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Final project

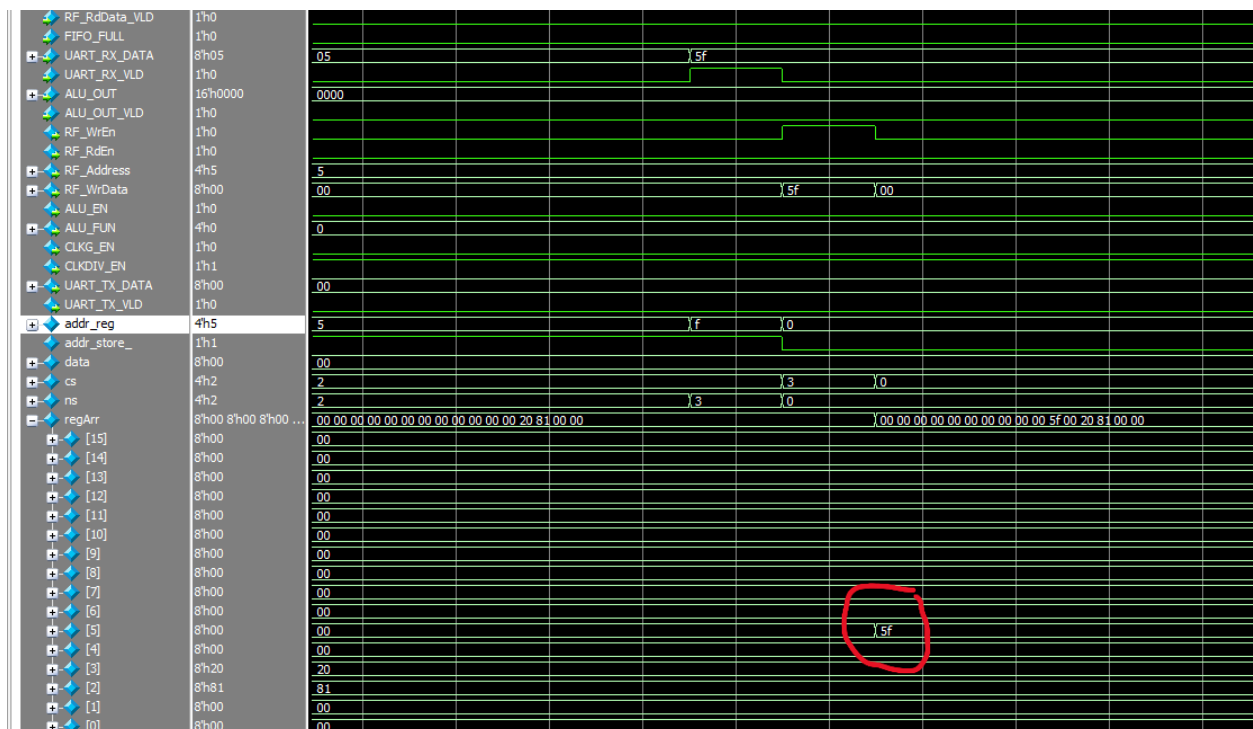
First case: Writing in the reg file

```
// sending aa to write in regfile
frame(0,0,1,0,1,0,1,0,1,0,1); //aa

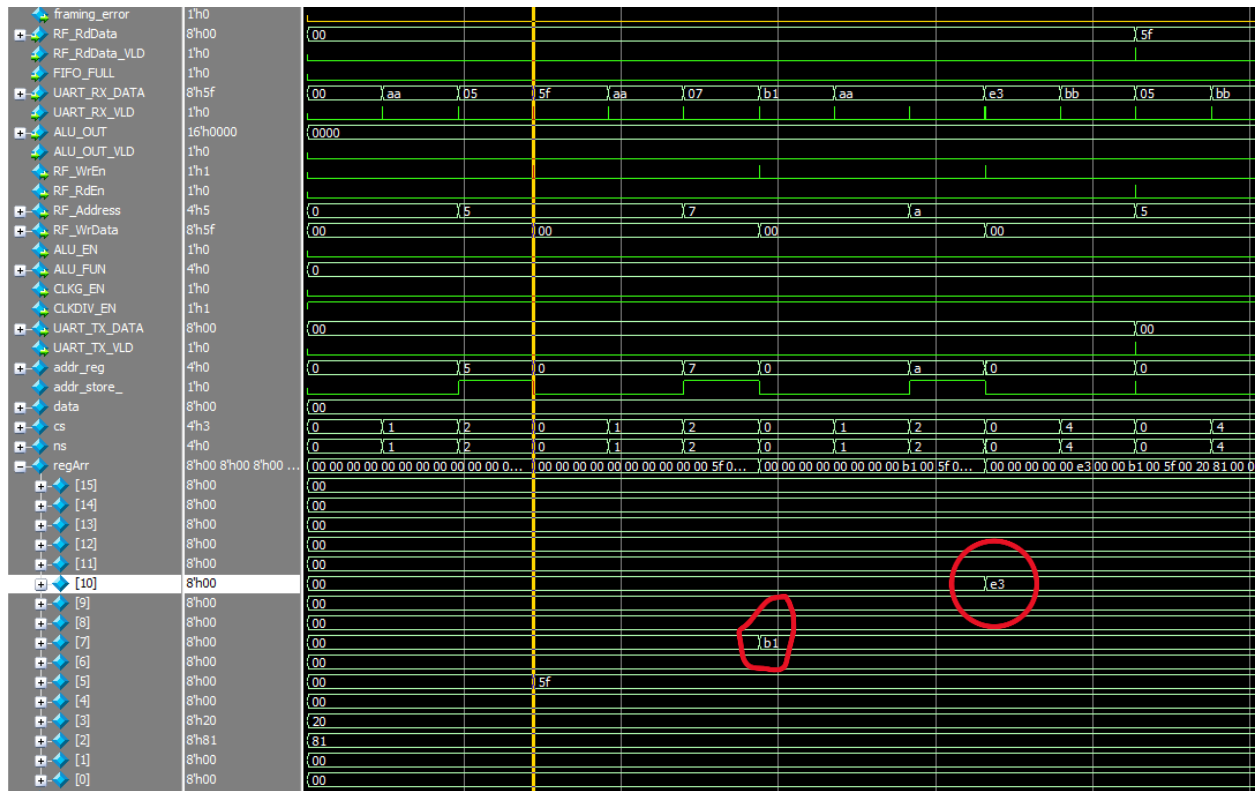
//sending the address "5"
@ (negedge UART_CLK_tb);
frame(0,1,0,1,0,0,0,0,0,0,1); //5
$display("here we should write aa in 5 reg file and the time is ",$time);

@ (negedge UART_CLK_tb);
// sending data to write "5f"
frame(0,1,1,1,1,1,0,1,0,0,1);

$display("here we should write 5f in 5 reg file and the time is ",$time);
```



