Performance modelling of a 3D printer service.

A 3D printing service, receives files to print from users remotely, and prints their objects with a first-come-first-served (FCFS) approach. Using JMT (where FCFS is the default) analyze the performances when the distributions of the inter arrival times of the files and of the priniting times are the following:

Case	**Interarrival time**	**Service time**
A	Deterministic, 10 minutes	Deterministic, 8 minutes
B	Exponential, average 10 minutes	Exponential, average 8 minutes
C	Uniform, [9-11 minutes]	Uniform, [7-9 minutes]
D	Erlang, average 10 minutes eight stages	Hyper-exponential, average 8 minutes c.v. 1.42

Questions:

1. Which is the utilization of the four scenarios?
2. Which is the response time of the four scenarios?
3. Compare Scenario A and C: which are differences? Why are they so similar?
4. Compare Scenario B and D: which are differences? Why are they so similar?

Please enter the answers, together with a ZIP file containing the .jsimg files of the four models for the four cases, renamed with PPTX extension, in the following form:

https://forms.office.com/Pages/ResponsePage.aspx?id=K3EXCvNtXUKAjjCd8ope67-7CBR7gDJEgHF_krAEqPhUOUgwNEFHNUhIRkRLTlNETjdBRjNLSVpOMi4u

The deadline is **Midnight, 09/10/2025**