Use the cross-section analysis tool siliwiz (siliwiz.com) to do the following assignment.

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|  | **Assignment-1**: Using the **inverter.json** layout   1. Draw the cross-section CS1 – CS5 and verify with siliwiz 2. Extract the circuit from the layout with the transistor sizes. 3. Assuming contact resistance and M1 sheet-rho of , calculate all the parasitic resistance. |
|  | **Assignment-2**: Using the **m2cap.json** layout   1. Draw the cross-section CS1 and verify with siliwiz. 2. Calculate the total capacitance between the terminal ‘in’ and ‘out’ with the following input:    1. Thickness of M2 is 0.5um    2. Spacing between M2 is 0.1um    3. Dielectric is Silicon Dioxide |
|  | **Assignment-3**: Using **mimcap.json** layout   1. Draw the cross-section CS1 – CS3 2. Extract the circuit from the layout. 3. Calculate and R and C of the layout with the following input:    1. The capacitance density of the Metal-Insulator-Metal (MIM) is    2. Poly res (yellow) sheet-rho is |