Burtin's data

Bacteria	Penicillin	Streptomycin	Neomycin	Gram Staining
Aerobacter aerogenes	870	1	1.6	negative
Brucella abortus	1	2	0.02	negative
Brucella antracis	0.001	0.01	0.007	positive
Diplococcus pneumoniae	0.005	11	10	positive
Escherichia coli	100	0.4	0.1	negative
Klebsiella pneumoniae	850	1.2	1	negative
Mycobacterium tuberculosis	800	5	2	negative
Proteus vulgaris	3	0.1	0.1	negative
Pseudomonas aeruginosa	850	2	0.4	negative
Salmonella (Eberthella) typhosa	1	0.4	0.008	negative
Salmonella schottmuelleri	10	0.8	0.09	negative
Staphylococcus albus	0.007	0.1	0.001	positive
Staphylococcus aureus	0.03	0.03	0.001	positive
Streptococcus fecalis	1	1	0.1	positive
Streptococcus hemolyticus	0.001	14	10	positive
Streptococcus viridans	0.005	10	40	positive

Burtin's data visualization

Minimum inhibitory concentration of Antibiotics vs Bacteria
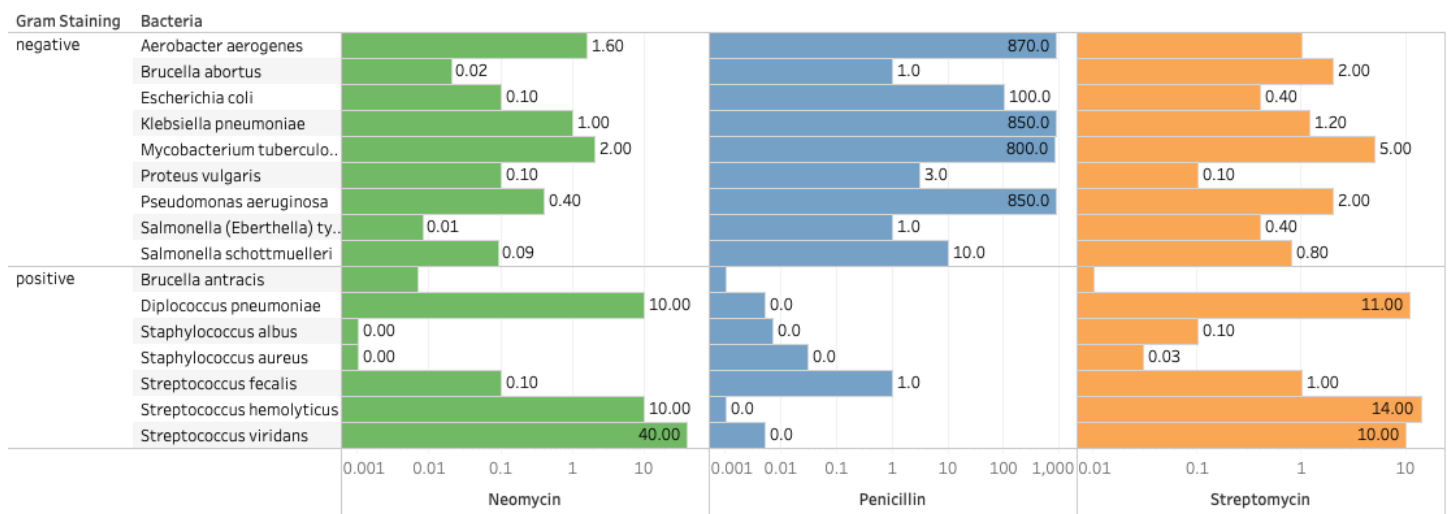
Grouped Bar Chart:

The above grouped bar chart talks about the effectiveness of three types of antibiotics - Penicillin, Neomycin and Streptomycin against the 16 varieties of bacteria. The main focus in this bar chart is the **gram staining** and so the data is split based on the two values of gram staining (i.e positive and negative).

The bar chart directly implies that the higher MIC (minimum inhibitory concentration) gives the negative gram staining meaning higher concentration of the antibiotic is required for the bacteria to be killed which is not optimal.

As the scale ranges widely (for example from 0.001 to 870), **logarithmic scale** is used in all of the columns to provide a meaningful visualization. The data is directly split based on their gram staining value instead of using colours to differentiate them which may not be appealing at times.

The **grouped bar chart** is chosen because it gives an insight about the MIC of all the three antibiotics for a particular bacteria. So it will be easy to compare and choose the best antibiotic for a certain bacteria. **Different light colours** are chosen to differentiate the antibiotics. The **split data** (based on positive/negative value) will show the bacteria which are effectively killed when these antibiotics are administered.