2023 Digital IC Design Homework 5

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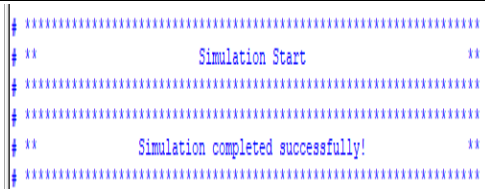
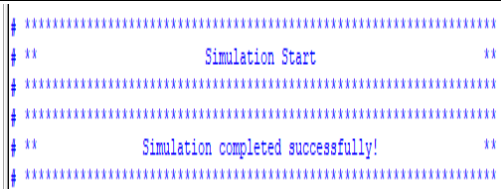
Simulation Result

Functional simulation	Completed	Gate-level simulation	Completed



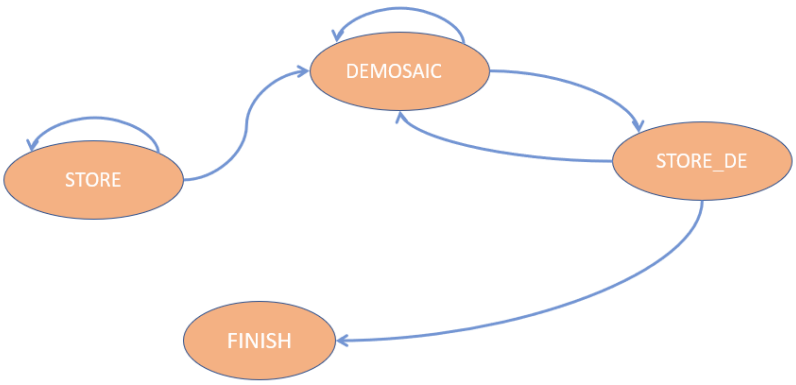


Evaluation Results

test1.png	25.32	test2.png	24.82
test3.png	29.12	test4.png	20.95
test5.png	21.94	test6.png	25.21

Description of your design

The proposed work is implemented using a finite state machine (FSM) that is divided into four states. The state diagram is described below:



STORE: Stores data_in's value to the corresponding RGB memory.

DEMOSAIC: Gets values from RGB memory and demosaicing current pixel depends on surrounding pixel.

STORE_DE: Stores the DEMOSAIC state's result to the corresponding pixel.

FINISH: Finish by setting the "done" signal to 0.

Scoring = average PSNR of the six test images

*** PSNR of all interpolation results should meet at least the baseline.**