ENCS3330 – First Sem 2021-2022 - Final Project Grading

Project: Design 4 bit CAM using 9T SRAM cell

Design of a cutting-edge CAM cell using 9T device chip using 22nm or lower. Teams of 3 students undertake a large circuit design problem, going from specification to implementation while optimizing for speed, area, and/or power. Group collaboration and engineering design. See attached two paper for SRAM AND CAM. Last day for report is last week of classes.

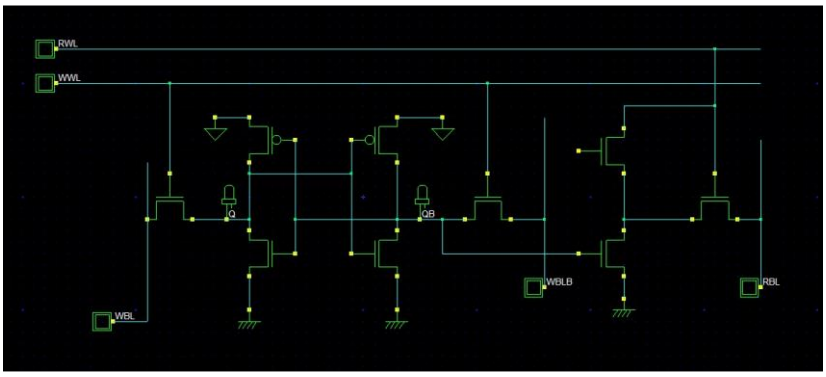

Fig 1 – 9T SRAM schematic

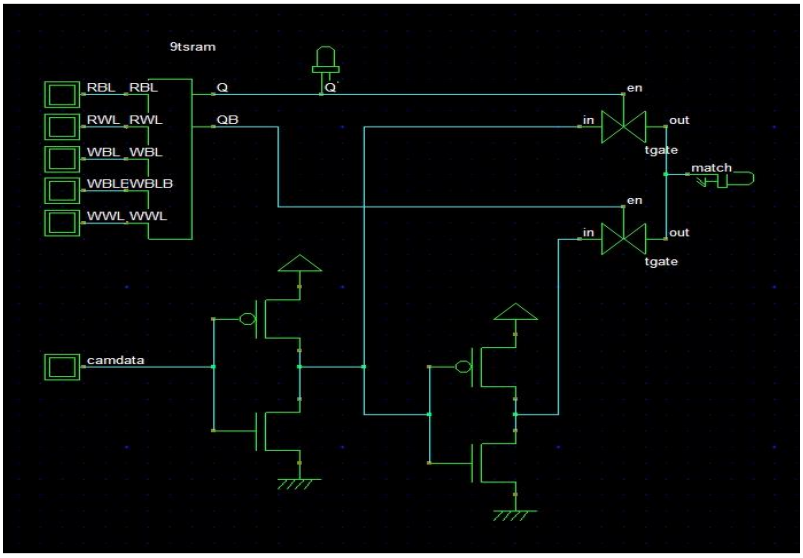

Fig 4 – CAM cell schematic

GRADES: Grading is based upon the following factors

- Presentations
- Final project report
- Technical competency in pursuing project goals
- Proficiency in collaboration, as measured by overall project integration and success.

- Implementation- **Presentation**
  - Design ____ / 5
  - Spice Simulation ____ / 5

- layout
- Layout based Simulation ____ / 5
- Overall Area ____ / 5
- Delay ____ / 5
- Power ____ / 5

Final Report -IEEE format ____ / 20

Report should have:

- **Download template from:** **https://www.sciencedirect.com/journal/microelectronics-journal**
- Content:
- Abstract
- Introduction
- Existing system and comparison
- Simulation and results: elaborate on simulation and include table comparisons
- Conclusion
- References: add all references not less than 10, 5 of them has to be within last 3 years and at least one of them from **https://www.sciencedirect.com/journal/microelectronics-journal**

Note: figures and tables formats in the report :

- **need to be nice and clean, readable, and not black and white.**
- **Need to be your own drawing not cut and past**
- **Exact copy of figure, table. Circuit, content will be zero grade**

Total ____ / 50