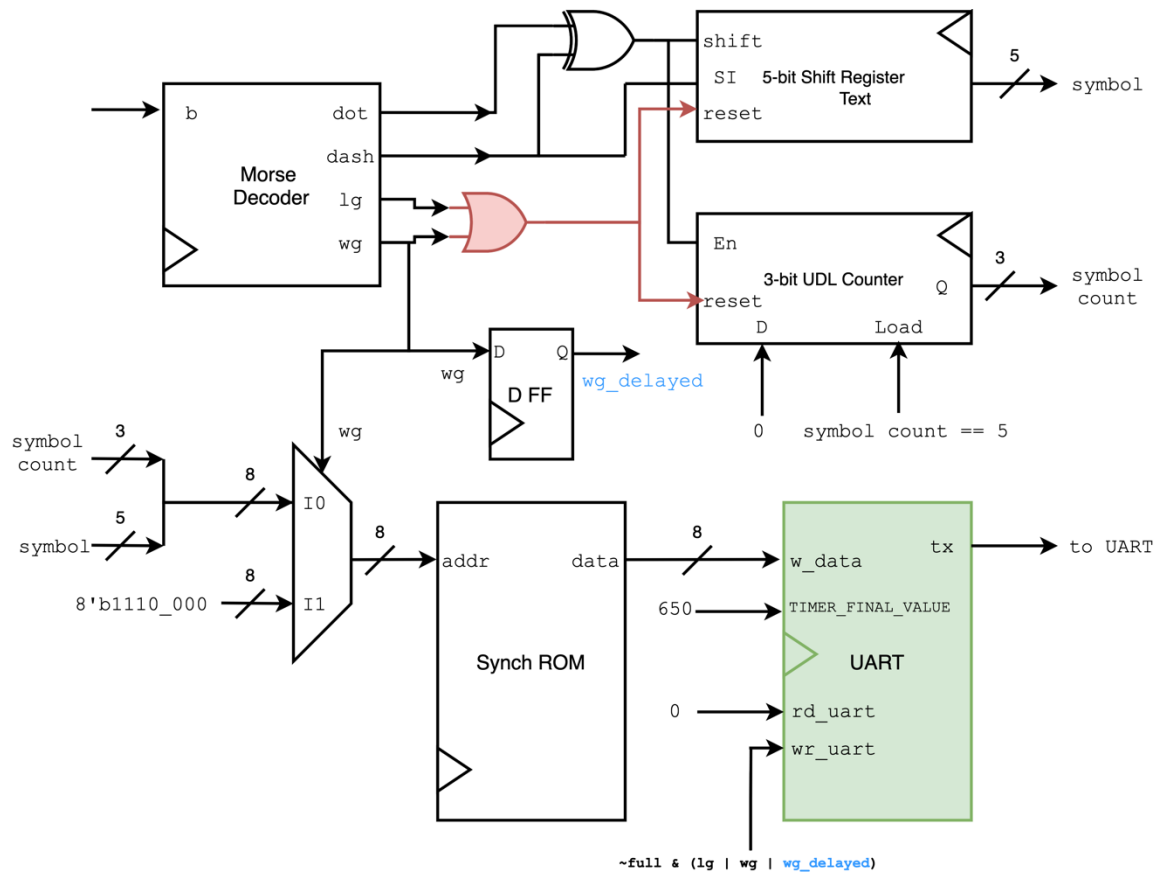# Lab 11
Morse Code Terminal

In this lab, you will display the decoded Morse code on a computer terminal. Specifically, you will replace the FIFO in the previous lab solution by a UART module (displayed in green below)

- Implement the system shown in the figure on the FPGA board
- The 650 connected to the TIMER_FINAL_VALUE, assumes a baud rate of 9600 bps
- The `rd_uart` signal should be connected to 0 because we are not using the `rx` (receiver) part of the UART.
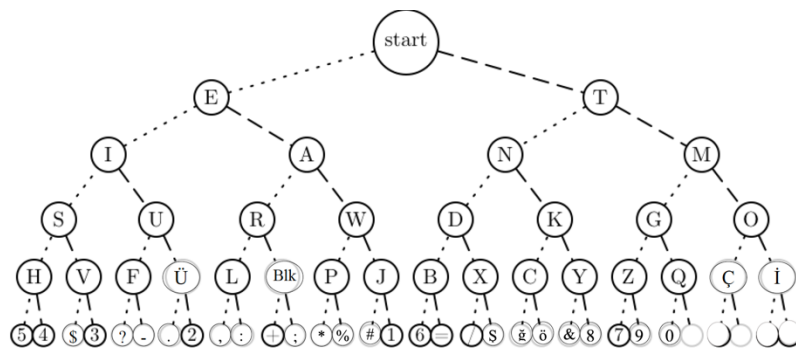
International Morse Code

1. The length of a dot is one unit.
2. A dash is three units.
3. The space between parts of the same letter is one unit.
4. The space between letters is three units.
5. The space between words is seven units.

A · ▬
B ▬ · · ·
C ▬ · ▬ ·
D ▬ · ·
E ·
F · · ▬ ·
G ▬ ▬ ·
H · · · ·
I · ·
J · ▬ ▬ ▬
K ▬ · ▬
L · ▬ · ·
M ▬ ▬
N ▬ ·
O ▬ ▬ ▬
P · ▬ ▬ ·
Q ▬ ▬ · ▬
R · ▬ ·
S · · ·
T ▬

U · · ▬
V · · · ▬
W · ▬ ▬
X ▬ · · ▬
Y ▬ · ▬ ▬
Z ▬ ▬ · ·

1 · ▬ ▬ ▬ ▬
2 · · ▬ ▬ ▬
3 · · · ▬ ▬
4 · · · · ▬
5 · · · · ·
6 ▬ · · · ·
7 ▬ ▬ · · ·
8 ▬ ▬ ▬ · ·
9 ▬ ▬ ▬ ▬ ·
0 ▬ ▬ ▬ ▬ ▬

Submission check list:

[ ] All Verilog code you generated or modified
[ ] All testbenches written
[ ] Embed all screenshot of your testbench output in your README.md
[ ] Embed all block diagram or state diagrams generated in your README.md
[ ] Short videos demonstrating each of the parts you implemented on the FPGA