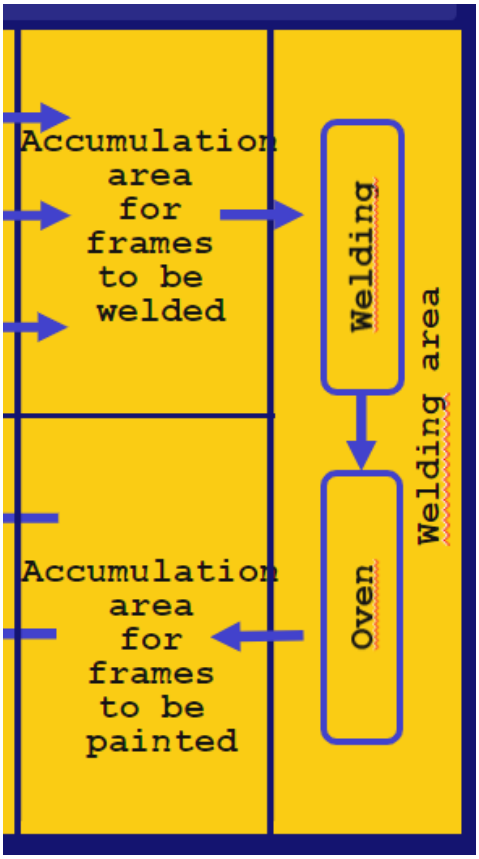
Exercise 2.

With reference to the example “DIBRIS-BIKE” (powerpoint slides partIIIez05, example), focusing on the part of the plant shown below, you are required to design and implement the following activities.



1) Design and implement in MS-Sql server the tables required to store the information related to the “cutted tubes” present in the accumulation area (attributes: id, batch_id, processing_time_on_welding, processing_time_on_oven), and to the jobs (“assembling the tubes”) assignment to the two machines.
2) Design and implement the Johnson scheduling algorithm in Matlab to minimise the overall time required by a batch of tubes stored in the accumulation input area. Store the results in MS-Sql by the proper call in matlab.
3) Verify the performance of the algorithms against the definition of the same problem as a mathematical problem (they should give the same result, maybe with difference sequences)
4) Verify such performance generating different instances of the problem