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## **Final project**

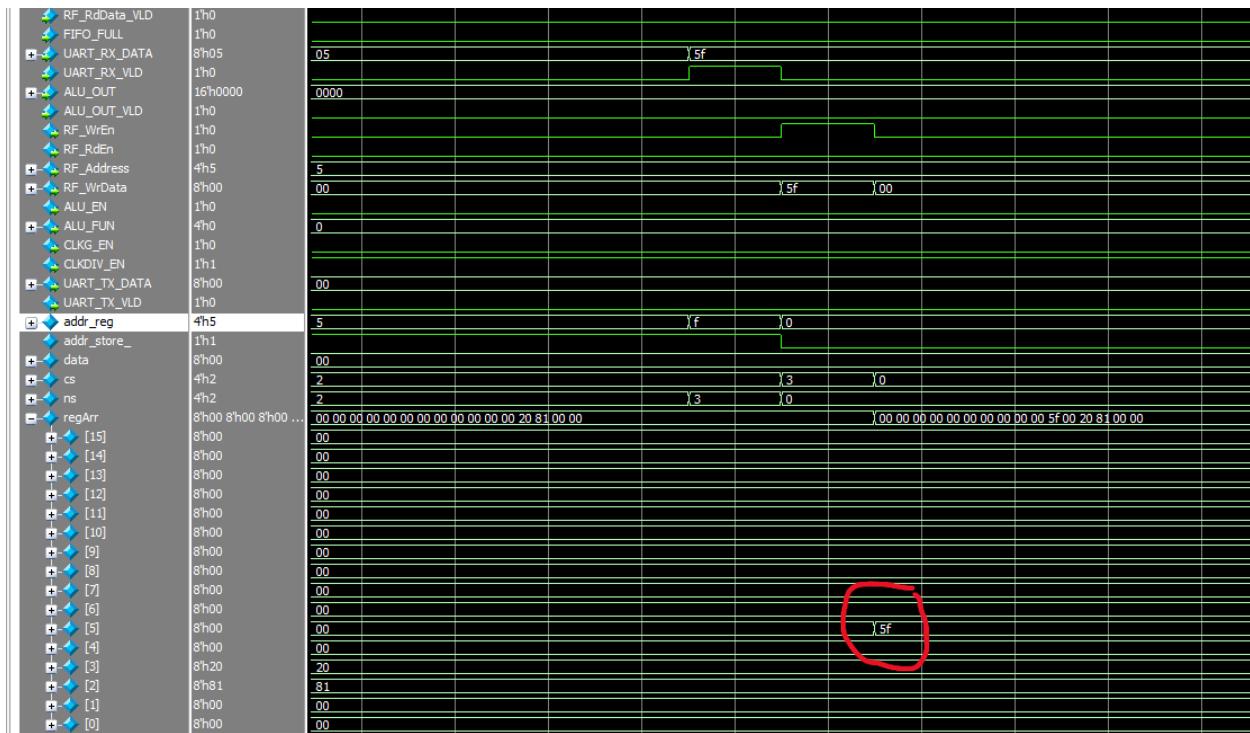
### **First case: Writing in the reg file**

