Forwarding Unit Equations: 1. (EX/MEM. RegWrite &(EX/MEM. Register Rd + 0) & (EX/MEM. Register Rd = ID/EX. Register Rs)) = Forward A = 10. ALVA = Prior ALV result 2. (EXMEM. ProgWrite & (EX/MEM. Register Rd =0) & (EX/MEM. Degister Rd = ID/Ex. Degister Rt)) = Forward B = 10. ALUB = Prior ALU result 3. (EX/MEM, RagWrite & (EX/MEM. Register Rd =0)& (MEM/WB. Register Rd = IDEX, Register Rs)) = Forward A = 01. ALVA = Dafa Memory or Prior ALL vesult 4. (EX/MEM. Regulate & (EX/MEM. Register Rd =0) & (MEM/WB. Pregister Rd = ID/EX. Degister Rd)) = Forward B=01. ALUB= Doba Momory or Prior ALU result EX/MEM. Register Rd -TREX. Project RS_ Forward A(1)
Forward A(0) B Comparater (A=B) EXMEM. Reginite-B Comparador A=B EXMEM. Augistic 2d Comparator A>B O B TOKEN . Register RE -Forward B(1) Comperator A=B Forward B(O) MENYWB. Rogister Rd . $\frac{A}{A}$ Comparator A = BHazard Delection Unit Equation:

Hazard Detection Unit. Equation: 1. (EXMEM. Membead & ((ID/EX. PegisterRt = IF/ID. PegisterRs) or (ID/EX. Pregister Rt = IF/ID. Pregister Rt))) EXMEX. MEM Dead 7 IF/ID. Register Rs Comparator ID/EX. RegisterAt B Comparator A=B IF/ID. Pegister RY. CHIMUX PCWrite = 1: PC increments, else is held IF/IDWrite=1: TF/ID is written to, else is stalled CA-LMUX = 1: Control signals from CU, else Flushed with Zeros of Powrite, IF/IDWrite, and Ctr/MUX are be high signals. Want them to