2023 Digital IC Design Homework 5

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| NAME | 黃彥承 | | | |
| Student ID | N26101185 | | | |
| **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.**