2023 Digital IC Design Homework 1

NAME	李亦軒
Student ID	E14091067

Functional Simulation Result

Stage 1	Pass	Stage 2	Pass	Stage 3	Pass	Stage 4	Pass

Stage 1

```
# ------------Stage 1 : Maximum selection with 4-input MMS-------------
#
# ------------Stage 1 :              Pass!                -------------
#
```

Stage 2

```
# ------------Stage 2 : Minimum selection with 4-input MMS-------------
#
# ------------Stage 2 :              Pass!                -------------
#
```

Stage 3

```
# ------------Stage 3 : Maximum selection with 8-input MMS-------------
#
# ------------Stage 3 :              Pass!                -------------
#
```

Stage 4

```
# ------------Stage 4 : Minimum selection with 8-input MMS-------------
#
# ------------Stage 4 :              Pass!                -------------
#
```

Description of your design

MMS_4nums：利用兩個 8-bits 的值暫存輸入兩兩比較的結果(最大值或最小值)，再讓這兩個值比大小，並利用輸入訊號的改變讓 result 存取對應的輸出值。

MMS_8nums：利用 hierarchy 的方式將兩個 MMS_4nums 組合起來再利用 comparator 比較兩者大小，配合選擇線輸出對應值。