

Example I – Data Hazard & Forwarding

- ADD R1, R2, R3
ADD R5, R1, R5
ADD R3, R1, R4

S1: Instruction Fetch

S2: Decode

S3: Register Fetch

S4: Execute/EA

S5: Memory Access (LD/ST)

S6: Write Back (register write)

Example II – Data Hazard & Forwarding

- ADD R1, R2, R3
LDR R4, R1, #1
STR R4, R1, #1

S1: Instruction Fetch

S2: Decode

S3: Register Fetch

S4: Execute/EA

S5: Memory Access (LD/ST)

S6: Write Back (register write)