Making Combinatorial Logic - assign Statement

- assign is used to create combinatorial logic that is easily described with a straightforward expression
- It creates a continuous assignment to the net or variable
- It is evaluated once at time zero
- assign requires no sensitivity list
- assign is like a one-line always statement
- always is better for more complex combinatorial logic

wire cout, cin, out, data, enable;
wire [31:0] sum, a b;

assign {cout, sum} = a + b + cin; //adder with carry in and out
assign out = (enable) ? data:1’bz; //one bit tri-state buffer