LAB 3 DEMO – Building a Microprocessor Based System with External SRAM and Peripheral Device

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Team_____

Microprocessor Based System (310)

Microprocessor (160)

Top Level Module		30
Input and Output		
Clock, LEDs, Switches, Reset		
NIOS II Processor		
Clock, LEDs, Switches, Reset		
Qsys		50
CPU		
GPIO		
LEDs		
Switches		
NIOS II Build		80
Count Binary Program	15	
Output to Eclipse Window		
Lights and Switches Program	15	
All Switches → LEDs		
Reset		
Hello World Small Program 1	15	
Output to Eclipse Window		
Hello World Small Program 2	15	
Input from Eclipse Window		
Output to Eclipse Window		
Hello World Small Program 3	20	
Switch I/O		
LED Display		

Working with an SRAM (50)

Driver – Behavioural Verilog model

- Write – data 127..0 to addresses 0..127
- Read– data 127..0 from addresses 0..127 and display on LEDs

Signal Tap Interface

- Write – data 127..0 to addresses 0..127
- Read– data 127..0 from addresses 0..127

Working with a Peripheral Device (100)

Interlock Management Subsystem	55
Integrated	
Pressure managed on arrival	
Ports managed on arrival	
Pressure managed on departure	
Ports managed on departure	
Console Interface	
Commands Received	15
Display on Eclipse Window	
Commands Entered	30
Input via Eclipse Window	
Output to interlock management subsystem	