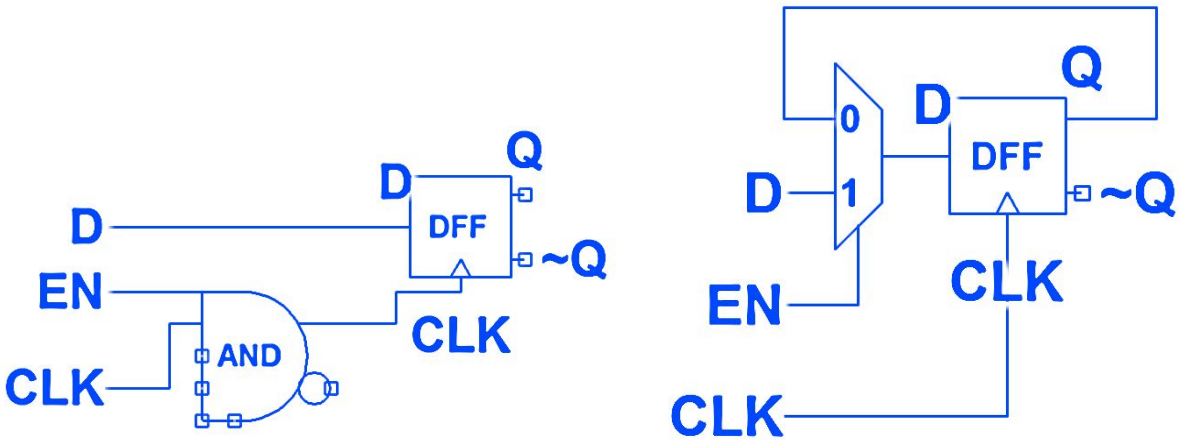
Deliverable 1



The left schematic corresponds to the gated clock, and the right schematic corresponds to the proper implementation.

Deliverable 6

```
module decoder1to32
(
output[31:0]    out,
input           enable,
input[4:0]      address
);
    assign out = enable<<address;
endmodule
```

The module works because the module describes precisely the behavior we expect the decoder to implement: i.e. a one-hot representation of a given binary-encoded address. Provided that enable is active, the output will be shifted exactly by the quantity that address indicates. Perhaps an example would illustrate this better:

```
Out = 0000 … 00000 1
      Out <<= 5
Out = 0000 … 1 00000
```

Conveniently, because of the way we used enable as the value to be bitshifted, the output would be 0 (invalid value) when enable is low.