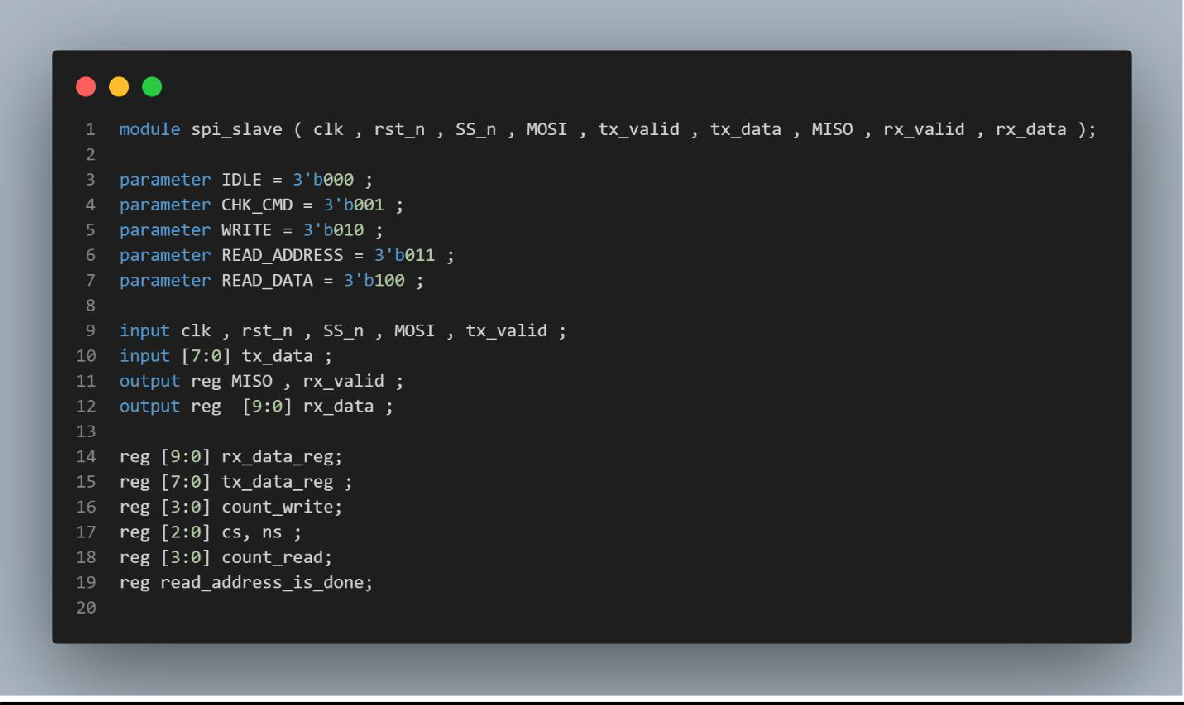
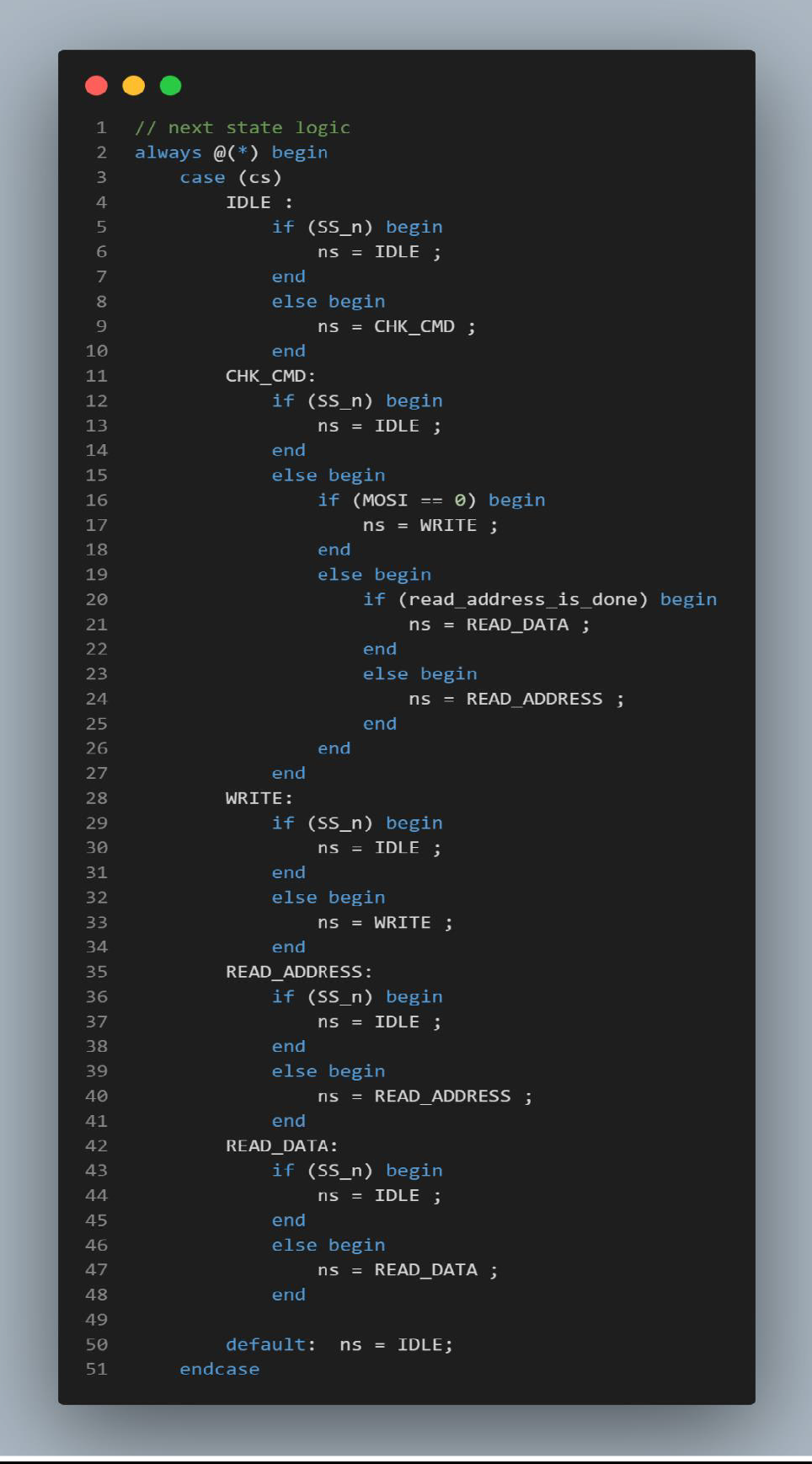
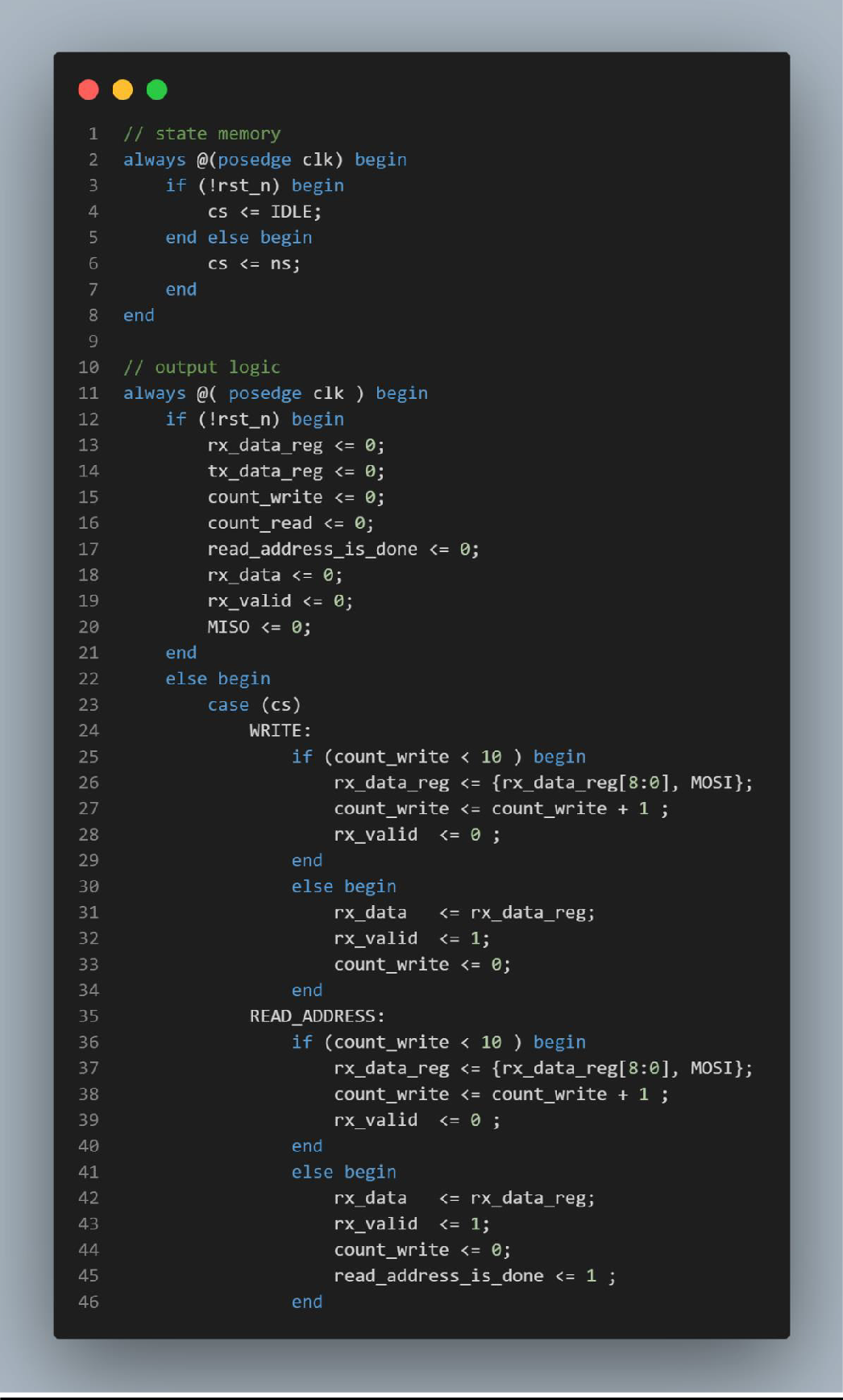
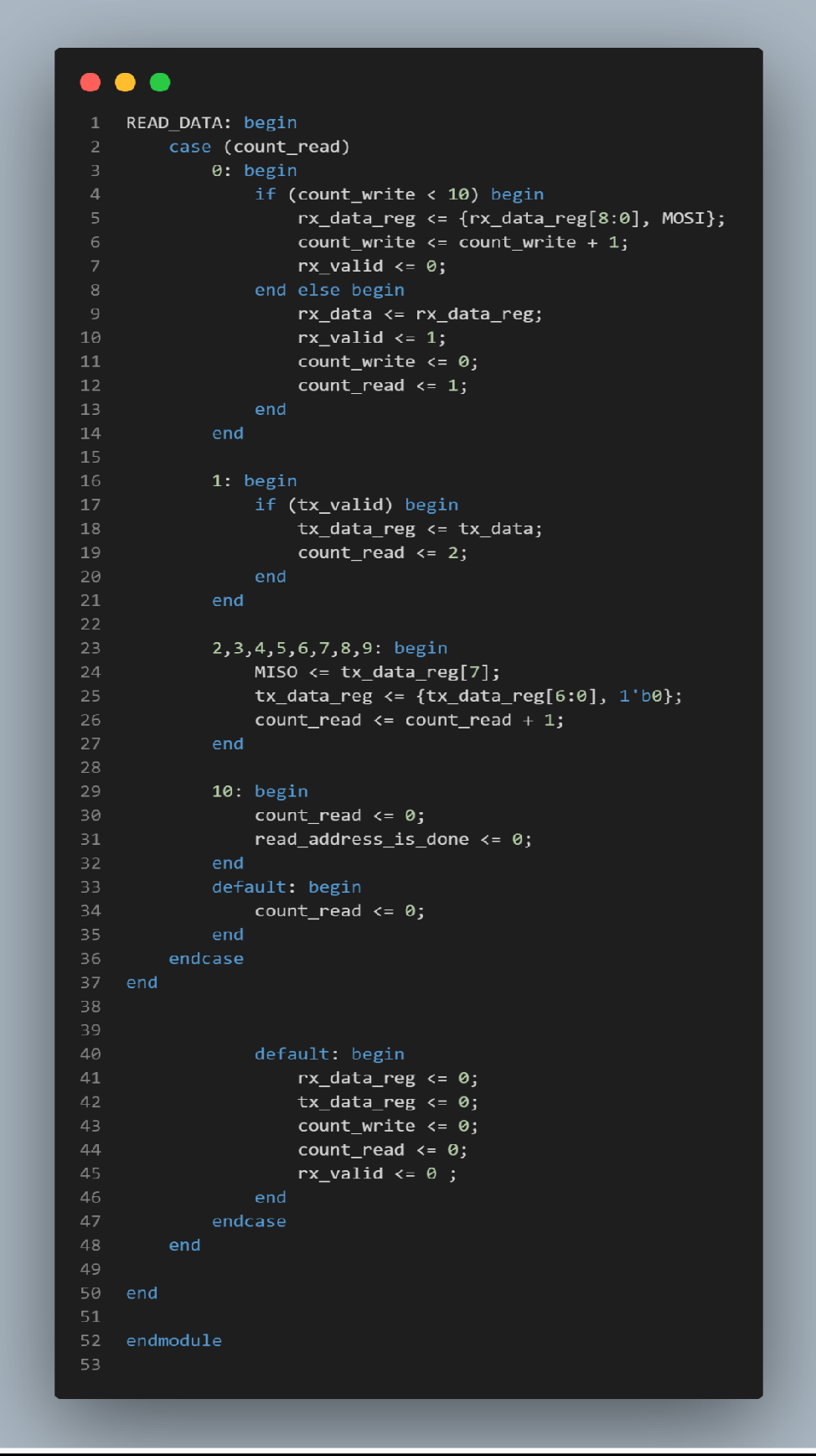
SPI Slave with Single Port RAM

