

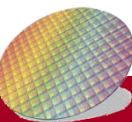


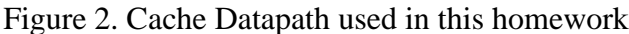
成功大學

National Cheng Kung University

Computer Organization Homework 4

Cache Design







General rules for deliverables

- Complete this homework INDIVIDUALLY.
- When submitting your homework, compress all files into a single **zip** file, and upload the compressed file to Moodle.

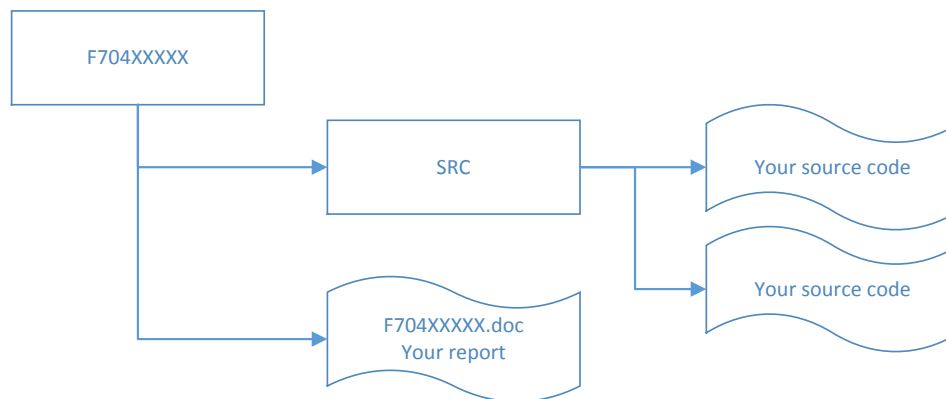
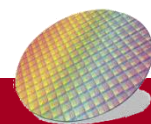


Figure 1. File hierarchy for homework submission





Deadline

- Due: 6/23(一) PM 9:50

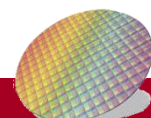
HW Announcement:

- HW0 Self Introduction - [Student_info_v1.pptx](#) Due: 3/1 9:50PM. If the course is not in your moodle account, you can mail homework 1 to nckuco@gmail.com
- [HW1 MIPS Instruction](#) Due: 4/6
- [HW2 Single-cycle](#) Due: 4/27 moved to 5/1 9:50PM
- [HW3 Pipeline](#) Due: 5/22->5/25 9:50 PM
- [HW4 Cache](#) Due: 6/15-> 6/23 (Friday) 9:50PM

繳交狀態

繳交狀態	沒有繳交作業
評分狀態	尚未評分
規定繳交時間	2017年 06月 12日(一) 21:55
剩餘時間	10 日 7 小時

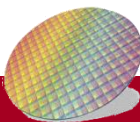
Moodle will be update soon !!!





作業重點 - Outline

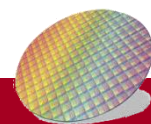
- I/D Cache Size
- Read Data From IM or DM
- Cache Read Miss/Hit
- Cache Write Miss/Hit (Write Through)
- Modify CPU: Stall & MemRead





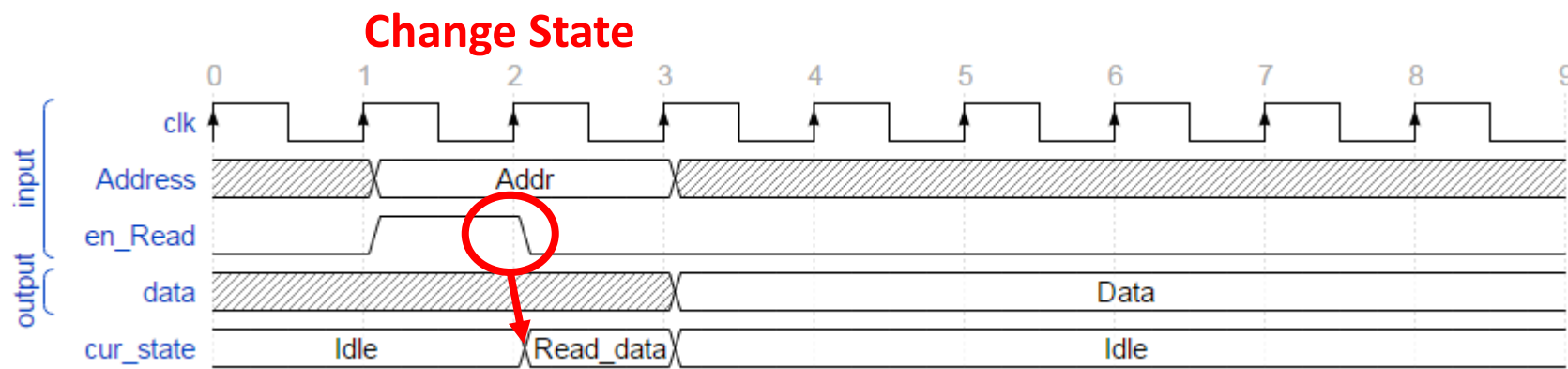
I/D Cache Size

Cache Size	Cache Line	Cache Block	Way	Write Policy
128Byte	32	4Byte	Direct Map	Write Through

