SOFT400127: Computer Organization and Architecture 2022-Fall Homework- **12** Solutions

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Honor Code: I promise that I finished the homework solutions on my own without copying other people's work.

Instruction Level Parallelism and Superscalar Processors

1.

- true data dependency
- procedural dependency
- resource conflict
- output dependency
- antidependency

2.

- I1&I2, true data dependency(R1)
- I2&I3, output dependency(R2), output dependency(R2), antidependency(R2)
- I3&I4, antidependency(R2)

solutions

- true data dependency. Out of order or Insert irrelevant instructions.
- antidependency&output dependency. Register renaming.

Other things

- LATEX code refer to these things and was complied on texlive 2020.
 - UCB-CS70's given homework template.
 - A free website useful to edit LATEX formula code.

• Some context refer to Professor Li. 's PPT.

The purpose of writing in English is to adapt to bilingual teaching and to improve my poor English writing skills in preparation for a possible future exchange program.

Thanks for your correcting and grading:).