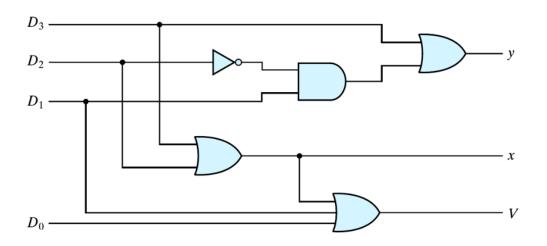
Homework 1: Priority Encoder

Design a priority encoder using gate-level Verilog



Truth Table of a Priority Encoder

| LSB D ₀ | Inputs | | MSB | Outputs | | |
|-----------------------|-----------------------|----------------|----------------|---------|---|---|
| | D ₁ | D ₂ | D ₃ | х | y | V |
| 0 | 0 | 0 | 0 | X | X | 0 |
| 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| X | 1 | 0 | 0 | 0 | 1 | 1 |
| X | X | 1 | 0 | 1 | 0 | 1 |
| X | X | X | 1 | 1 | 1 | 1 |