': 9}
{'_id': 'PROTECTIVE CUSTODY-I RPT', 'count': 9}
{'_id': '594(B)(1)VANDALISM GRAF +\$400', 'count': 9}
{'_id': '11378 HS POSS/SALE AMPHETAMINE', 'count': 9}
{'_id': '11350(B)HS POSSESS QUAALUDES', 'count': 9}
{'_id': '148(A)(1)PC RESIST PEACE OFFCR', 'count': 10}
{'_id': '451(D) PC ARSON OF PROPERTY', 'count': 10}
{'_id': '166(A)(4) WILFUL DISOBEY CT OR', 'count': 10}
{'_id': 'IMPOUNDED VEHICLE', 'count': 10}
{'_id': '12020(A)1) PROHIBITED FIREARM', 'count': 10}
{'_id': 'CHILD CUSTODY - I RPT', 'count': 10}
{'_id': '23222(B)POSSESS MARIJ IN VEH', 'count': 11}
{'_id': '487(A) GRAND THEFT-CLOUT-UNLOC', 'count': 11}
{'_id': '148.9 PC FALSE ID TO OFFICER', 'count': 11}
{'_id': '1203.2 PC VIOLATION OF PROBATI', 'count': 11}
{'_id': '459 PC BURGLARY-UNSPECIFIED', 'count': 12}
{'_id': '653.22(A) LOITER PROSTITUTION', 'count': 12}
{'_id': '653M(B) PC ANNOY/RPT CALL HOME', 'count': 12}
{'_id': 'ROBBERY - I RPT', 'count': 12}
{'_id': '475(A)PC POSS FORGED CHK/NOTE', 'count': 13}
{'_id': 'MISSING PERSON LOCATE O/S ASSI', 'count': 13}
{'_id': '1551(A) FUGITIVE FROM JUSTICE', 'count': 13}
{'_id': 'O/S AGENCY -ASSISTANCE- I RPT', 'count': 13}
{'_id': 'FAMILY DISTURBANCE - I RPT', 'count': 13}
{'_id': 'SAFEKEEPING - I RPT', 'count': 14}

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{'_id': 'WARRANT SERVED - I RPT', 'count': 14}
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{'_id': '243.2(A)(1) BATT/SCHOOL INJURY', 'count': 14}
{'_id': '11352(A)HS SALE/TRANS CNTL SUB', 'count': 15}
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{'_id': '23153(A) VC DUI CAUSE INJURY', 'count': 15}
{'_id': 'CHILD WELFARE - I RPT', 'count': 16}
{'_id': 'ASSAULT WITH WEAPON - I RPT', 'count': 16}
{'_id': '4140 BP POSS OF HYPO NEEDLE', 'count': 16}
{'_id': 'PERSON INFORMATION - I RPT', 'count': 16}
{'_id': 'TELEPEST -I RPT', 'count': 17}
{'_id': '653M(A) PC OBSCENE/THREAT CALL', 'count': 17}
{'_id': '246 PC SHOOT OCCUP DWELL/VEH', 'count': 17}
{'_id': '215(A) PC CARJACKING', 'count': 18}
{'_id': '422 PC THREAT/INTENT TO TERROR', 'count': 18}
{'_id': 'FRAUD OR BUNCO - I RPT', 'count': 19}
{'_id': 'TRAFFIC - I RPT', 'count': 19}
{'_id': '484 PETTY THEFT CLOUT UNLOCKED', 'count': 20}
{'_id': '475(C) PASS FORGED NOTE', 'count': 20}
{'_id': '211 PC ROBBERY-PURSE SNATCH', 'count': 20}
{'_id': '1708 US THEFT OF MAIL', 'count': 20}
{'_id': 'ACCIDENTAL FIRES/ARSON -I RPT', 'count': 20}
{'_id': 'BURGLARY - I RPT', 'count': 21}
{'_id': '484J PC PUBLISH CARD INFO', 'count': 21}
{'_id': '476 PC PASS FICTICIOUS CHECK', 'count': 21}
{'_id': '594(B)(2)(A)VANDALISM GRAF-400', 'count': 22}
{'_id': '245(A)(2) AWDW/FIREARM/CIVILIA', 'count': 22}
{'_id': '647(F) PC DIP - DISORDERLY', 'count': 23}
{'_id': '529 PC FALSE PERSONATION', 'count': 23}
{'_id': 'VANDALISM - I RPT', 'count': 24}
{'_id': '496(A) RECEIVE STOLEN PROPERTY', 'count': 24}
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{'_id': 'MISSING PERSON I RPT', 'count': 24}

