2023 Digital IC Design Homework 1

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| NAME | | 陳映臻 | | | | | | |
| Student ID | | P76111783 | | | | | | |
| **Functional Simulation Result** | | | | | | | | |
| Stage 1 | Pass/Fail | | Stage 2 | Pass/Fail | Stage 3 | Pass/Fail | Stage 4 | Pass/Fail |
| **Stage 1** | | | | | | | | |
|  | | | | | | | | |
| **Stage 2** | | | | | | | | |
|  | | | | | | | | |
| **Stage 3** | | | | | | | | |
|  | | | | | | | | |
| **Stage 4** | | | | | | | | |
|  | | | | | | | | |
| **Description of your design** | | | | | | | | |
| 4-input MMS：首先先將number0和number1、number2和number3比大小，分別將結果輸出到cmp1和cmp2這兩個register，若前者小於後者，輸出1，反之，則輸出0。cmp1和cmp2分別和select一起選擇MUX該輸出的結果，並儲存到output1和output2這兩個register，最後將output1和output2比大小，結果輸出到cmp3並和select一起選擇MUX的結果，最後輸出至result。  8-input MMS：將number0~3和number4~7傳輸至各自的4-input MMS，結果為w1和w2這兩個wire，接著比大小並將結果輸出至cmp，和select一起選擇MUX的結果，最後輸出至result。 | | | | | | | | |