***Question2***

***Shushant Kumar 16CO143***

***Anmol Horo 16CO206***

***Ques:*** **Register File**. Use the register designed above to implement a 32 register Register file with two read ports and one write port.



This is the block which represents the block diagram of 32 register Register File.

 

Read Port Implementation Write Port Implementation

We implemented the above two circuits. For that we took inputs as Read register 1(regno1), Read register 2(regno2), Write register (wreg), Write Signal (write), Write data (wdata). The outputs are Read data1(rdata1) and Read data2(rdata2).

Read reg1 and Read reg2 determines which register is selected to be read data from. By the if else conditions that was implemented.

Similarly while writing the data into register file write operation was compared with 1, if it is 1 then Write data was written into the respective register file depending on register number. For decoder we checked the value using if else and then assign it to respective Register.