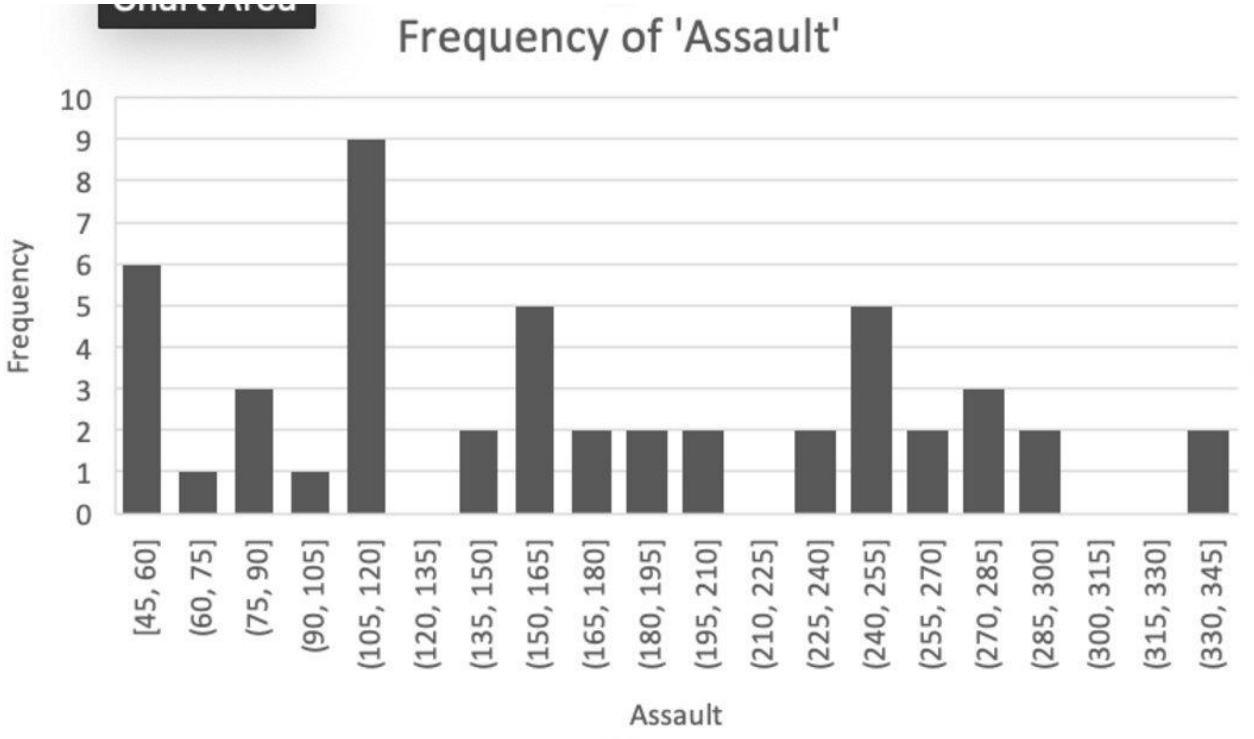
Abdullah Alshamrani
GitHub: https://github.com/AbdullahAlshamrani0/IDS

