

Multicycle Processor Performance

- Instructions take different number of cycles:
 - 3 cycles: B
 - 4 cycles: DP, STR
 - 5 cycles: LDR
- CPI is weighted average
- SPECINT2000 benchmark:
 - 25% loads
 - 10% stores
 - 13% branches
 - 52% data processing

$$\text{Average CPI} = (0.13)(3) + (0.52 + 0.10)(4) + (0.25)(5) = 4.12$$