{'_id': '273.6(A) PC VIO DV COURT ORDER', 'count': 25}

{'_id': '243(D) PC BATT/CIVILIAN W/INJ', 'count': 26}

{'_id': '3056 PAROLE VIO - I RPT', 'count': 27}

{'_id': '20001(A) VC HIT/RUN INJ/DEATH', 'count': 28}

{'_id': '666 PC PETTY THEFT W/PRI CONV', 'count': 30}

{'_id': 'BATTERY - I RPT', 'count': 35}

{'_id': '647(B) PC PROSTITUTION', 'count': 36}

{'_id': 'HARASSMENT - I RPT', 'count': 36}

{'_id': '211 PC ROBBERY- BUSINESS', 'count': 38}

{'_id': 'NARCOTICS SUSP/EVID/ACT- I RPT', 'count': 41}

{'_id': '487(A) GRAND THEFT-INSIDE', 'count': 41}

{'_id': '11350(A)HS POSS CNTRL SUBST', 'count': 43}

{'_id': 'SUSP PERS-NO CRIME - I RPT', 'count': 44}

{'_id': '484 PC PETTY THEFT/ OUTSIDE', 'count': 48}

{'_id': '11357(B)HS POSS -28.5GR MARIJ', 'count': 51}

{'_id': 'LOST PROPERTY - I RPT', 'count': 57}

{'_id': '11377(A)HS POSS AMPHETAMINES', 'count': 58}

{'_id': '530.5 PC USE PERSONAL ID INFO', 'count': 65}

{'_id': 'GANG ACTIVITY - I RPT', 'count': 65}

{'_id': '484G(B) PC ACCESS CARD FRAUD', 'count': 66}

{'_id': 'MISCELLANEOUS I RPT (ZMISC)', 'count': 71}

{'_id': 'THREATS - I RPT', 'count': 71}

{'_id': '245(A)(1)AWDW/NO FIREARM/CIVIL', 'count': 76}

{'_id': '243(E)1 BATTERY NONCOHAB SPOUS', 'count': 81}

{'_id': 'FOUND PROPERTY - I RPT', 'count': 81}

{'_id': '484 PC PETTY THEFT', 'count': 82}

{'_id': '23152(A) VC DUI-ALCOHOL/DRUGS', 'count': 83}

{'_id': '487(A) PC GRAND THEFT', 'count': 84}

{'_id': '484 PETTY THEFT-SHOPLIFT', 'count': 86}

{'_id': 'NON INJ HR/MAIL OUT REPORT', 'count': 88}

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{'_id': '242 PC BATTERY CIVILIAN', 'count': 89}
{'_id': '11364 HS POSS DRUG PARAPH', 'count': 95}
{'_id': '484 PC PETTY THEFT/INSIDE', 'count': 99}
{'_id': '211 PC ROBBERY UNSPECIFIED', 'count': 99}
{'_id': '20002(A) HIT/RUN', 'count': 102}
{'_id': '5150 WI DANGER SELF/OTHERS', 'count': 106}
{'_id': 'CASUALTY REPORT', 'count': 116}
{'_id': '594(B)(1)PC VANDALISM +$400', 'count': 117}
{'_id': '484 PETTY THEFT/LICENSE PLATE', 'count': 118}
{'_id': '459 PC BURGLARY BUSINESS', 'count': 135}
{'_id': 'TRAFFIC-ACCIDENT-NON INJURY', 'count': 175}
{'_id': 'TRAFFIC-ACCIDENT INJURY', 'count': 180}
{'_id': '594(B)(2)(A) VANDALISM/ -$400', 'count': 195}
{'_id': '10851 VC AUTO THEFT LOCATE', 'count': 223}
{'_id': 'MISSING PERSON', 'count': 268}
{'_id': '459 PC BURGLARY RESIDENCE', 'count': 356}
{'_id': 'TOWED/STORED VEHICLE', 'count': 429}
{'_id': 'TOWED/STORED VEH-14602.6', 'count': 453}
{'_id': '459 PC BURGLARY VEHICLE', 'count': 461}
{'_id': '10851(A)VC TAKE VEH W/O OWNER', 'count': 652}
```

2 EJERCICIO 2

Para mostrar las franjas horarias con más delitos he hecho lo siguiente:

```
def most_crime_time():
    print("\nFranja horaria (o franjas) con más número de delitos")
    collection = login()
    result = collection.aggregate(
        [{"$group": {
            "_id": {"hour": {"$hour": '$datetime'}},
            "count": {"$sum": 1}
        }}, {"$sort": {"count": 1}}]]
    for res in result:
        print(res)
```

Ilustración 2 – Código para el primer ejercicio

En el agregado restrinjo la búsqueda únicamente a la hora en el que ocurrió el incidente (aunque en base de datos se ha almacenado la hora completa). Si un delito se realizó entre las 00:00 y las 00:59 se indicará como 0, si se realizó entre las 01:00 y las 01:59 se indicará como 1, y así hasta las 23:59.

2.1 Solución

La franja horaria donde más delitos se produjeron fue de 00:00 a 00:59.

Franja horaria (o franjas) con más número de delitos

```
{'_id': {'hour': 5}, 'count': 73}
{'_id': {'hour': 4}, 'count': 91}
{'_id': {'hour': 6}, 'count': 114}
{'_id': {'hour': 3}, 'count': 122}
{'_id': {'hour': 2}, 'count': 171}
{'_id': {'hour': 1}, 'count': 187}
{'_id': {'hour': 7}, 'count': 219}
{'_id': {'hour': 23}, 'count': 304}
{'_id': {'hour': 10}, 'count': 306}
{'_id': {'hour': 9}, 'count': 326}
{'_id': {'hour': 11}, 'count': 338}
{'_id': {'hour': 13}, 'count': 353}
{'_id': {'hour': 19}, 'count': 358}
{'_id': {'hour': 21}, 'count': 358}
{'_id': {'hour': 20}, 'count': 362}
```


{'_id': {'hour': 8}, 'count': 380}

{'_id': {'hour': 22}, 'count': 384}

{'_id': {'hour': 14}, 'count': 385}

{'_id': {'hour': 12}, 'count': 399}

{'_id': {'hour': 15}, 'count': 417}

{'_id': {'hour': 18}, 'count': 430}

{'_id': {'hour': 17}, 'count': 458}

{'_id': {'hour': 16}, 'count': 471}

{'_id': {'hour': 0}, 'count': 578}