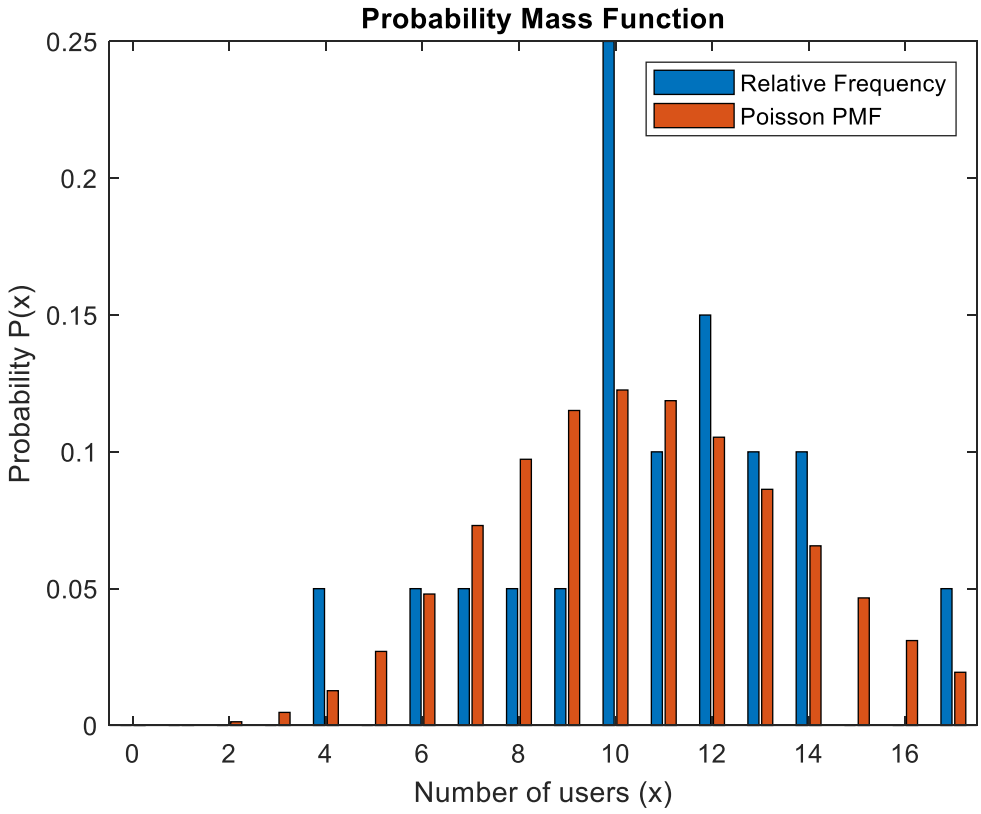
Project 5 report

Graph report



Answer the question

1/ Using the PMF obtained from the relative frequency approach, do you think you could give your boss an answer?

Using the PMF obtained from the relative frequency approach, I can not give my boss the answer. Because we can observe from the graph that when the time interval is changing from 5 second interval to 1 second interval, there is not any change from the graph. In other words, there is no relationship between relative frequency PMF and the time interval.

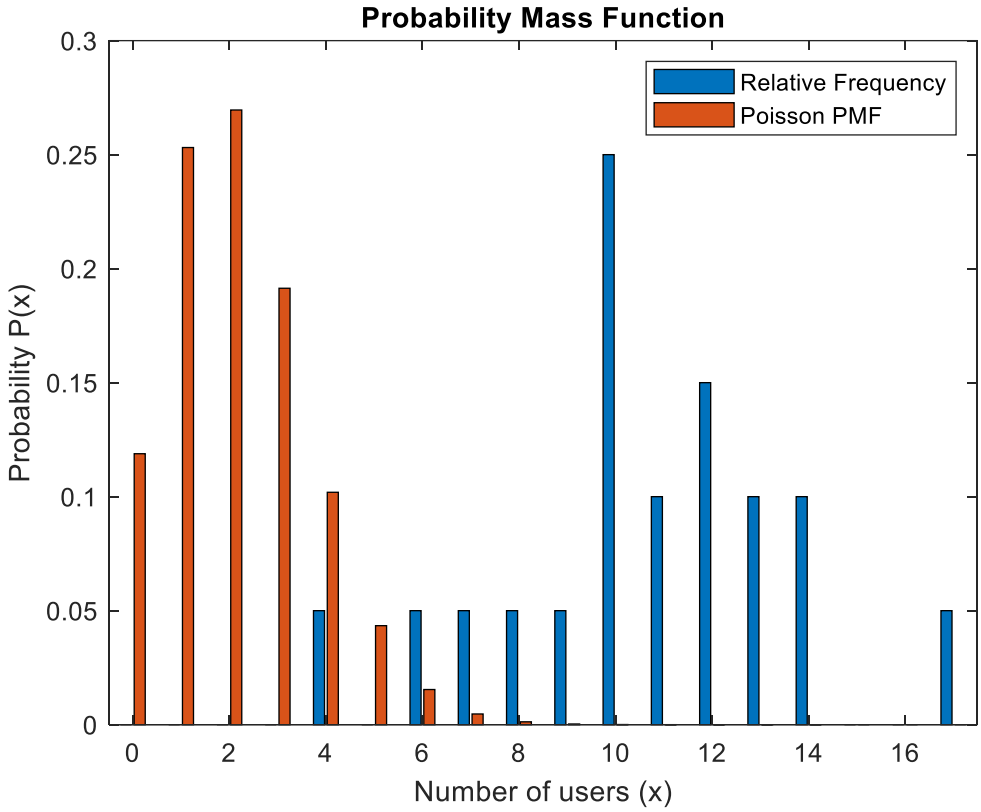
2/ Using the parametric approach, what is your new estimated α for the question your boss asked you?

The old estimated α was the average of the distribution in 5 second interval. It was 10.65.

The new estimated α in 1 second interval will be calculated by dividing the old estimated α by 5. It was α = 10.65/5 = 2.13

3/ Using this new α, what is the probability that the base station will drop users?

This is the graph based on the new α = 2.13



From the graph we can observe that it is impossible to get more than 10 users connect to the base station in a one second interval. Therefore, the probability that the base will drop users will be 0.

4/ What benefits do you see of using the parametric approach versus the relative frequency approach?

There are several benefits that I see of using the parametric approach

- We can observe the probability of a given number of events occurring in a fixed interval of time.
- We can observe the change in the probability of a given number of events when the time interval is changing. Hence, we can predict whether the next events will happen or not.