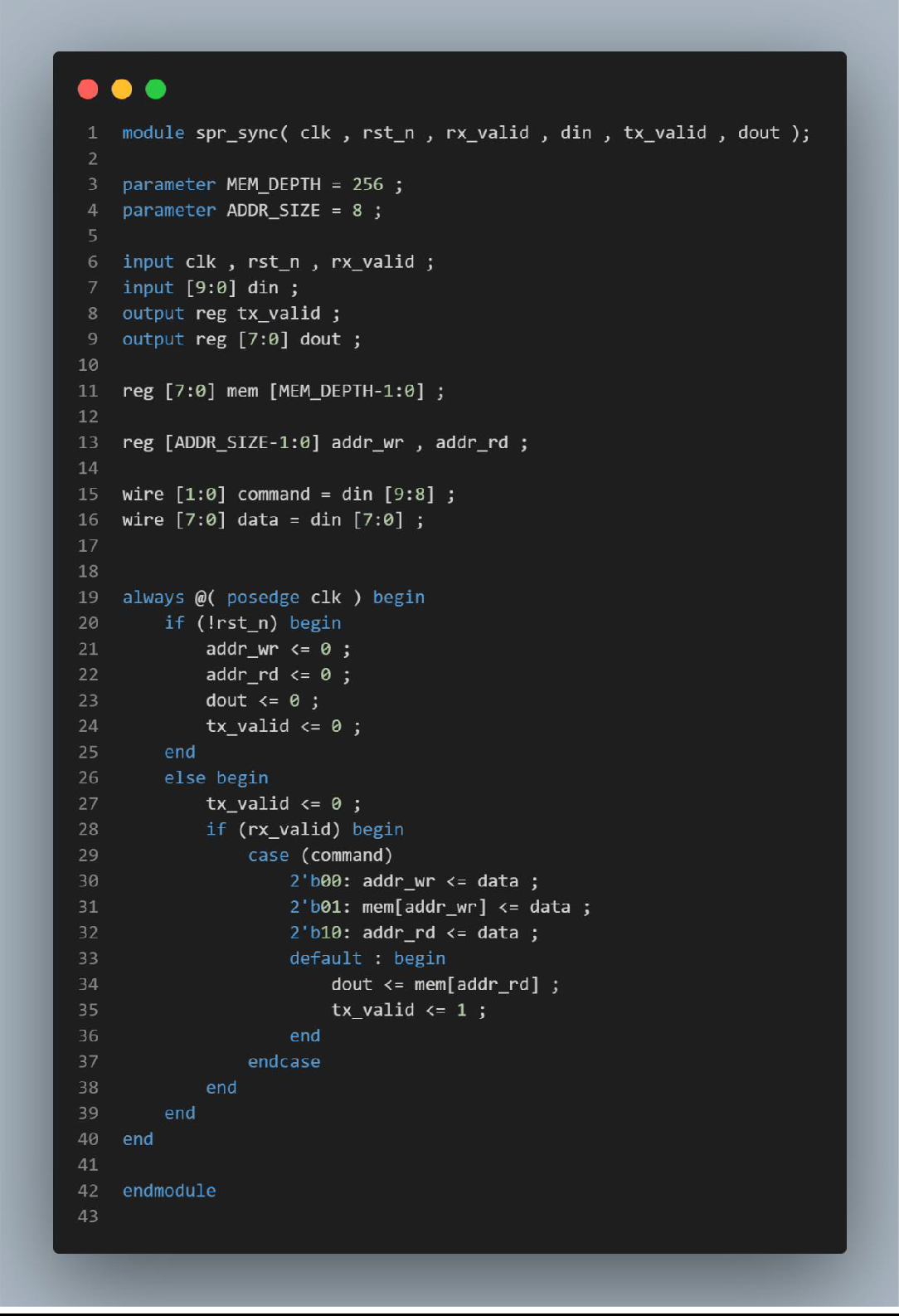
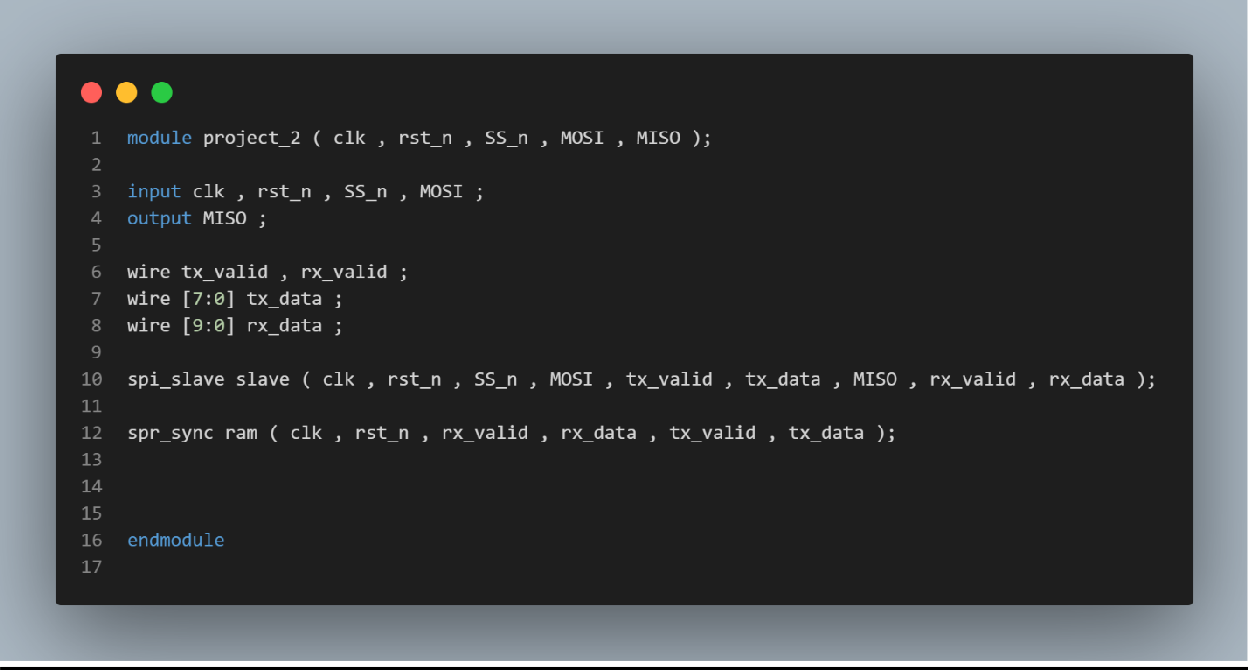
Team Name : m&m*’*s Team members :

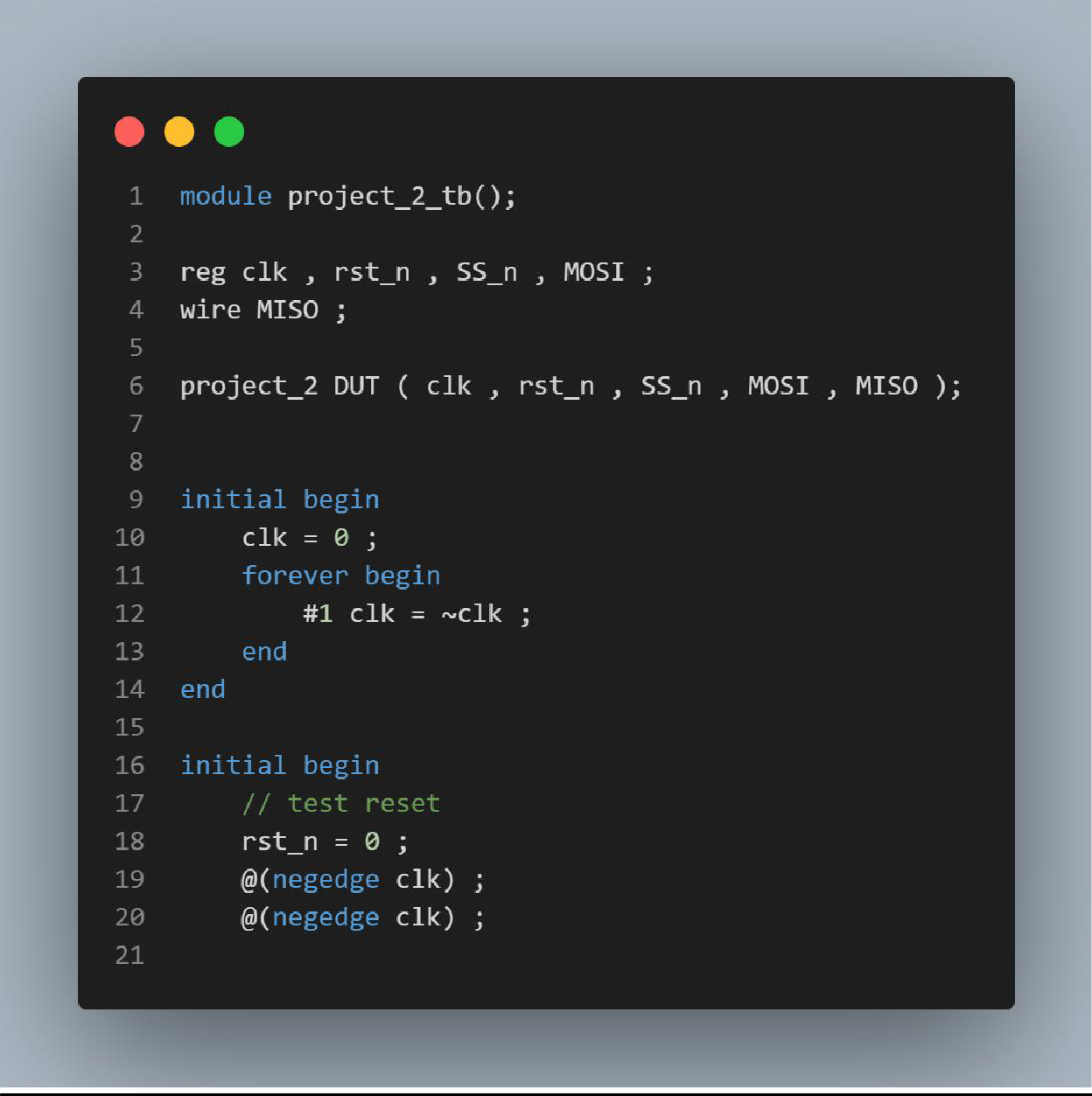
* Monaya Wael Mohamed
* Mennatu-Allah Abd Elfattah
  + SPI Code

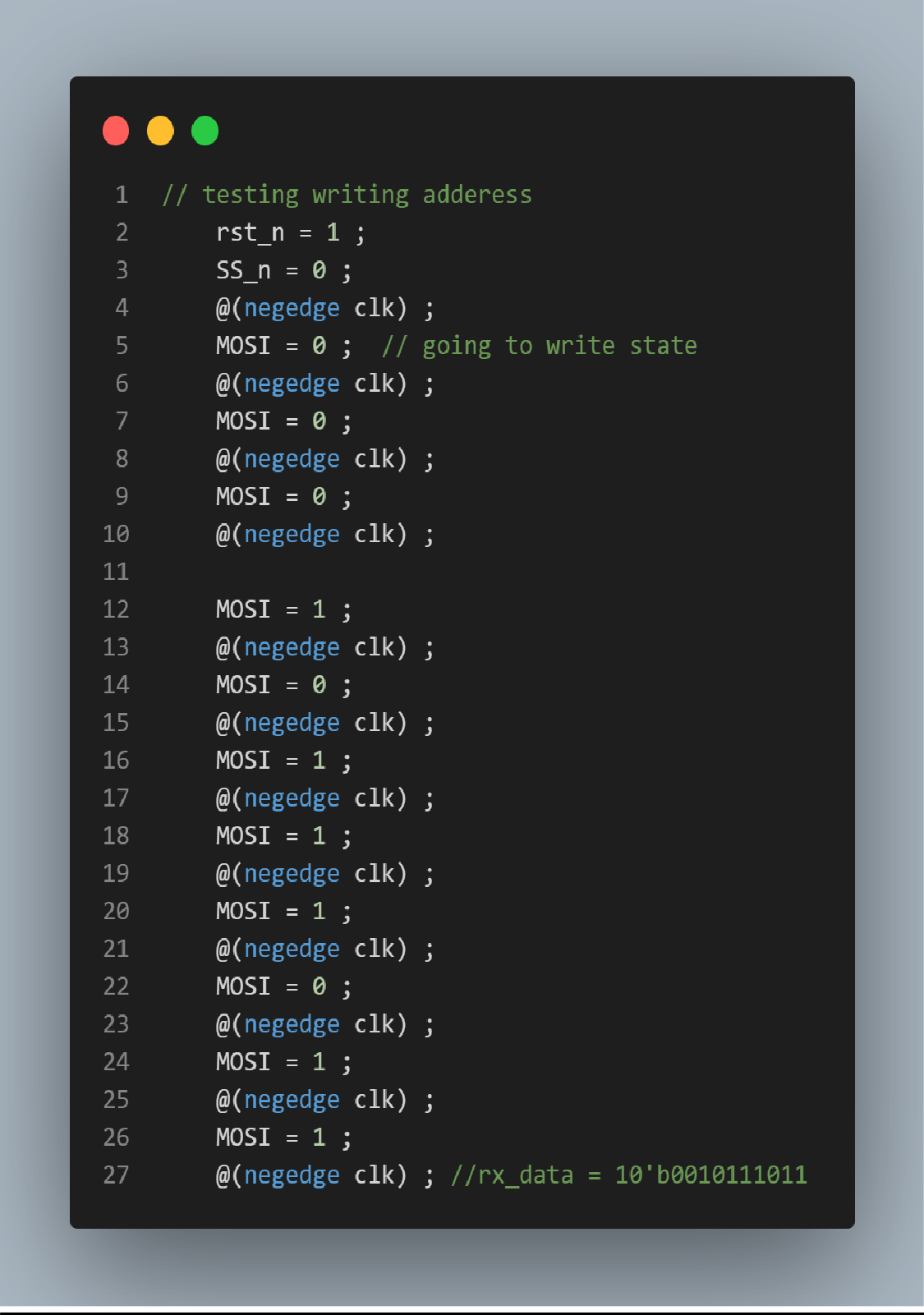






* RAM Code
* Project Code
* Testbench Code





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2 **MOSI** = **0** ,

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4 **MOSI** = **0** ,

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*J* @(negedge **elk)** ,

I=; **MOSI** = **1** ,

7 @(negedge **elk)** .,

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9 **MOSI** = **1** ,

1 @(negedge **elk)** .,

1. **MOSI** = **0** ,
2. @(negedge **elk)** ,.

L! **MOSI** = **1** ,

1. @(negedge **elk)** .,
2. **MOSI** = **1** ,

E @(negedge **elk)** .,

17 **MOSI** = **1** ,

1. @(negedge **elk)** ,.

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*L* @(negedge **elk)** ,

1. **MOSI** = **0** ,
2. @(negedge **elk)** ,.

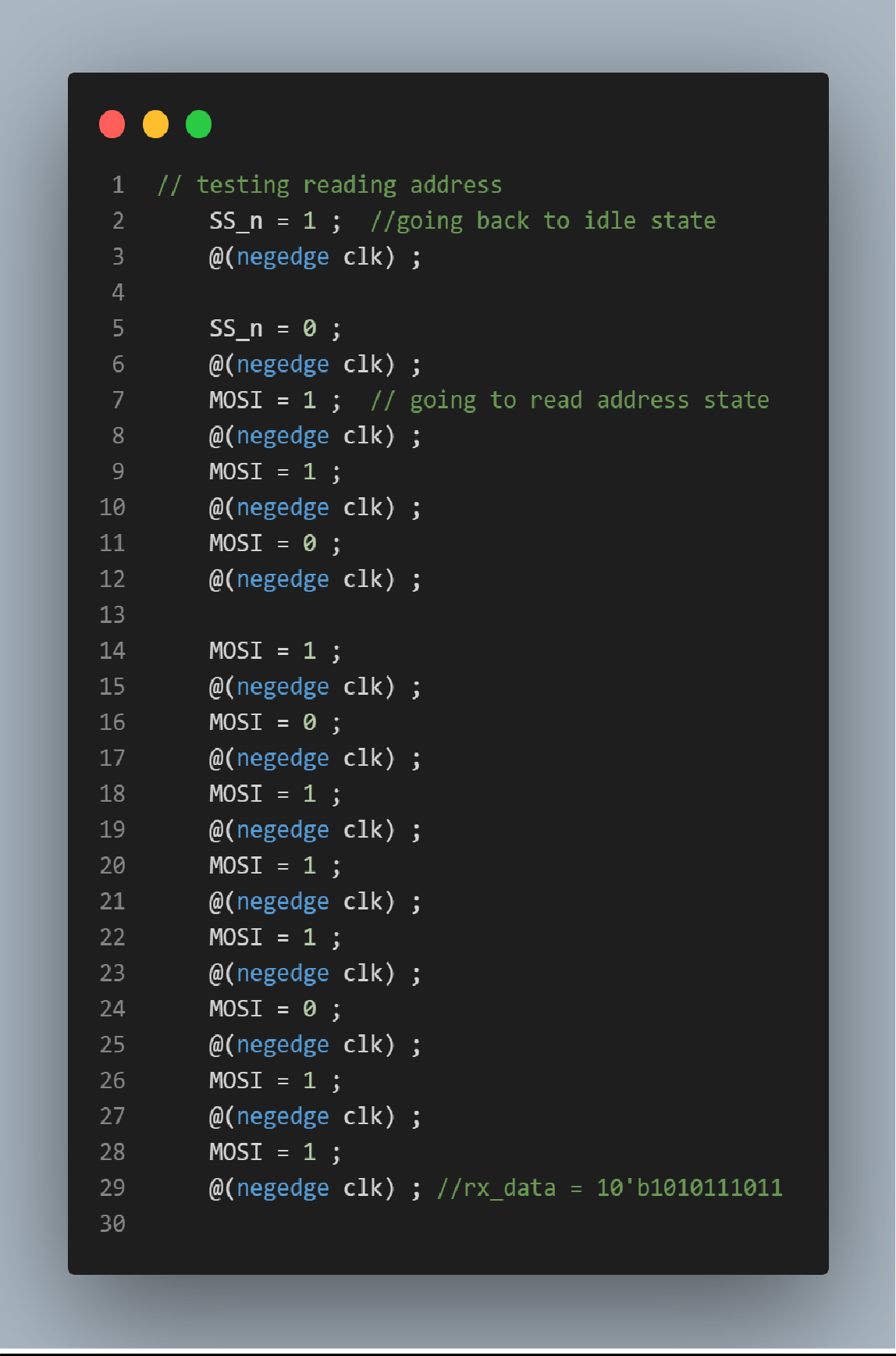
-) -:1

*L* \_.

**MOSI** = **1** , .

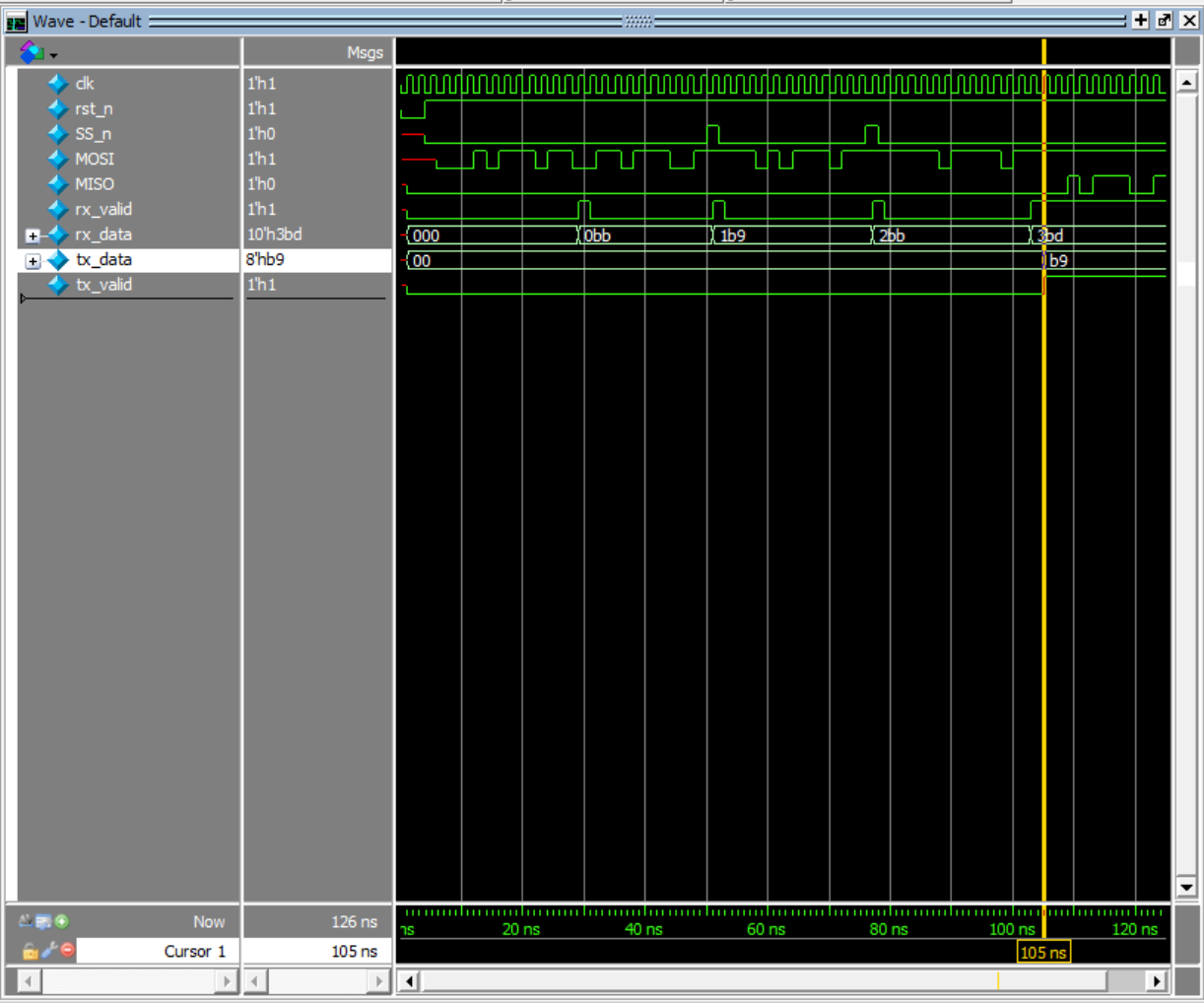
24 @(negedge **elk)** ,

1· '.( .-:,:1L1 = 1 11 111 1

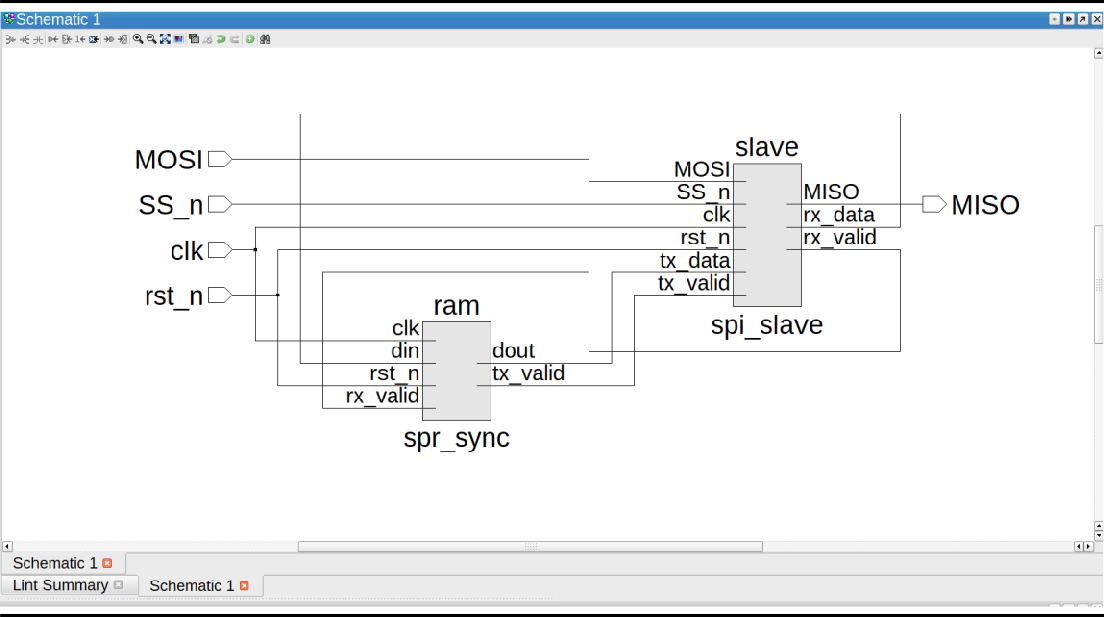
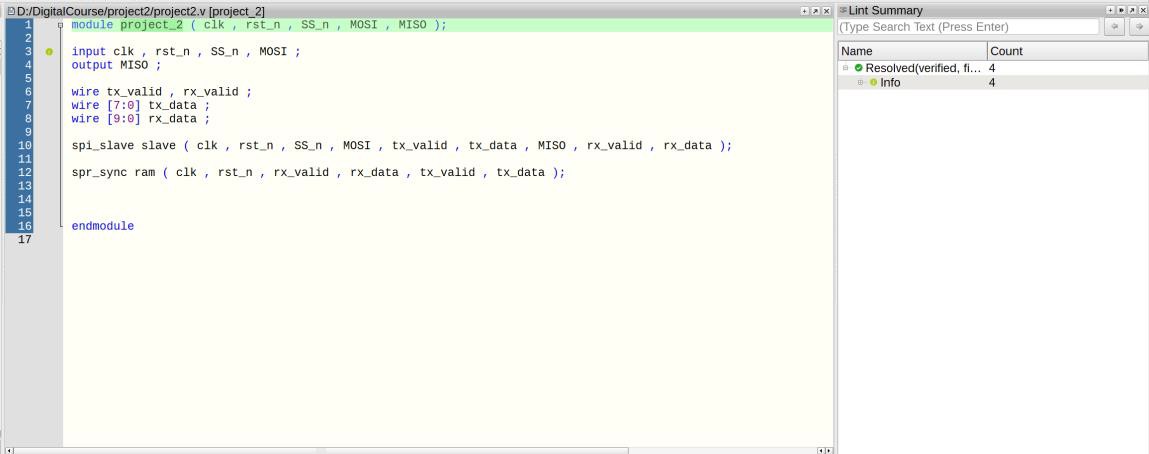




* QuestaSim Snippets

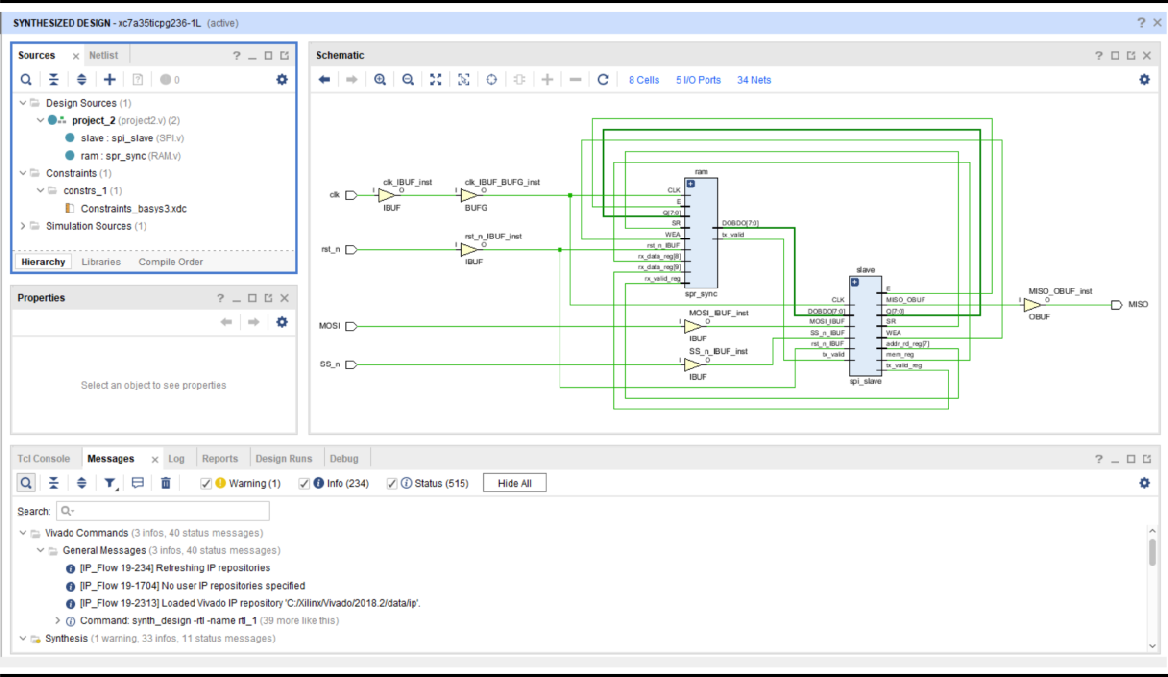
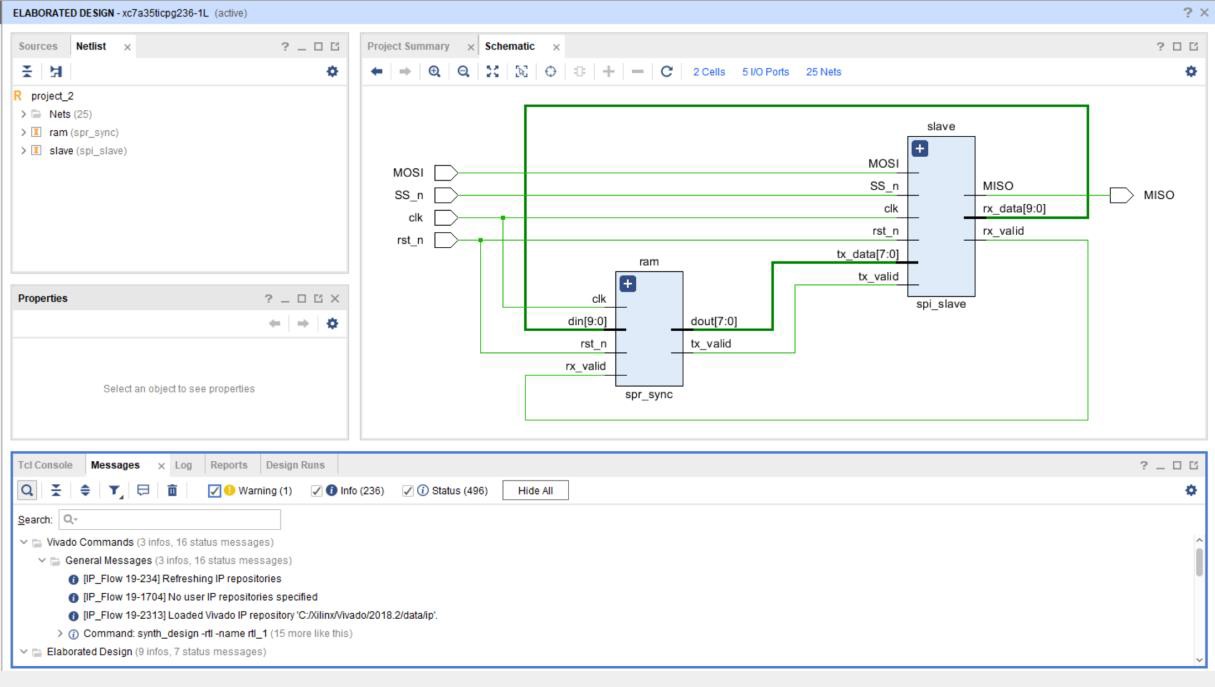


* QuestaLint Snippets

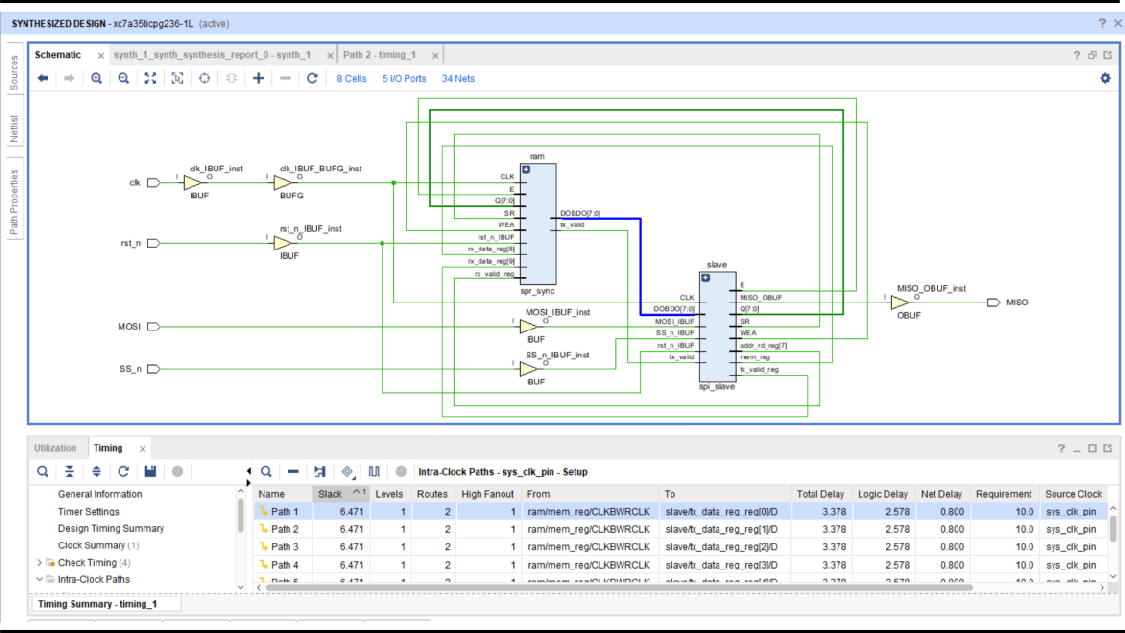
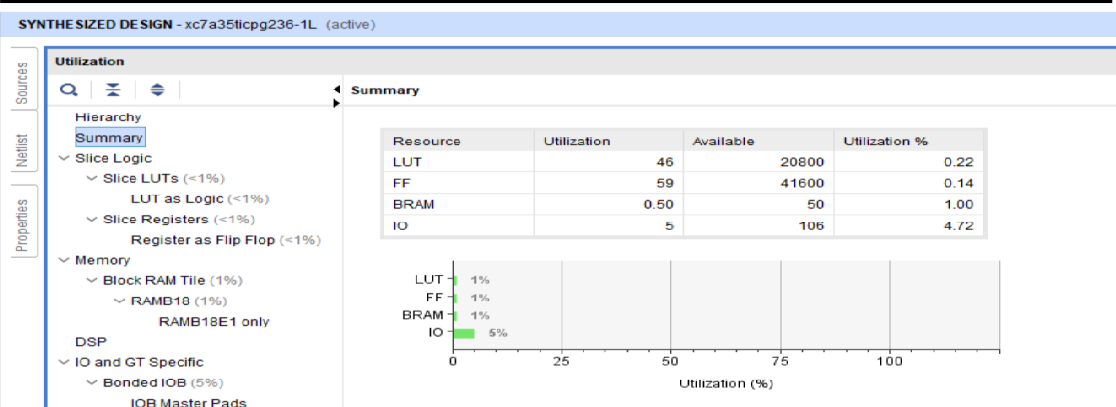
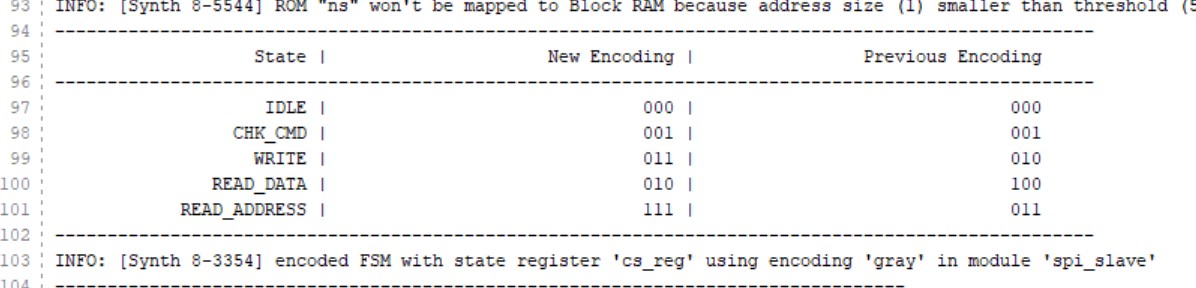


# GRAY Encoding

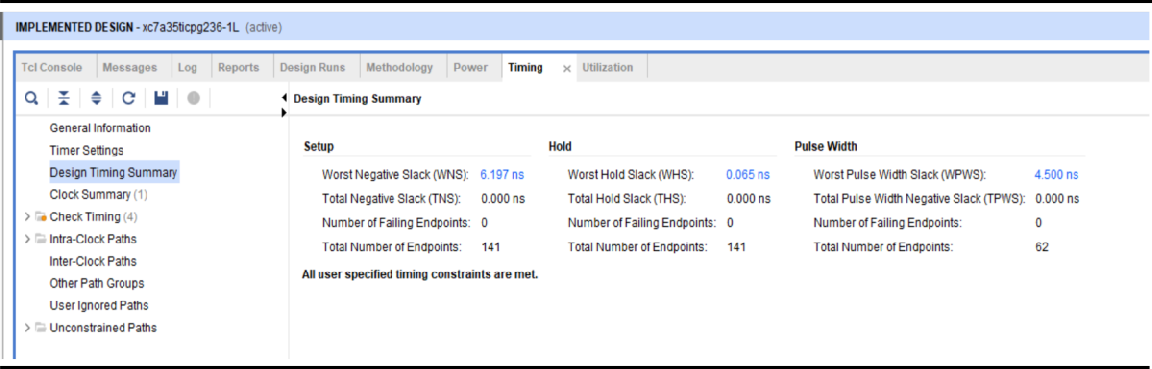
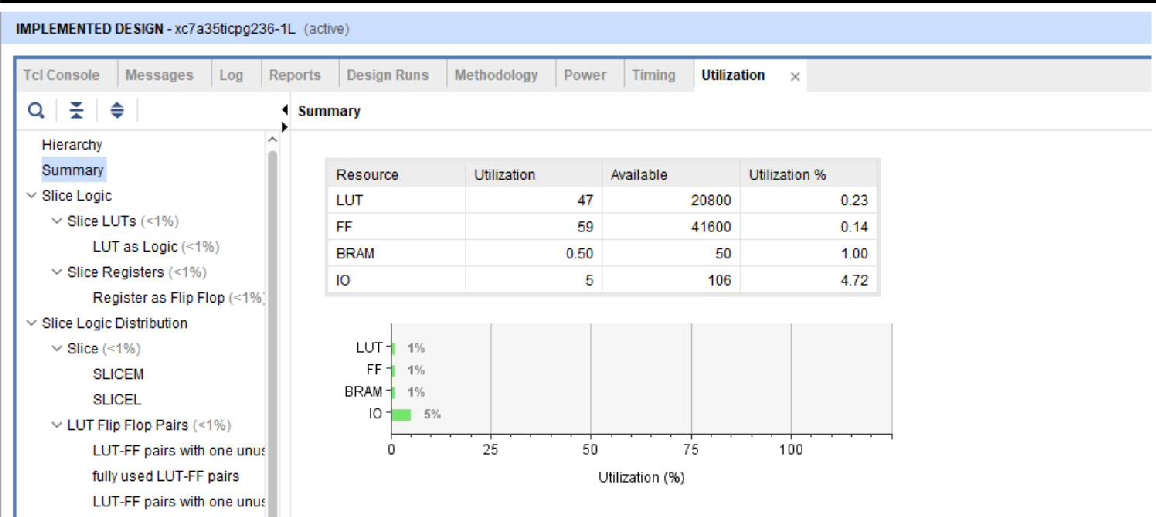
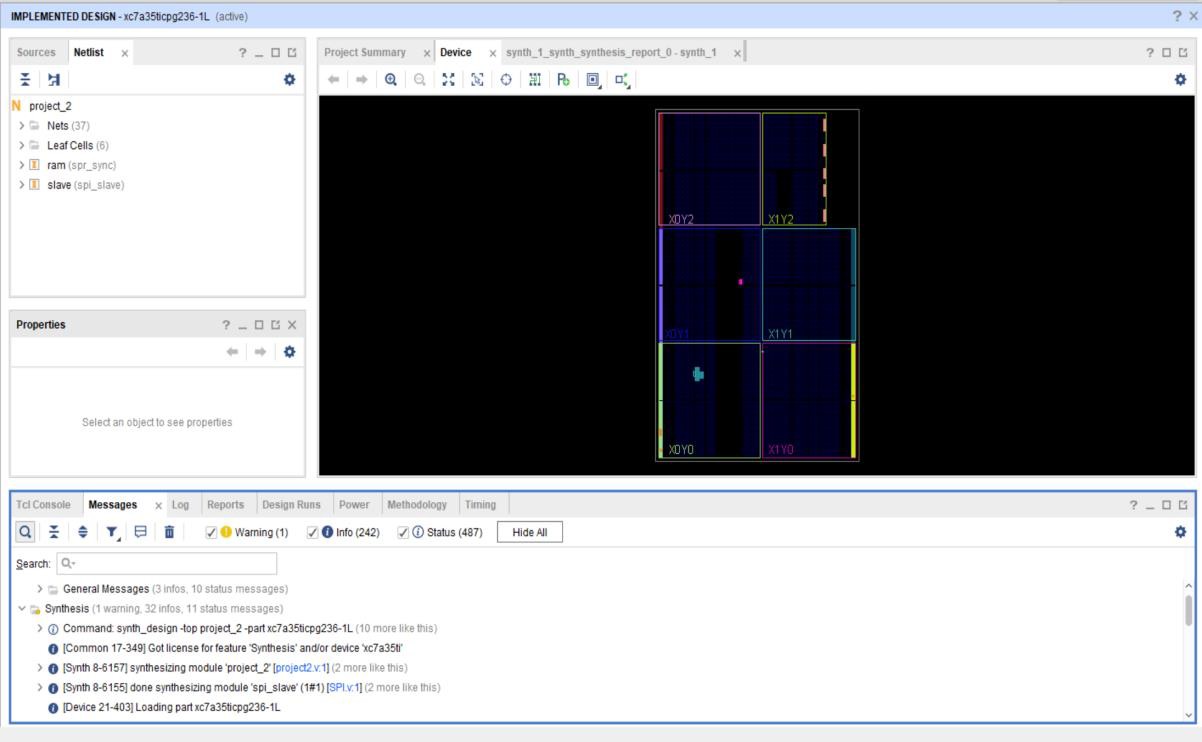
* Schematic



* Synthesis Reports

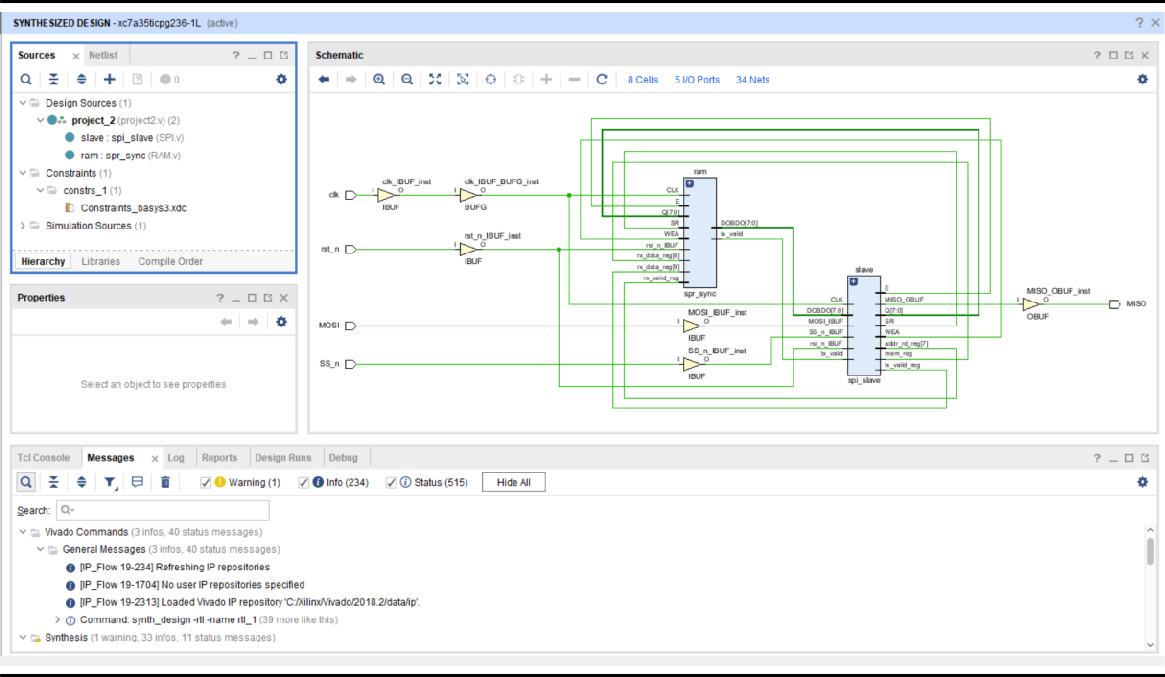
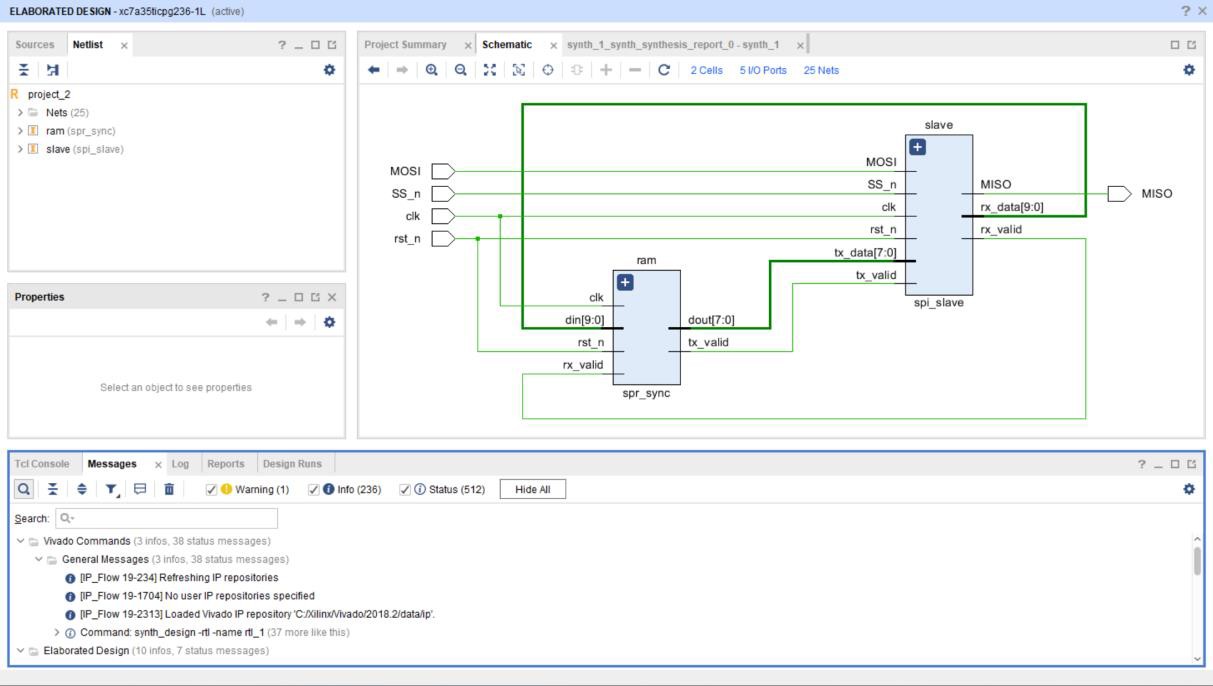


* Implementation

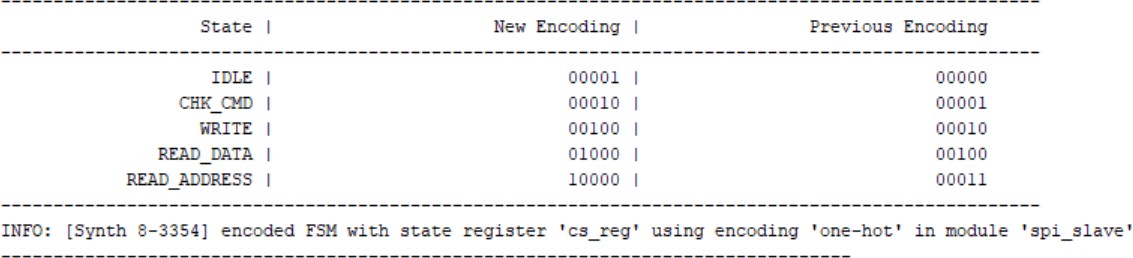


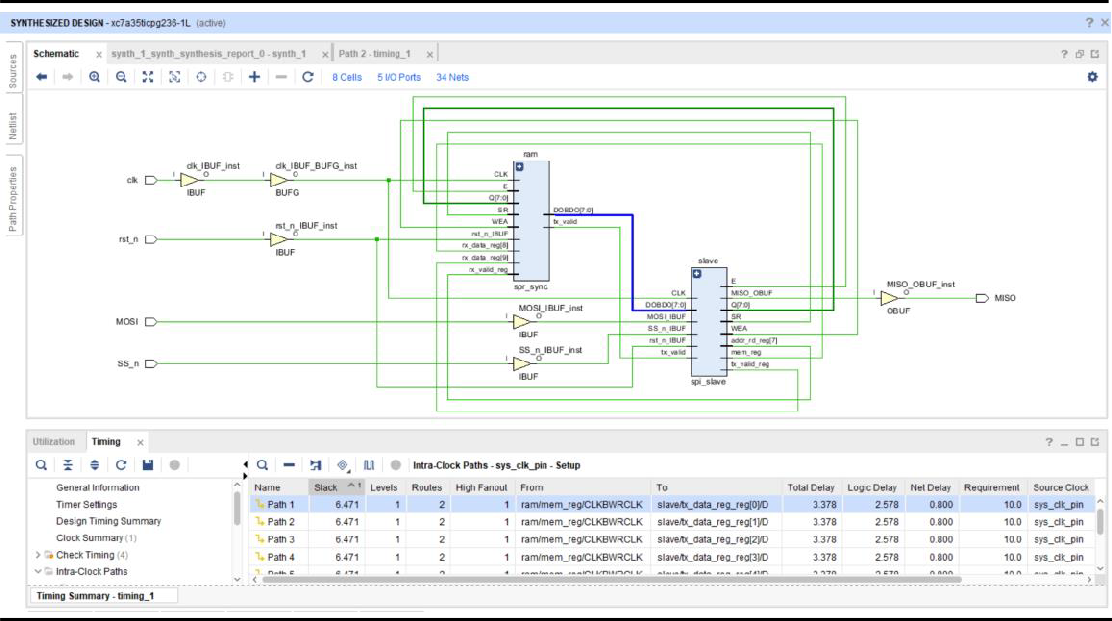
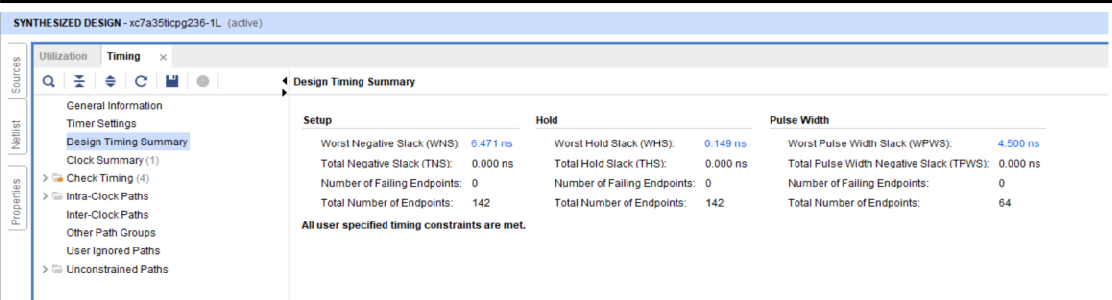
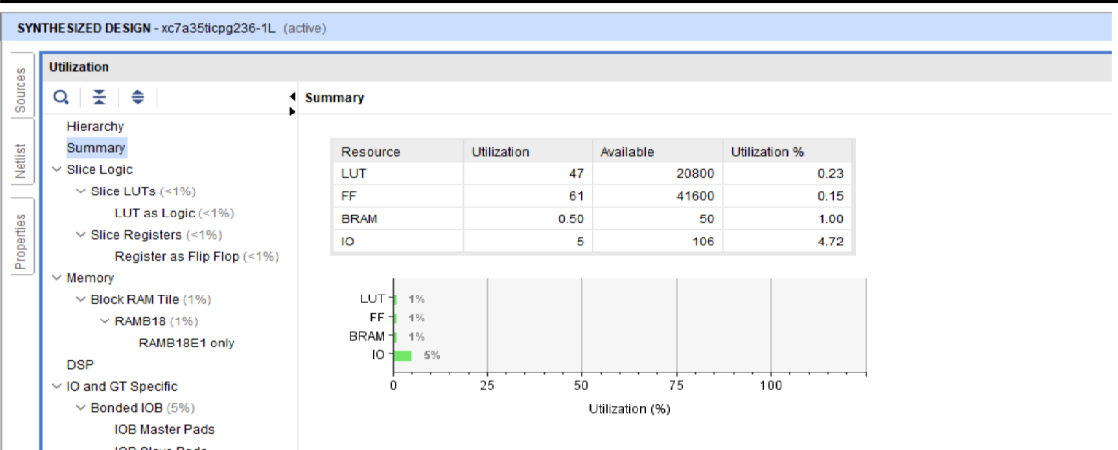
# ONE HOT Encoding

* Schematic

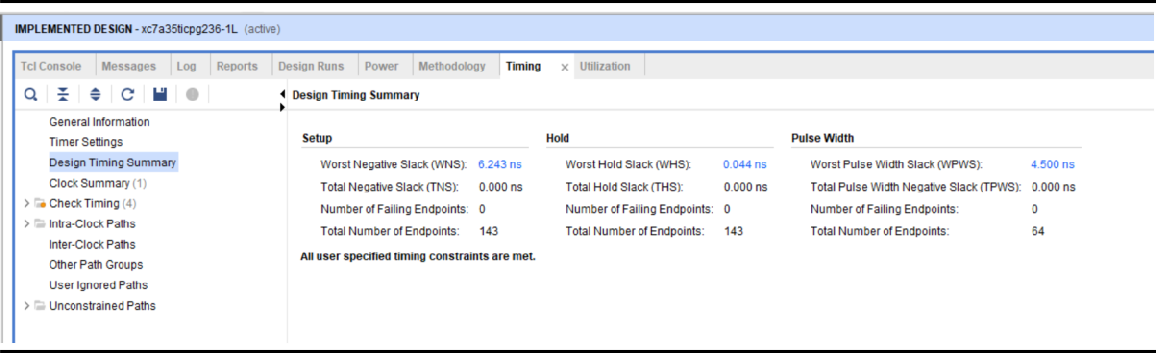
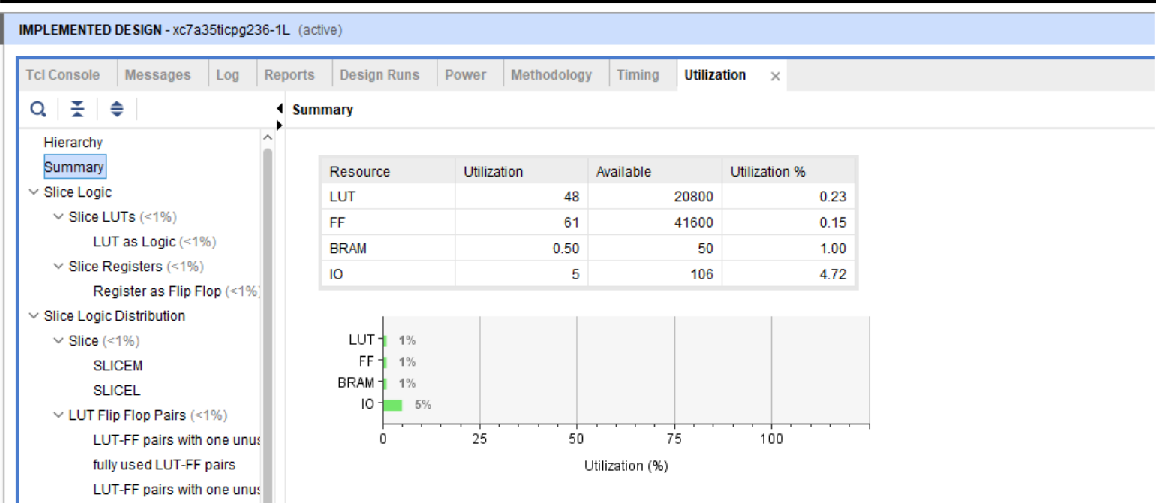
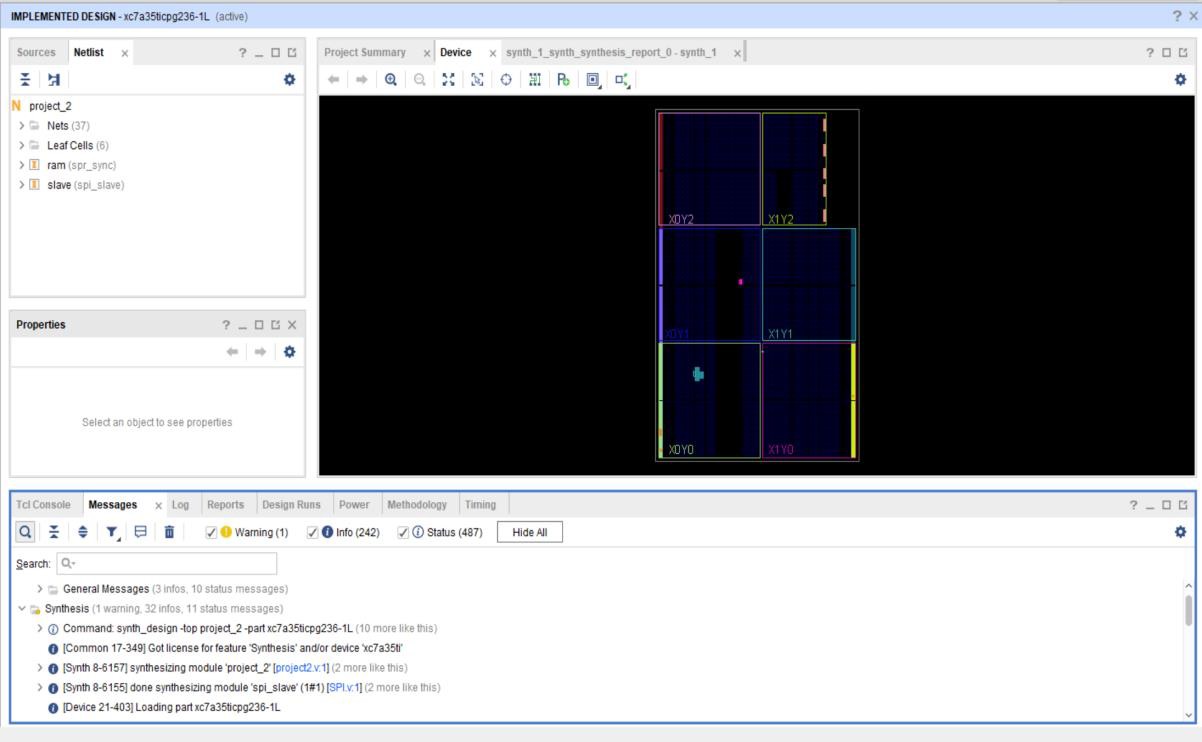


* Synthesis Reports



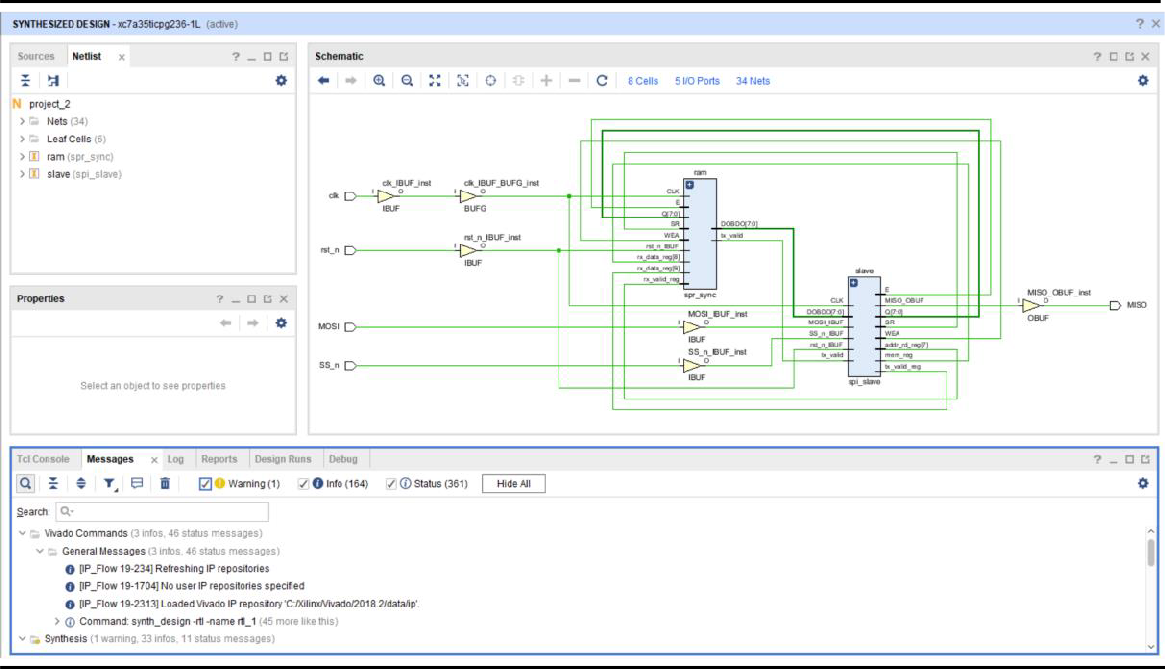
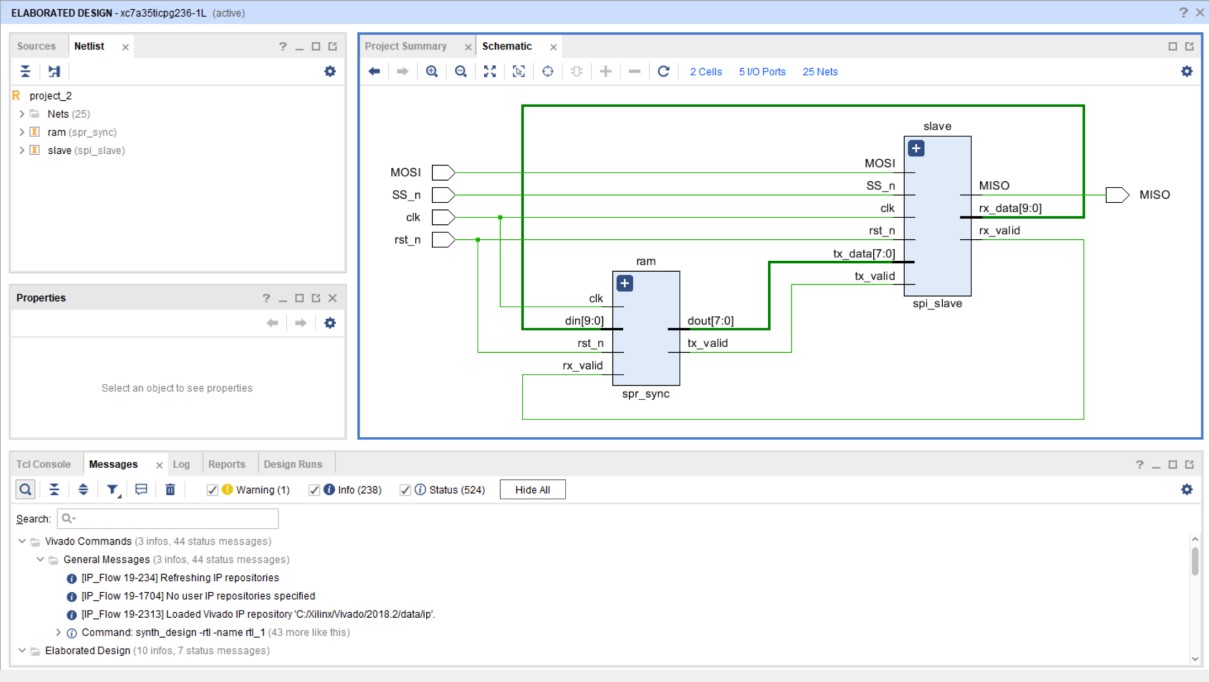


