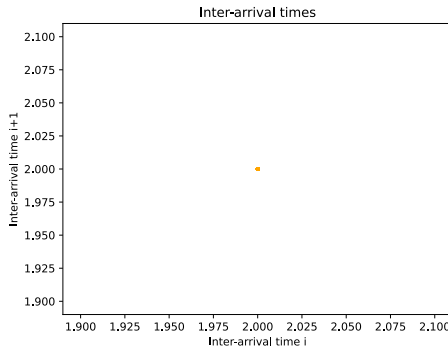
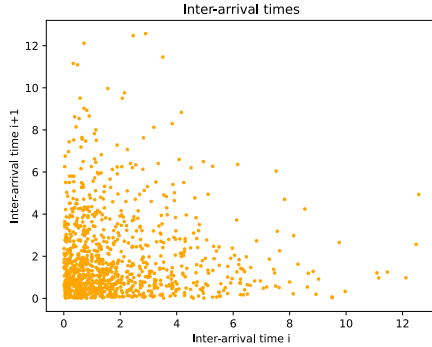
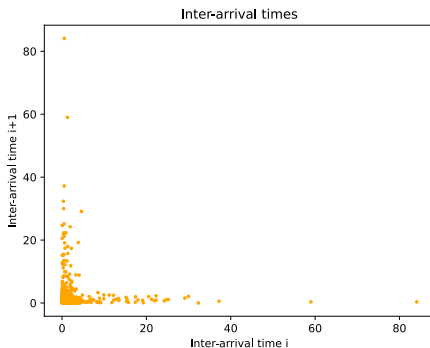


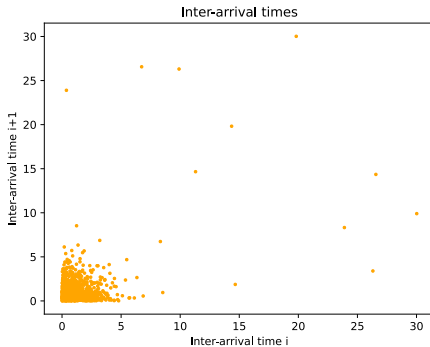
Workloads Types

To have this assignment evaluated for the in-class exam, please upload on WeBeep a ZIP file including:

- the source code used to solve this assignment
- this file, with the table below properly filled

Name (Family + given)		Demasi Giovanni
Student ID (codice persona)		10656704
QR-code ID (8 digits of the QR that was given you)		71847928
Log1.csv	Arrival rate	0,5000 <i>jobs/second</i>
	Average inter-arrival time	2,0000 <i>seconds</i>
	Variability	0,0000 <i>seconds</i>
	Response time	1,2000 <i>seconds</i>
	Correlation plot: <i>deterministic distribution</i> 	
Log2.csv	Arrival rate	0,5093 <i>jobs/second</i>
	Average inter-arrival time	1,9636 <i>seconds</i>
	Variability	2,0060 <i>seconds</i>
	Response time	2,0822 <i>seconds</i>
	Correlation plot: <i>exponential distribution (not correlated)</i> 	

Log3.csv	Arrival rate	0,5408 jobs/second
	Average inter-arrival time	1,8491 seconds
	Variability	4,7488 seconds
	Response time	5,1840 seconds
	Correlation plot: <i>hyper exponential distribution (not correlated)</i>	
		

Log4.csv	Arrival rate	0,7798 jobs/second
	Average inter-arrival time	1,2824 seconds
	Variability	2,1809 seconds
	Response time	25,8783 seconds
	Correlation plot: <i>Markov modulated Poisson process of size 2 (positively correlated)</i>	
		

As it can be noticed by the above results, even if Log1 and Log2 are practically characterized by the same arrival rate, Log2, which has a larger variability, exhibits a larger response time.

Another thing to be noticed is that, even if the arrival rate of Log3 is slightly larger than the arrival rate of Log2, since its variability is more than twice the variability of Log2, also its response time is more than twice with respect to Log2, confirming that higher variability determines worse performance.

The last thing that must be noticed from the above analysis is that, since Log4 inter-arrival times are positively correlated, its response time increases a lot, being much larger with respect to the response times of the other Logs.