top\_adder\_4bits\_generatecase:1 adder\_4bits\_generateifinif\_1:1 adder\_4bits\_pipeline sum\_HH(3:0) a(3:0) CLK1 pipeline A\_HH adder\_4bits\_generateifinif\_2:1 adder\_4bits\_pipeline pipeline A\_HL adder\_4bits\_generateifinif\_3:1 adder\_4bits sum\_LH(3:0) c\_LH CLK2 CLK combine RST A\_LH adder\_4bits\_generateifinif\_4:1 adder\_4bits\_pipeline pipeline A\_LL top\_adder\_4bits\_generatecase