


Kahoot!

VLIW/static SS quiz

1 play • 81 players





 A kahoot by Penn State

Questions (8)

1 - Quiz

Which statement is NOT true?





60 sec

-  IPC is $1/\text{CPI}$ ✗
-  ILP depends on the hardware ✓
-  ILP is the best-possible IPC ✗
-  Different instructions may have different ILP ✗

2 - Quiz

What is the ILP of the following code?

120 sec

-  5 ✗
 -  $5/2$ ✗
 -  $5/3$ ✓
 -  1 ✗
- ```
add $1, $1, $2
sub $3, $1, $2
add $4, $3, $2
sub $5, $6, $7
add $8, $9, $10
```

## 3 - Quiz

**What is NOT true about VLIW?**

60 sec



The compiler schedules instructions and create packets.



VLIW needs a multi-ported register file



VLIW resolves WAW dependence with renaming



VLIW suffers less from data and control hazard compared to single-issue CPU



## 4 - Quiz

**Which of the dependence CANNOT be resolved even with renaming?**

60 sec



RAW dependence



WAR dependence



WAW dependence



RAR dependence



## 5 - Quiz

**What is the benefit of VLIW compared to superscalar processor?**

60 sec



Better backward code compatibility



Simpler hardware



Faster compilation time



Smaller code size



## 6 - Quiz

**What is NOT true about static superscalar?**

60 sec



Can issue multiple instructions at once



Can run the exact same code with a single-issue processor



Only execute instructions in program order



Does not benefit from loop unrolling, unlike VLIW



## 7 - Quiz

**In a static superscalar processor, you DO NOT NEED TO stall if ...**

90 sec



WAR dependence within the instructions fetched at the same time



If two different branches are fetched at the same time



If there is a structural hazard



RAW dependence within the instructions fetched at the same time



## 8 - Quiz

**Why not build a 32-issue static superscalar?**

60 sec



Data hazard



Needs more read/write ports for the register file



Short instruction run length



All of the above

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