HEALTH INSURANCE DATABASE SYSTEM
Milestone #3

Group 23

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Query1:

```sql
SELECT
    d.money_insured as MONEY_INSURED,
    d.insurance_type AS INSURANCE_TYPE,
    a.insurance_id AS INSURANCE_ID,
    b.status AS STATUS,
    f.P_Name as PatientName
FROM
    insure a,
    claim_details b,
    insurance_type c,
    health_insurance d,
    person e,
    patient_info f
WHERE
    a.claim_id = b.claim_id
    AND b.status = 'TRUE'
    AND a.insurance_id = c.insurance_id
    AND c.insurance_type = d.insurance_type
    and e.person_insurance_id=c.insurance_id
    and e.personID=f.Person_ID
LIMIT 10;
```

MONEY_INSURED	INSURANCE_TYPE	INSURANCE_ID	STATUS	PatientName
92254	PPO	6	TRUE	Erina Wye
92254	PPO	149	TRUE	Krystyna Quirk
74421	POS	141	TRUE	Barbara-anne Parbrook
74421	POS	195	TRUE	Chrisy Hessentaler
72931	EPO	131	TRUE	Sherman Joint
87407	HMO	184	TRUE	Tabb Borleace
74421	POS	167	TRUE	Nickey Pache
87407	HMO	41	TRUE	Noll Sayton
92254	PPO	108	TRUE	Layne Hagergham
92254	PPO	25	TRUE	Ferris Trustrie

This query will output the patient name whose insurance has been passed along with their insurance ID and which insurance type they have bought and the amount of money which is insured to them.

Query 2:

```sql
SELECT
    a.bill_amt AS Amount,
    b.injury_Name AS Injury,
    b.infection_code AS Infection_Code
FROM
    bill a,
    injury b
WHERE
    b.infection_code = a.injury_code
GROUP BY b.injury_Name
ORDER BY a.bill_amt DESC
LIMIT 10;
```

Amount	Injury	Infection_Code
99501	Poisoning by unsp topical agent, undetermined,…	20
99329	Fracture of mandible, unsp, subs for fx w routn…	150
97940	Displ commnt fx r patella, 7thR	21
97683	Cholera, unspecified	100
97157	Corrosion of second degree of left lower leg, init…	75
96573	Malignant neoplasm of appendix	187
96498	Nondisp commnt fx shaft of unsp femr, 7thE	86
96455	Allergy status to unsp drug/meds/biol subst status	184
96284	Non-pressure chronic ulcer of unspecified ankle	6

This query outputs the injuries and the infection code which has the highest bill amount to treat that disease or injury.

Query 3:

```sql
SELECT
    COUNT(hospital_id) AS Count, isunderinsurance
FROM
    hospital
GROUP BY isunderinsurance
```

Count	isunderinsuran...
14	FALSE
47	TRUE

Query to retrieve the count of hospitals in Massachusetts that are under the insurance, and which are not under the insurance.

Query 4:

```sql
SELECT
    COUNT(hospital_id) AS Count, isunderinsurance, h_address
FROM
    hospital
WHERE h_address = "Boston, MA"
GROUP BY isunderinsurance
```

Count	isunderinsuran...	h_address
7	TRUE	Boston, MA
4	FALSE	Boston, MA

Query to fetch the count of hospitals that are under the insurance, and which are not under insurance and are in Boston, Massachusetts.

Query 5:

```sql
SELECT
    status, COUNT(claim_id) AS COUNT, AVG(issued_amt)
FROM
    claim_details a,
    bill_details b
WHERE
    b.bill_id = a.claim_bill_id
        AND status = 'true'
```

status	COUNT	AVG(issued_amt)
▶ TRUE	150	23367.046666666665

Query to return the average issued amount when the claim for the insurance is accepted

Query 6:

```sql
SELECT
    DISTINCT(e.Person_ID),
    e.P_Name AS PatientName,
    b.treats_infection_code AS InfectionCode,
    c.Injury_Name AS Injury,
    a.hospital_name,
    a.h_address
FROM
    hospital a,
    treats b,
    injury c,
    infected d,
    patient_info e
WHERE
    a.hospital_id = b.treats_hospital_id
        AND b.treats_infection_code = c.infection_code
        AND c.infection_code = d.infection_cod
        AND d.person_id = e.Person_ID
        AND e.Status = 'true'
        AND a.h_address LIKE '%Boston%'
        AND a.isunderinsurance = 'TRUE'
LIMIT 10
```

Person_ID	PatientName	InfectionCode	Injury	hospital_name	h_address
67	Katina Pepall	2	Sltr-haris Type IV physl fx low end humer, l arm,...	Beth Israel Deaconess Medical Center	Boston, MA
192	Jacinda Shelliday	156	Benign neoplasm of connective and oth soft tiss...	Brigham and Women's Faulkner Hospital	Boston, MA
10	Cilka Frances	136	Scrotal pain	Brigham and Women's Faulkner Hospital	Boston, MA
22	Binky Marousek	136	Scrotal pain	Brigham and Women's Faulkner Hospital	Boston, MA
116	Bren Aizikovitch	30	Underdosing of unspecified systemic antibiotic, i...	Brigham and Women's Hospital	Boston, MA
73	Miles Dradey	24	Rheumatoid bursitis, left hand	Massachusetts Eye and Ear Infirmary	Boston, MA
15	Ruy Presland	167	Unsp fracture of navicular bone of right wrist, se...	Massachusetts General Hospital	Boston, MA
64	Jessie Whiteman	101	Toxic effect of petroleum products, self-harm, init	Massachusetts General Hospital	Boston, MA
159	Bobina Culcheth	105	Military operations involving other explosions an...	Tufts Medical Center	Boston, MA
106	Krystyna Quirk	62	Contusion of unspecified forearm	Tufts Medical Center	Boston, MA

Query to fetch Patient information who were treated in Hospitals in Boston and had their insurance covered along with the injury and infection code that were treated in those hospitals.

Query 7:

```sql
SELECT
    COUNT(Person_ID) AS count, status,
FROM
    patient_info
GROUP BY status
```

count	status
90	true
110	false

Query to output the count of person who has active health insurance.

Query 8:

```sql
SELECT
    bill_id as Bill_ID,
    f.date_of_discharge,
    f.date_of_admission,
    a.infection_code as Infection_Code,
    a.Injury_name as Injury_Name,
    e.Price as TestPrice,
    f.bill_amt as Treatment_amount,
    (e.Price + f.bill_amt) AS Total_Bill
FROM
    injury a,
    Treats b,
    hospital c,
    conducts d,
    test e,
    bill f
WHERE
    a.infection_code = b.treats_infection_code
        AND b.treats_hospital_id = c.hospital_id
        AND c.hospital_id = d.hospital_id
        AND d.test_code = e.Test_code
        AND e.billid = f.bill_id
ORDER BY (e.Price + f.bill_amt) desc
LIMIT 10;
```

Bill_ID	date_of_dischar...	date_of_admissi...	Infection_Code	Injury_Name	TestPrice	Treatment_amount	Total_Bill
161	10/4/2022	9/24/2022	187	Malignant neoplasm of appendix	9685	99501	109186
161	10/4/2022	9/24/2022	142	Disp fx of 4th metatarsal bone, unsp ft, 7thG	9685	99501	109186
161	10/4/2022	9/24/2022	149	Corrosion of third degree of neck, subsequent encounter	9685	99501	109186
33	9/13/2022	9/4/2022	158	Mtrcy driver injured in collision w unsp mv in traf, subs	9215	96498	105713
33	9/13/2022	9/4/2022	118	Poisoning by appetite depressants, self-harm, sequela	9215	96498	105713
33	9/13/2022	9/4/2022	130	Subluxation and dislocation of T8/T9-T9/T10 thor vertebra	9215	96498	105713
16	5/24/2023	5/5/2023	168	Sprain of tibiofibular ligament of unsp ankle, sequela	7742	97683	105425
16	5/24/2023	5/5/2023	75	Corrosion of second degree of left lower leg, init encntr	7742	97683	105425
16	5/24/2023	5/5/2023	148	Contusion of right forearm, initial encounter	7742	97683	105425
91	6/23/2023	6/5/2023	124	Other effects of lightning, sequela	6693	97940	104633

Query to fetch the top 10 total Bill amount for the treatment of various injuries