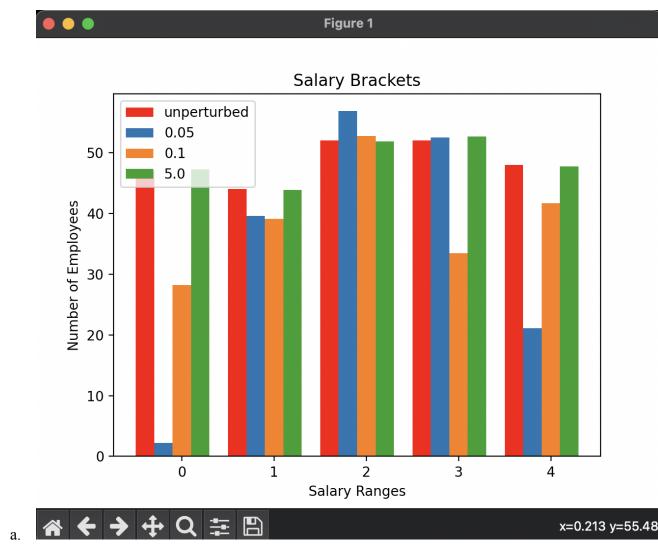
## CSC533 hw2

1.

	mean:
	1 = 1 1+100 +200 = (00 1 = 1 2 = 50 1+100+200 = (00)
	1+400 2 20
	$\frac{1+200+800}{03} = 333$ $\frac{1+200+800}{3} = 366                                $
	F(x) = f(x) + Law (consider)
K->	a) Sensitivity = $\frac{10-a}{N}$
	dataset which holds salaries in the range [a, b]
	With N entries would be b-a because  Me largest change in mean from if we remove 1
	ontry from our detabase would be N.
	b) $Z = \frac{\text{Sensitivity}}{\text{epsilons}}$ where epsilon is our privated parameter $\epsilon$ . Our sensitivity was $\frac{\text{box}}{N}$ , so
	$Z = \left(\frac{b-a}{N}\right)/E$

2.



b. As I increase the epsilon value the resulting histogram becomes more similar to the unperturbed output, providing less privacy. At 5.0 epsilon value the privacy is almost non-existent. However, with an epsilon value of 0.05 there was typically a huge difference in the output compared to the unperturbed output.

3.