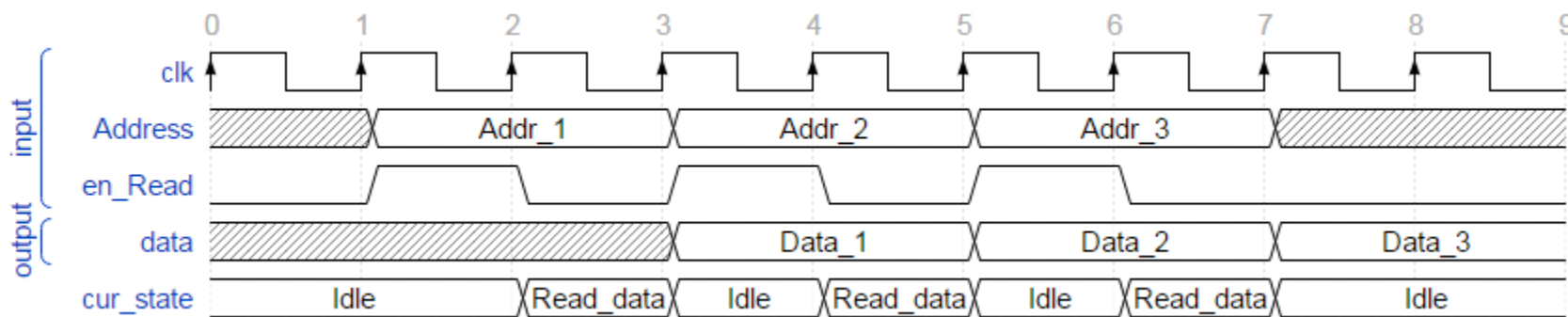




Read Data From IM or DM



Read One Data From I/D Memory

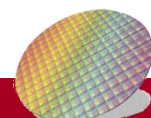


Read Three Datas From I/D Memory

Waveform:

[ReadOneData](#)

[ReadThreeDatas](#)

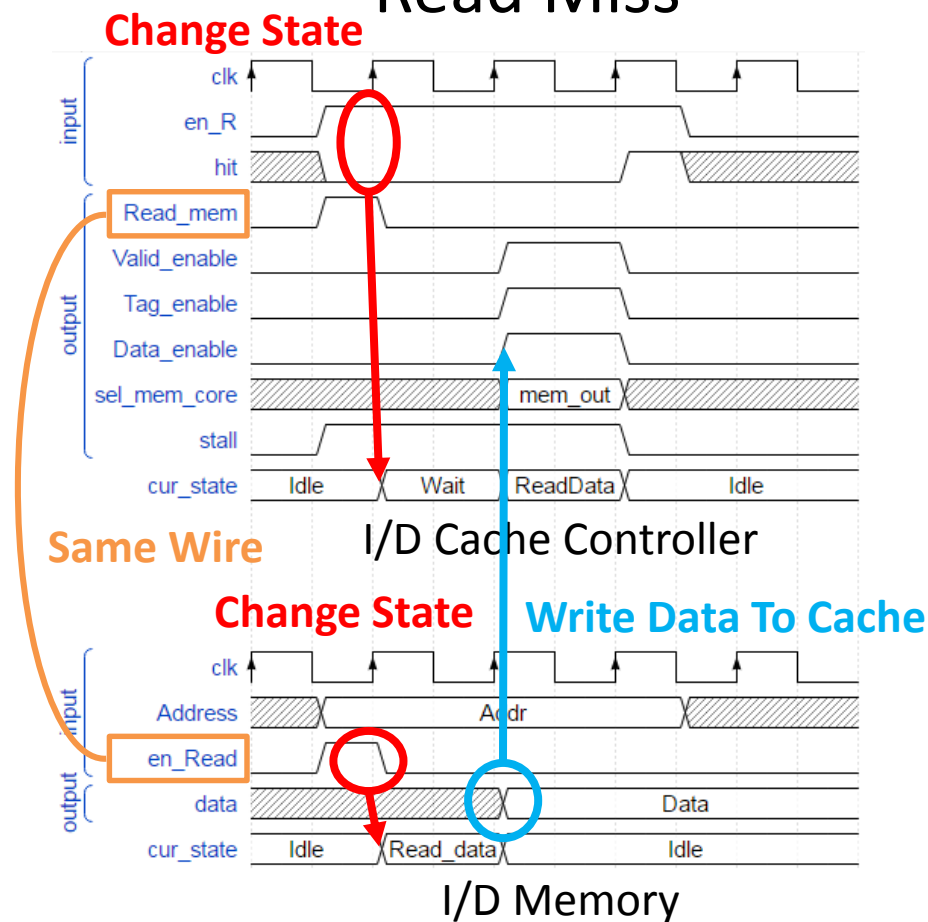




Cache Read Miss/Hit

Read Miss

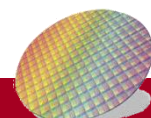
Read Hit



Waveform:

[ReadMiss](#)

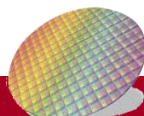
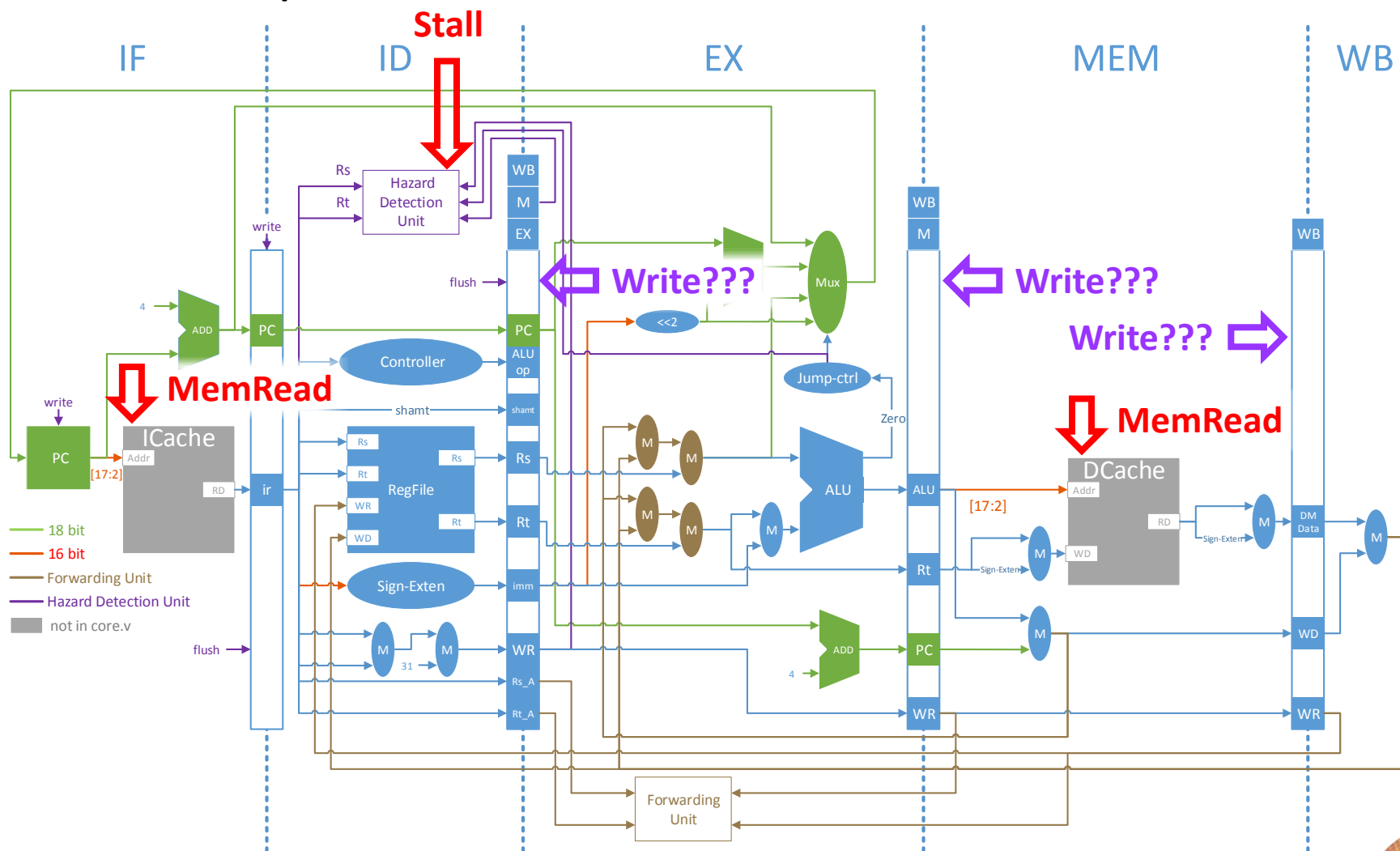
[ReadHit](#)





Modify CPU: Stall & MemRead

- HW3 top.v => HW4 Core.v



Q & A time

