

CS1026 II Assignment 10

Design an 8 bit serial 2's complementer with a shift register and a flip-flop. The binary number is shifted out from one side and its 2's complement shifted into the other side of the shift register.

```
module Serial_Twos_Comp (output y, input [7: 0] data, input load, shift_control,  
Clock, reset_b);
```

Test data will change on the falling edge of the clock and your register should shift on the rising edge.

y is the serial output (ie the 2's complement bits)
data is a number to load the shift register with,
when **load** is high this data is stored on rising clock edge.

when **load** is low **shift_control** high tells the register to shift and output the next bit in **y**

Your design should store 0 on the negative edge of the reset signal.