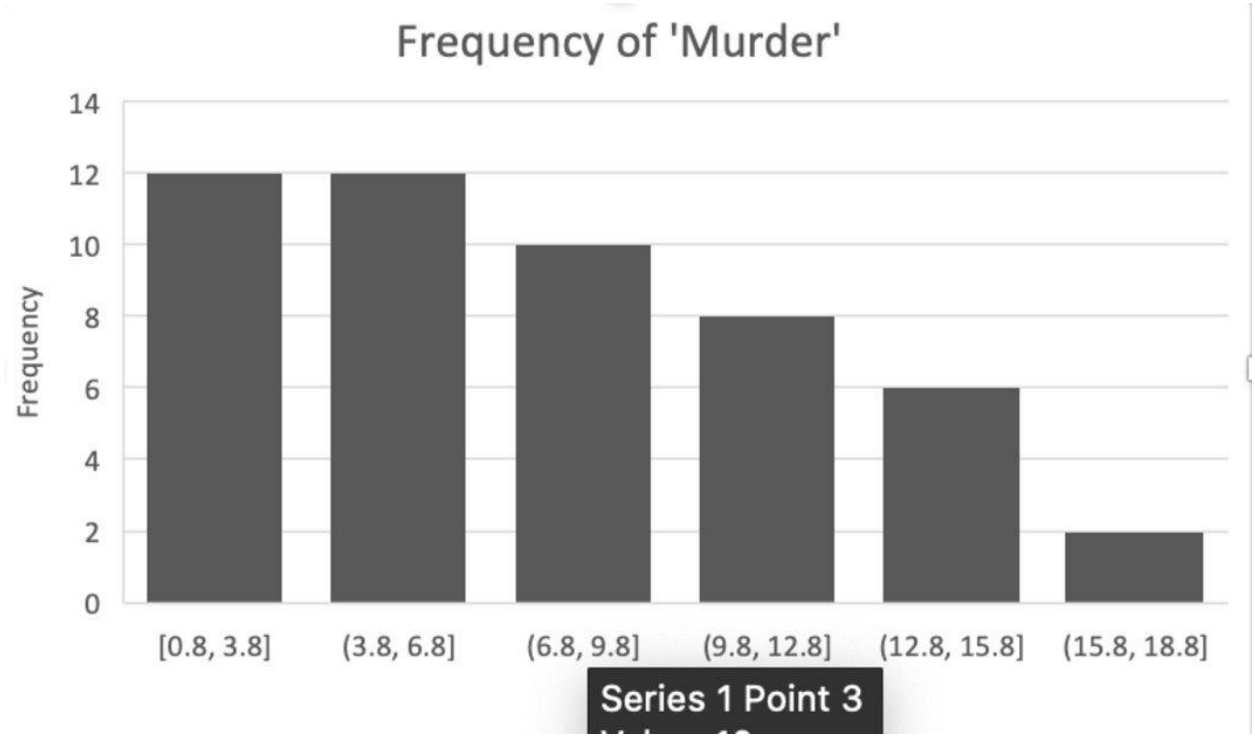
Problem 1

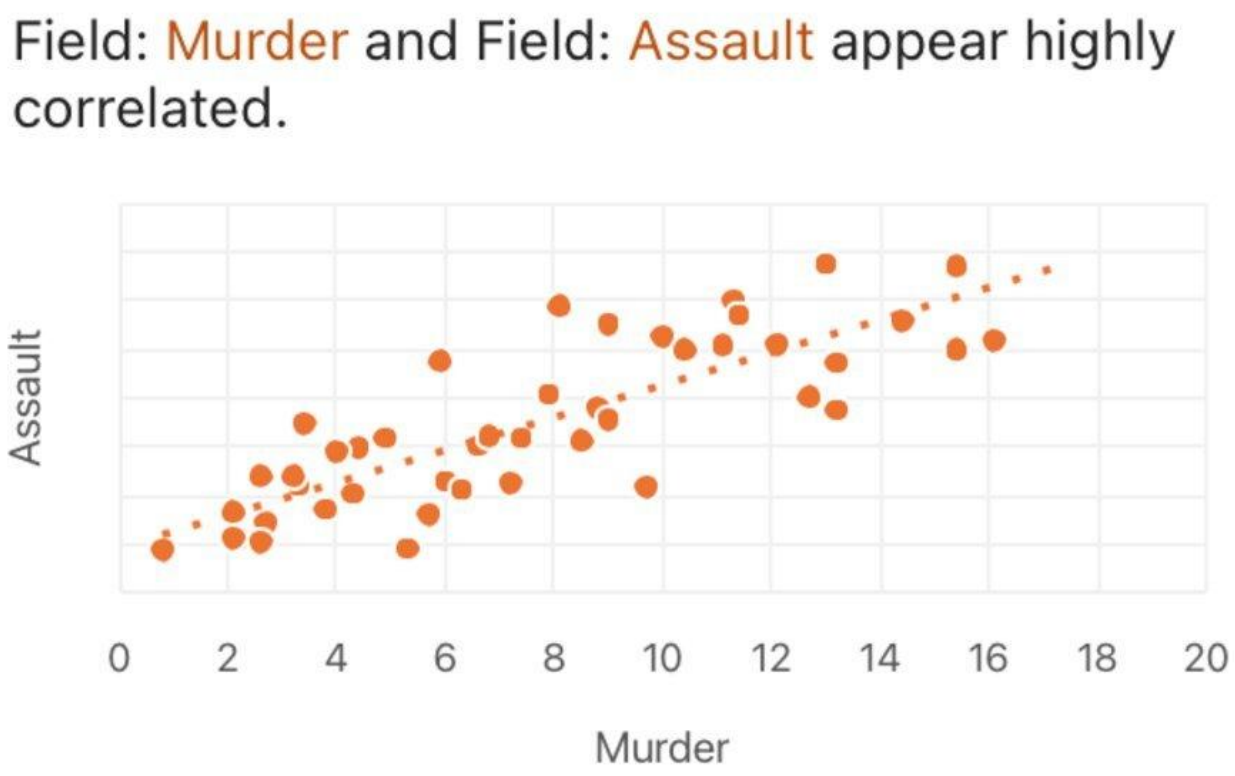
Missing Value in line 11 (Georgia)