Writing in another 2 places in reg file:

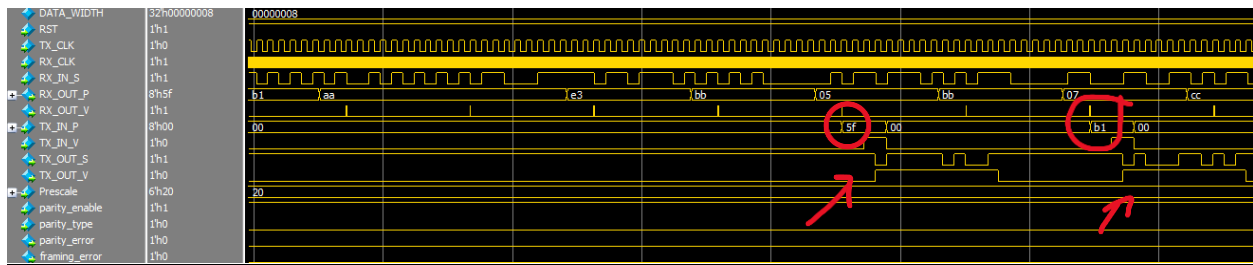


Second case: reading from reg file :

```
//sending bb to read
#200;
@ (negedge UART_CLK_tb);
frame(0,1,1,0,1,1,1,0,1,0,1);

//sending the address "5"
@ (negedge UART_CLK_tb);
frame(0,1,0,1,0,0,0,0,0,0,1);

$display("here we should read 5f in 5 reg file and the time is ",$time);
```



Third case: applying alu operation with operands

```

//////////sending cc to read
@ (negedge UART_CLK_tb);
frame(0,0,0,1,1,0,0,1,1,0,1);

#200;
//////////sending 2b as a operand

@ (negedge UART_CLK_tb);
frame (0,1,1,0,1,0,1,0,0,0,1);

#200;
//////////sending f as operand b

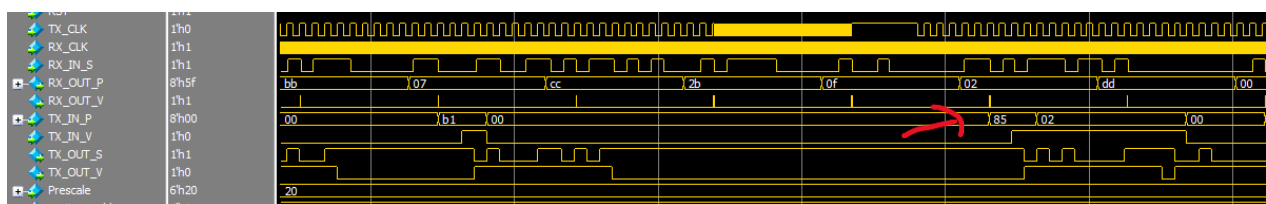
@ (negedge UART_CLK_tb);
frame (0,1,1,1,1,0,0,0,0,0,1);

#200;

//multiplication
@ (negedge UART_CLK_tb);
frame (0,0,1,0,0,0,0,0,0,1,1);

```

The result should be 285 so it was to the tx in 2 frames

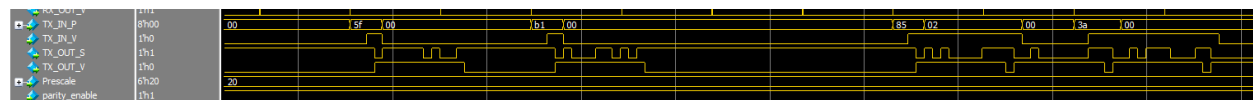


Fourth case : applying alu operation without operands

```
//////////dd
@ (negedge UART_CLK_tb);
frame (0,1,0,1,1,1,0,1,1,0,1);

#200;
//////////add
@ (negedge UART_CLK_tb);
frame (0,0,0,0,0,0,0,0,0,0,1);

#200;
$display("here we should add 2b+f=3a and the time is ",$time);
```



Full snippet:

