```
1   module RegFile_Alu (RdestRegLoc, RsrcRegLoc, Clk, En, Rst, Imm, Imm_s, OpCode, RdestOut,
    Flags);
2
3      input [3:0] RdestRegLoc, RsrcRegLoc;
4      input Clk, En, Rst, Imm_s; //Imm_s is 1 when we want to use the Imm value, else its 0 if
    we want to use RegSrc
5      input [15:0] Imm; //the 16 bit immediate value
6
7      output [15:0] RdestOut; //feeds in to Reg load and is outputed from the ALU
8
9      input [4:0] OpCode;
10     output [4:0] Flags;
11
12     wire [15:0] RsrcOut, AluOutput;
13     reg [15:0] AluSrcIn;
14
15     RegFile myReg(
16        .RdestRegLoc(RdestRegLoc),
17        .RsrcRegLoc(RsrcRegLoc),
18        .Clk(Clk),
19        .En(En),
20        .Rst(Rst),
21        .Load(AluOutput),
22        .RdestOut(RdestOut),
23        .RsrcOut(RsrcOut)
24     );
25
26     ALU myALU(
27        .Rsrc(AluSrcIn),
28        .Rdest(RdestOut),
29        .OpCode(OpCode),
30        .Flags(Flags),
31        .Out(AluOutput)
32     );
33
34     always @(*) begin
35        if (~Imm_s)
36           AluSrcIn <= RsrcOut;
37
38        else begin
39           AluSrcIn <= Imm;
40        end
41     end
42
43  endmodule
44
```