Solution

Q2 a)i)

time dimension table		fact table		doctor dimension table	
time_key		time_key		dooctor_id	
day		doctor_id		doctor_name	
day_of_week		patient_id		phone#	
month				address	
quarter		charge		sex	
year		count			

patient
dimension table

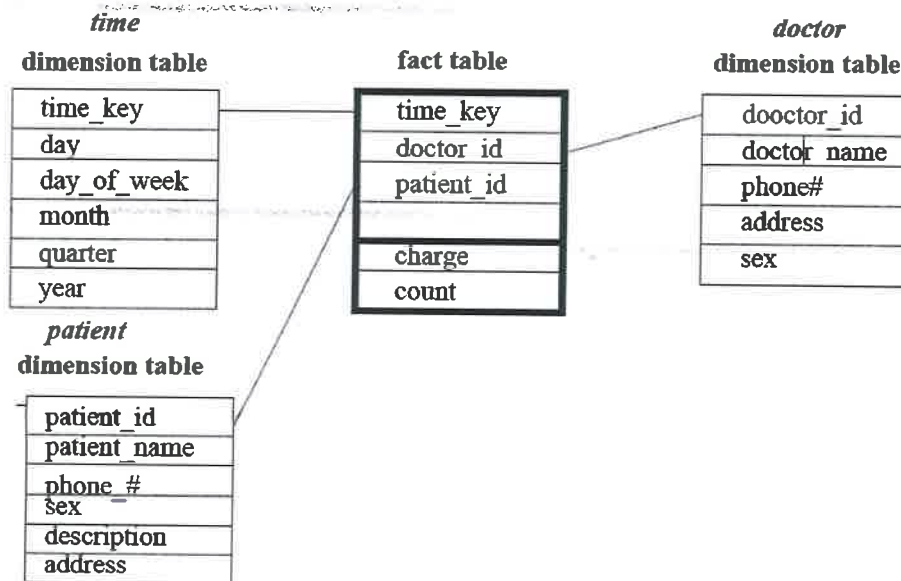| patient_id |
|---|
| patient_name |
| phone_# |
| sex |
| description |
| address |

Q2 a) ii) The operations to be performed are:
- Roll-up on *time* from *day* to *year*.
- Slice for *time=2004*.
- Roll-up on *patient* from individual patient to all.

Q2a)iii) *fee(day; month; year; doctor; hospital; patient; count; charge)*:
    select doctor, SUM (charge)
    from fee
    where year=2004
    group by doctor

Q2 b) The equation of the least squares line is estimated by y = 23.6 + 3.5x
    Therefore, the salary of a college graduate with 10 years of experience is $58,600.

Q3 a) Mean: 58 so the mean salary is $58,000
    Median:54 so the median is $54,000
    Mode: The data areQ2 a) bimodal so the two modes are $52,000 and $70,000.
    The midrange of the data is $70,000.
    Quartile: first quartile Q_1 is $47,000 and third quartile Q_3 is $63,000.

Q4 b) minimum support count =2

    Frequent item set is {1, 3, 5} and {2, 3, 5}

    Strong association rules are: 1^5 ➙3
                                   1^3➙5
                                   3^5➙1
                                   1➙ 3^5

2→3v5

2v5→3

3v5→2

2v3→5