

Digital System Design Project 4 – OpenROAD

Due: 23:59, Dec. 22, 2023

OpenROAD is a US DARPA IDEA program project that pursues open-source tools for 24-hour, "**no human in the loop**" digital layout generation across integrated circuit, package, and board domains. The development of open-source self-driving design tools is an ambitious "**moonshot**" project with numerous technical and cultural challenges. Up to now, six major design-flow stages, **synthesis**, **floorplanning**, **placement**, **clock tree synthesis**, **routing**, and **finishing**, have been developed. In this final project, you are going to install and study the OpenROAD design flow.

Please submit a complete study report according to the following rules:

- 1- The font size of your report is 12 in PDF format.
- 2- The filename of your report is your student ID (e.g., B12345678.pdf).
- 3- Elaborate on the incremental progress of each step and provide necessary screenshots (and output texts) to support your observations.
- 4- Discuss what you have learned from this open-source IC design flow.
- 5- Your feedback, comments, and suggestions for this course are highly welcomed.

Reference

[1] The OpenROAD Project – Foundations and Realization of Open and Accessible Design

URL: <https://theopenroadproject.org/>

[2] OpenROAD (Source code)

URL: <https://github.com/The-OpenROAD-Project>