Project and exam rules 2023 / 2024

Consider the system described in the project assigned to you as described in a separate document. Define a model, and use it to answer the proposed questions. You can use whatever tools and techniques you wish: MatLab code, Python, Excel, Java Modelling Tools are some examples, but you are free to use other tools if you know them and feel more comfortable using them.
Every project will require you to extract some data from a specific trace file. All traces will be included in a separate .ZIP file. Please be careful to choose the correct one and avoid using the "Repeater" if you decide to use JMT: data sets are expected to be fitted against a probability distribution.

Your model can either be a State Machine, a Queuing Network, a Petri-Net, a custom simulator producing and analyzing proper traces. Your models can be open or closed, single or multiple class, defined through states or queuing stations: you have to choose the technique which you think is better suited for the problem that has been assigned to you. Solutions can be computed using either Discrete Event Simulation or using analytical relations if available. If you opt for Simulation, please remember to provide confidence intervals for the results.

Prepare a set of slides that describe your approach and which can help you in presenting your results. In your analysis, try not limiting yourself just to answer the proposed questions, but use what you have learnt to derive some insights of the system behavior from the models you have created. Please upload the slides only in **PDF format**, and avoid other extensions.

If you have done the in-class exam and have delivered all the assignments throughout the course, the project will have to be uploaded in the same way you did for the assignments – in this case however no "scan of your code" is required. A mark will be proposed you after the evaluation of all your exercises will be completed: please be aware that this can be a very long process. If you do not accept it, you will be request to follow the rules for the students doing the regular off-line exam described below.

Regular off-line exams will not need any upload before the discussion, and you will be requested to deliver everything directly during the day of the exam. You will start with the presentation of the project, and you will be given up *to ten minutes* for describing it. The exam will then continue with the discussion of up to three assignments randomly chosen between the ones given during the lessons. Questions about the techniques you used in your projects and assignments will be made during your presentations: you will **NOT be supposed to know** *any of the proof* we seen during the course, *neither any of the formula* that have been described in the lessons. The exam, although being oral, it will be *open book*: you will also **be allowed to use** any notes you wish and read any material you want during your exam, as long as you will be able to answer your question in a reasonably short amount of time. You will however have to perfectly know what the code you have written for solving your assignments / project does: please remember that assignments will mainly be a starting point for a discussion about the theory, the concepts and reasons behind it. Even if there are a lot of assignments and you might have done some of them a long time before, you will be supposed to have revised them: any answers such as "I do not remember, I did it a long time ago" will not be accepted and the corresponding exercise will be considered as not done. You will be evaluated on the quality of the answers these questions, plus your presentation and confidence during your exam.