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

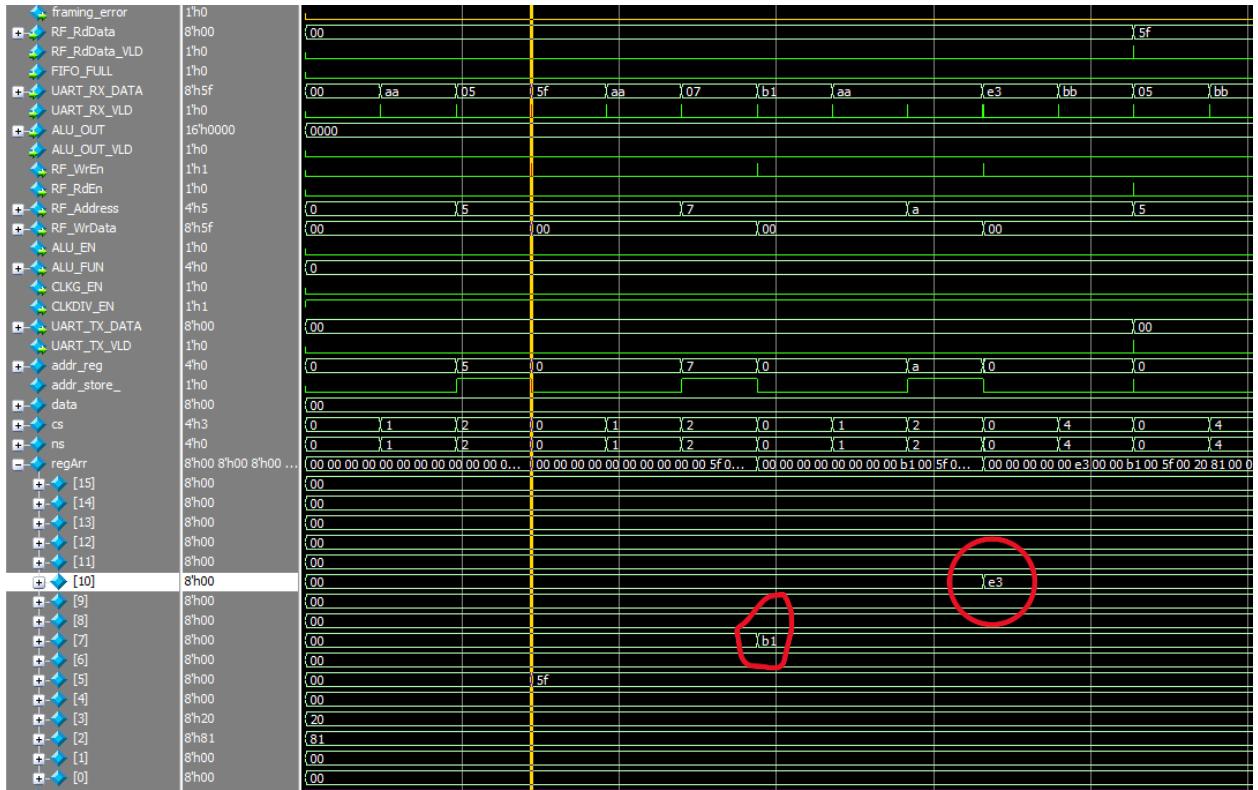
//sending the address "5"
@ (negedge UART_CLK_tb);
frame(0,1,0,1,0,0,0,0,0,0,1); //5
$display("here we should write aa in 5 reg file and the time is ",$time);

@ (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:

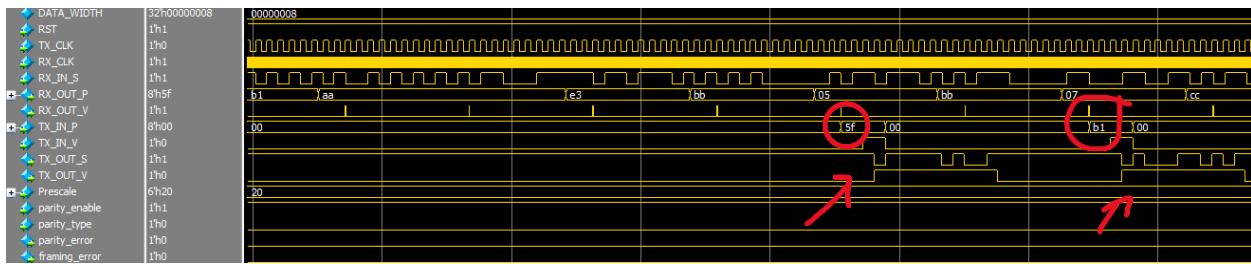


## **Second case: reading from reg file :**

```
//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);

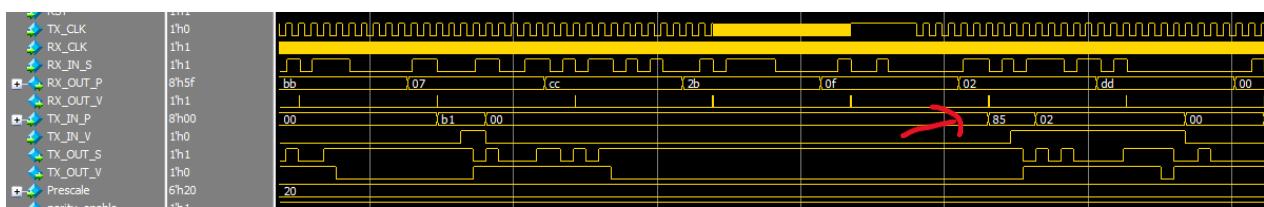
□#200;
///////////sending f as operand b
@ (negedge UART_CLK_tb);
frame (0,1,1,1,1,0,0,0,0,0,1);

□#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**



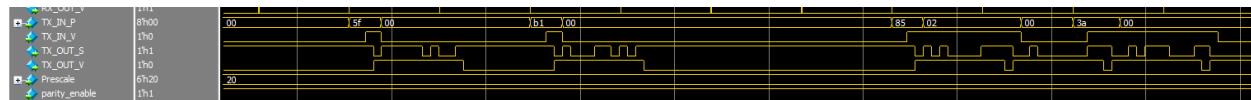
## Fourth case : applying alu operation without operands

```

    ////////////////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:

