10220 CS410001 – Computer Architecture 2014
Appendix C-1 - Output Samples for Project 1

Please strictly follow the following format to generate your outputs, **or your results may be evaluated as incorrect!**

Format:

    cycle (cycle index in decimal representation)
    $00: 0x(content in hexadecimal digits)   # note that there is a space between ":" and "0x"
    $01: 0x(content in hexadecimal digits)
    …
    … (other registers' contents)
    …
    $31: 0x(content in hexadecimal digits)
    PC: 0x(content in hexadecimal digits)
    (2 space lines here)

Note that comments are here for your understanding; they should not appear in your output files. If you have any doubts or questions, please check with TA's.

With the format, let's walk through an output example. Be noted that you should dump out the contents of registers **before** executing the instruction at each checkpoint.

The following is the content of snapshot.rpt after executing the sample inputs in *Appendix B*.   To save space, we show the outputs in three columns; nevertheless, you should generate a one-column report as specified in the "*Format*" section.

snapshot.rpt:

cycle 0	$12: 0x00000000	$25: 0x00000000
$00: 0x00000000	$13: 0x00000000	$26: 0x00000000
$01: 0x00000000	$14: 0x00000000	$27: 0x00000000
$02: 0x00000000	$15: 0x00000000	$28: 0x00000000
$03: 0x00000000	$16: 0x00000000	$29: 0x00000400
$04: 0x00000000	$17: 0x00000000	$30: 0x00000000
$05: 0x00000000	$18: 0x00000000	$31: 0x00000000
$06: 0x00000000	$19: 0x00000000	PC: 0x00000000
$07: 0x00000000	$20: 0x00000000	
$08: 0x00000000	$21: 0x00000000	
$09: 0x00000000	$22: 0x00000000	cycle 1
$10: 0x00000000	$23: 0x00000000	$00: 0x00000000
$11: 0x00000000	$24: 0x00000000	$01: 0x00000000

$02: 0x00000000

$03: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000000

$09: 0x00000000

$10: 0x00000000

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x00000004

cycle 2

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000

$03: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000000

$09: 0x00000000

$10: 0x00000000

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x00000008

cycle 3

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000

$03: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000000

$09: 0x00000000

$10: 0x00000001

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x0000000C

cycle 4

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000

$03: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000000

$09: 0x00000000

$10: 0x00000001

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x00000010

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x00000014

cycle 6

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x00000018

cycle 7

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000

$03: 0x00000000

cycle 5

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000

$03: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000000

$09: 0x00000000

$10: 0x00000001

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$03: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000000

$09: 0x00000001

$10: 0x00000001

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000000

$09: 0x00000001

$10: 0x00000001

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x00000008

cycle 8

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000

$03: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000000

$09: 0x00000001

$10: 0x00000001

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x0000000C

cycle 9

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000

$03: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000000

$09: 0x00000001

$10: 0x00000001

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x00000010

cycle 10

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000

$03: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000001

$09: 0x00000001

$10: 0x00000001

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x00000014

cycle 11

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000	$06: 0x00000000	$10: 0x00000001
$03: 0x00000000	$07: 0x00000000	$11: 0x00000000
$04: 0x00000000	$08: 0x00000001	$12: 0x00000000
$05: 0x00000000	$09: 0x00000002	$13: 0x00000000
$06: 0x00000000	$10: 0x00000001	$14: 0x00000000
$07: 0x00000000	$11: 0x00000000	$15: 0x00000000
$08: 0x00000001	$12: 0x00000000	$16: 0x00000000
$09: 0x00000002	$13: 0x00000000	$17: 0x00000000
$10: 0x00000001	$14: 0x00000000	$18: 0x00000000
$11: 0x00000000	$15: 0x00000000	$19: 0x00000000
$12: 0x00000000	$16: 0x00000000	$20: 0x00000000
$13: 0x00000000	$17: 0x00000000	$21: 0x00000000
$14: 0x00000000	$18: 0x00000000	$22: 0x00000000
$15: 0x00000000	$19: 0x00000000	$23: 0x00000000
$16: 0x00000000	$20: 0x00000000	$24: 0x00000000
$17: 0x00000000	$21: 0x00000000	$25: 0x00000000
$18: 0x00000000	$22: 0x00000000	$26: 0x00000000
$19: 0x00000000	$23: 0x00000000	$27: 0x00000000
$20: 0x00000000	$24: 0x00000000	$28: 0x00000000
$21: 0x00000000	$25: 0x00000000	$29: 0x00000400
$22: 0x00000000	$26: 0x00000000	$30: 0x00000000
$23: 0x00000000	$27: 0x00000000	$31: 0x00000000
$24: 0x00000000	$28: 0x00000000	PC: 0x0000000C
$25: 0x00000000	$29: 0x00000400	
$26: 0x00000000	$30: 0x00000000	
$27: 0x00000000	$31: 0x00000000	cycle 14
$28: 0x00000000	PC: 0x00000008	$00: 0x00000000
$29: 0x00000400		$01: 0x00000000
$30: 0x00000000		$02: 0x00000000
$31: 0x00000000	cycle 13	$03: 0x00000000
PC: 0x00000018	$00: 0x00000000	$04: 0x00000000
	$01: 0x00000000	$05: 0x00000000
	$02: 0x00000000	$06: 0x00000000
	$03: 0x00000000	$07: 0x00000000
cycle 12	$04: 0x00000000	$08: 0x00000001
$00: 0x00000000	$05: 0x00000000	$09: 0x00000002
$01: 0x00000000	$06: 0x00000000	$10: 0x00000001
$02: 0x00000000	$07: 0x00000000	$11: 0x00000000
$03: 0x00000000	$08: 0x00000001	$12: 0x00000000
$04: 0x00000000	$09: 0x00000002	$13: 0x00000000
$05: 0x00000000		

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x00000010

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x00000014

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x00000018

cycle 17

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000

$03: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000003

$09: 0x00000003

$10: 0x00000001

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

cycle 16

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000

$03: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000003

$09: 0x00000003

$10: 0x00000001

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

cycle 15

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000

$03: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000003

$09: 0x00000002

$10: 0x00000001

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x00000008

cycle 18

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000

$03: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000003

$09: 0x00000003

$10: 0x00000000

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x0000000C

cycle 19

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000

$03: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000003

$09: 0x00000003

$10: 0x00000000

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x0000001C

cycle 20

$00: 0x00000000

$01: 0x00000000

$02: 0x00000000

$03: 0x00000000

$04: 0x00000000

$05: 0x00000000

$06: 0x00000000

$07: 0x00000000

$08: 0x00000003

$09: 0x00000003

$10: 0x00000000

$11: 0x00000000

$12: 0x00000000

$13: 0x00000000

$14: 0x00000000

$15: 0x00000000

$16: 0x00000000

$17: 0x00000000

$18: 0x00000000

$19: 0x00000000

$20: 0x00000000

$21: 0x00000000

$22: 0x00000000

$23: 0x00000000

$24: 0x00000000

$25: 0x00000000

$26: 0x00000000

$27: 0x00000000

$28: 0x00000000

$29: 0x00000400

$30: 0x00000000

$31: 0x00000000

PC: 0x00000020