Average of murders in all 50 US States is: 7

Average of Assaults in all 50 US States is: 170


Frequency of 'Assault'
Frequency
10
9
8
7
6
5
4
3
2
1
0
[45, 60]
(60, 75]
(75, 90]
(90, 105]
(105, 120]
(120, 135]
(135, 150]
(150, 165]
(165, 180]
(180, 195]
(195, 210]
(210, 225]
(225, 240]
(240, 255]
(255, 270]
(270, 285]
(285, 300]
(300, 315]
(315, 330]
(330, 345]
Assault


Frequency of 'Murder'
Frequency
14
12
10
8
6
4
2
0
[0.8, 3.8]
(3.8, 6.8]
(6.8, 9.8]
(9.8, 12.8]
(12.8, 15.8]
(15.8, 18.8]
Series 1 Point 3



A. MySQL:

Setting an average value as a constant value for the missing values: 196

SET SQL_SAFE_UPDATES = 0;

B. Use SQL to fill in the missing values in each column using the medians.

```
select state, murder, format(avg(assault), 2)
from USArrest
group by state
order by avg(murder) desc;

Update USArrests
set assault = 169
```

where (assault = 0);

order by avg(murder) desc;

C. 1 Answer the following queries in SQL:

select distinct(state)
from USArrests
order by state, murder, assault;

C2. -- Which years have the lowest and highest infant mortality years, respectively?

select min(murder), max(murder), AVG(murder)
from USArrests;

MIN: 0
MAX: 17
AVG: 7.5

-- Which state has the maximum murder rate?
17.4
-- List of states in ascending order of urban population percentages.

-- How many states have higher murder rates than Arizona? List those states.

21 states

Problem 2:

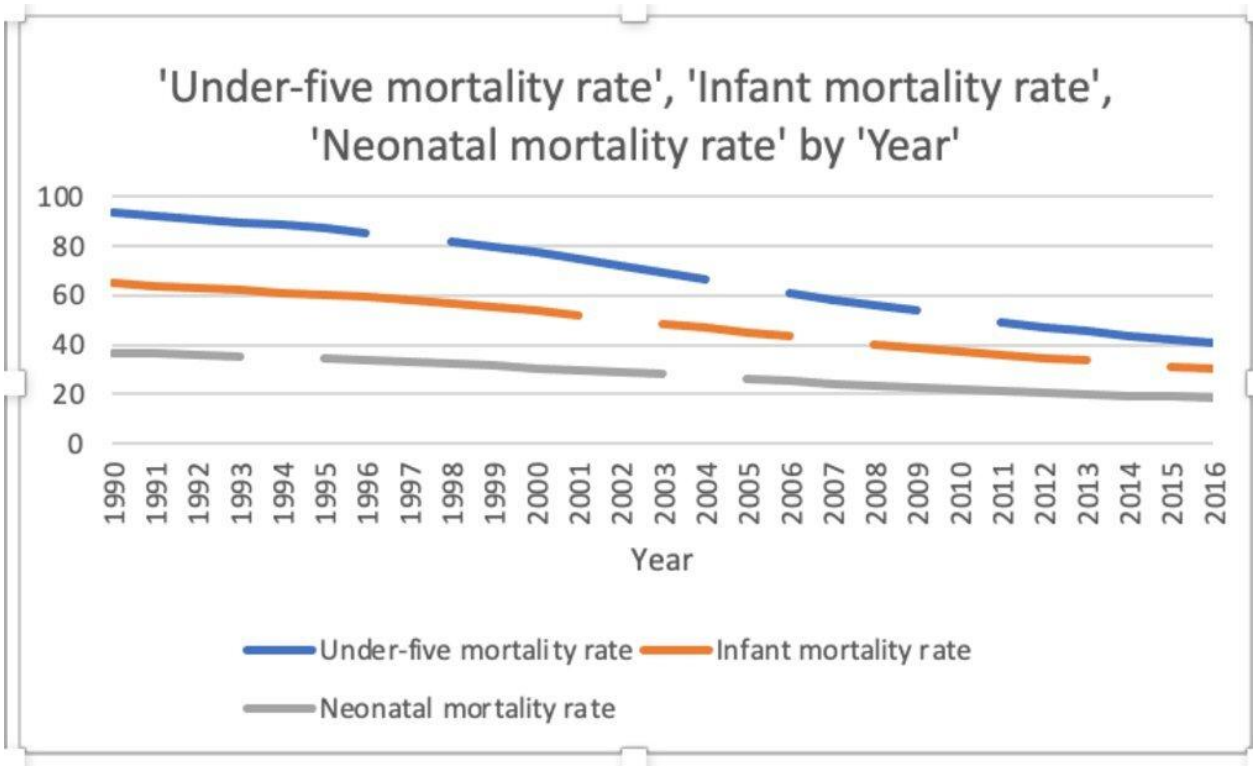
Excel:

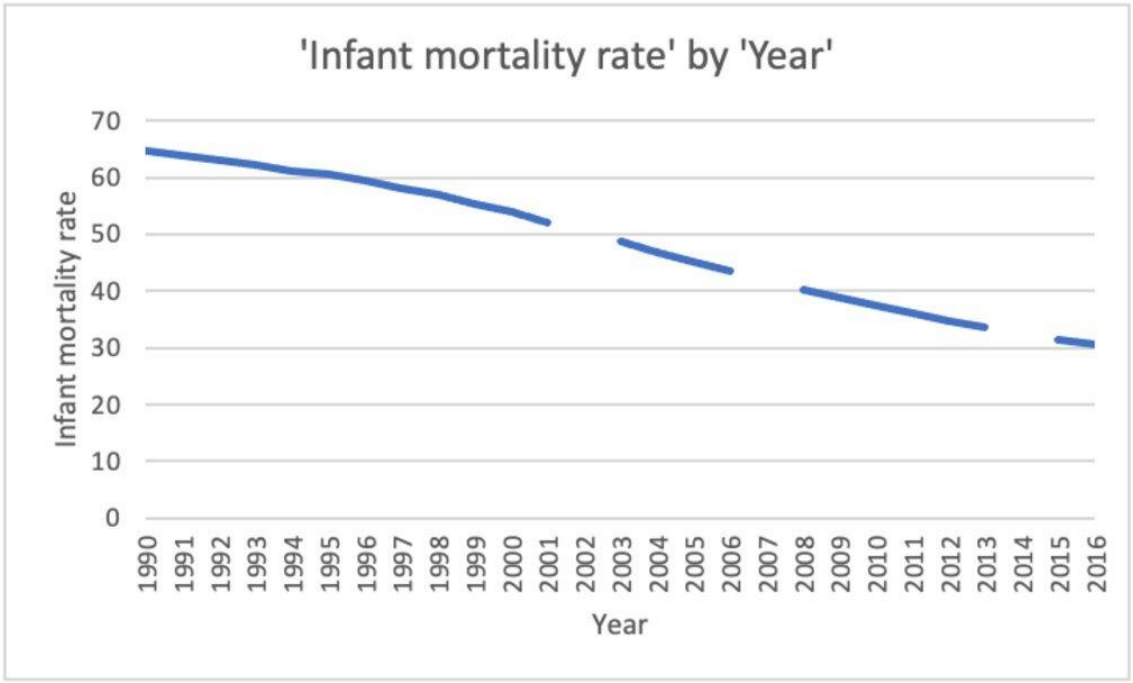
A.

1994 is missing “Neonatal mortality rate”
1997 is missing “under-five mortality rate”
2002 is missing “infant mortality rate”
2004 is missing “Neonatal mortality rate”
2005 is missing “under-five mortality rate”
2007 is missing “infant mortality rate”
2010 is missing “under-five mortality rate”
2014 is missing “infant mortality rate”

I am thinking I can replace missing values by the average of each column.

B.


'Under-five mortality rate', 'Infant mortality rate', 'Neonatal mortality rate' by 'Year'
100
80
60
40
20
0
1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016
Year
Under-five mortality rate
Infant mortality rate
Neonatal mortality rate


'Infant mortality rate' by 'Year'
Infant mortality rate
70
60
50
40
30
20
10
0
1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016
Year