* Implementation

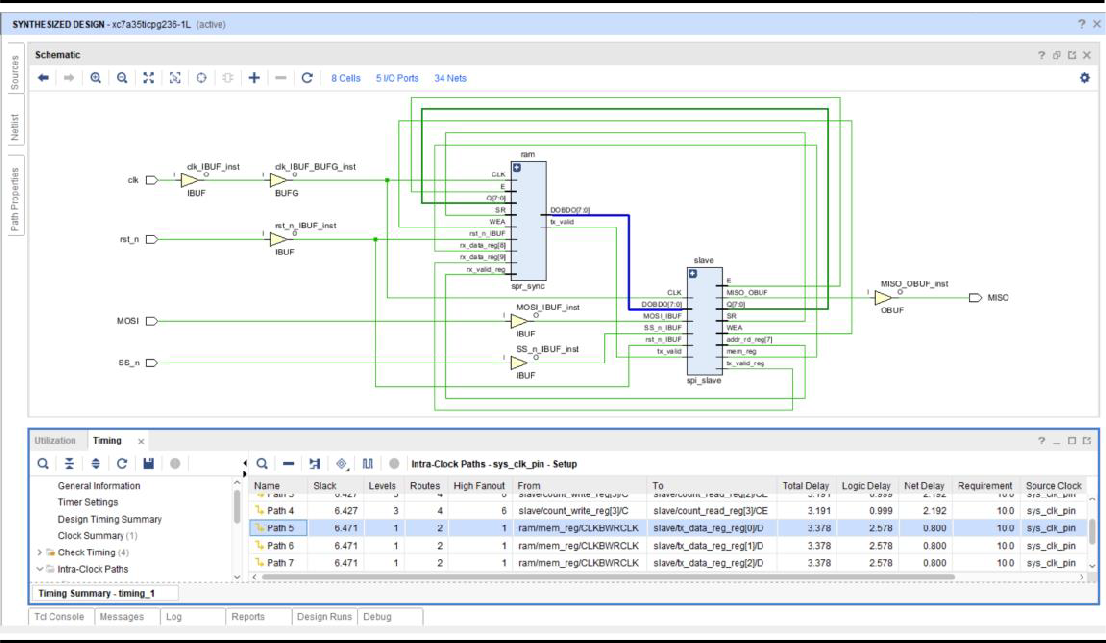
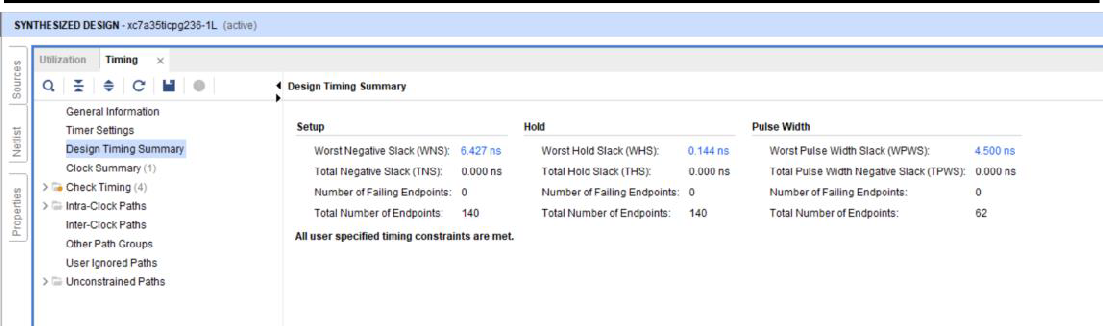
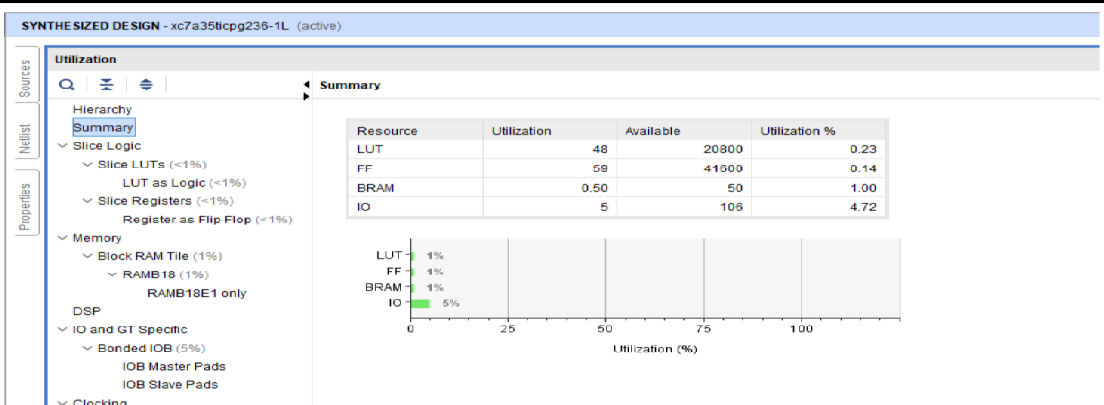
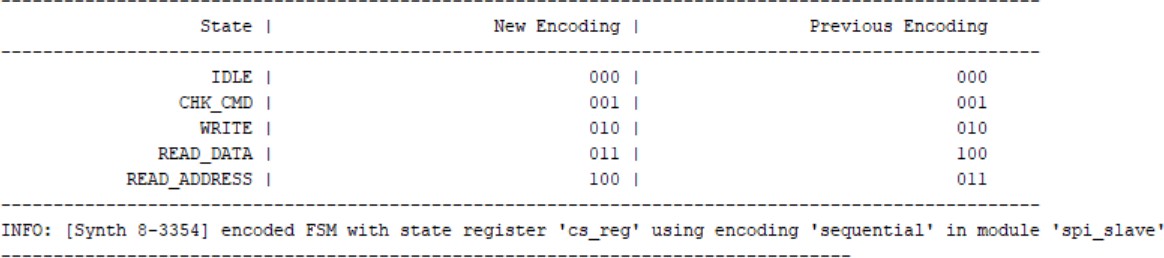


# SEQ Encoding

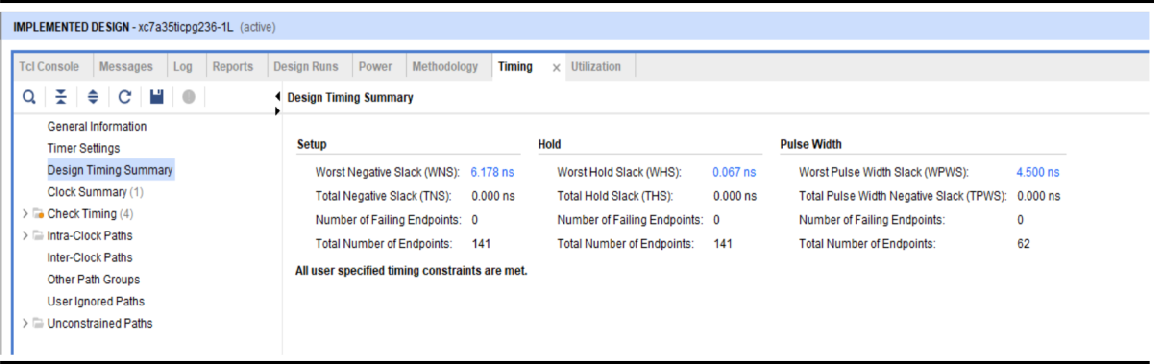
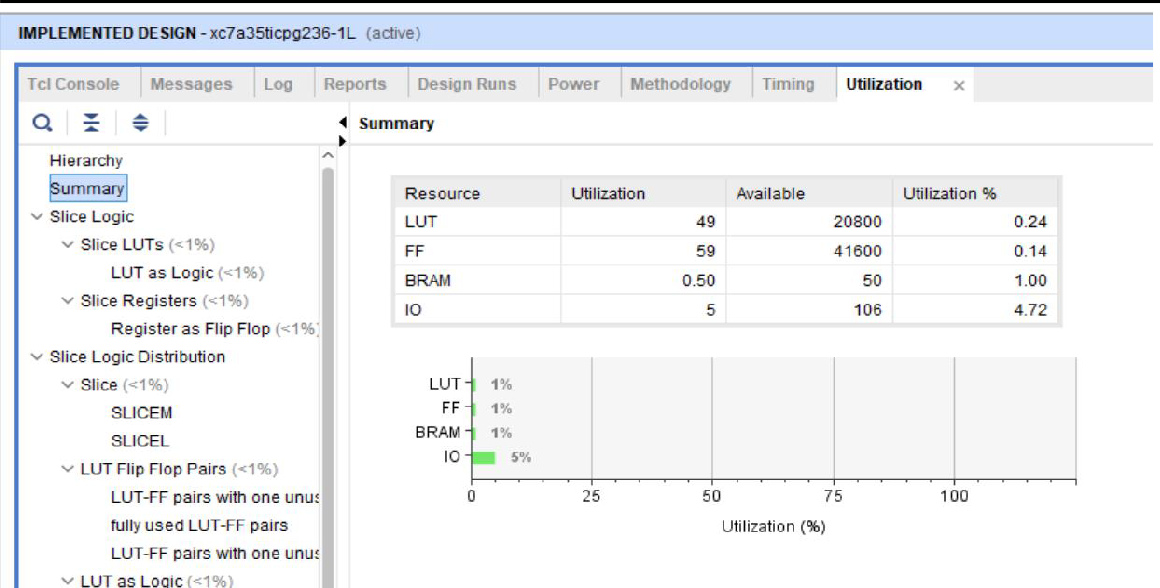
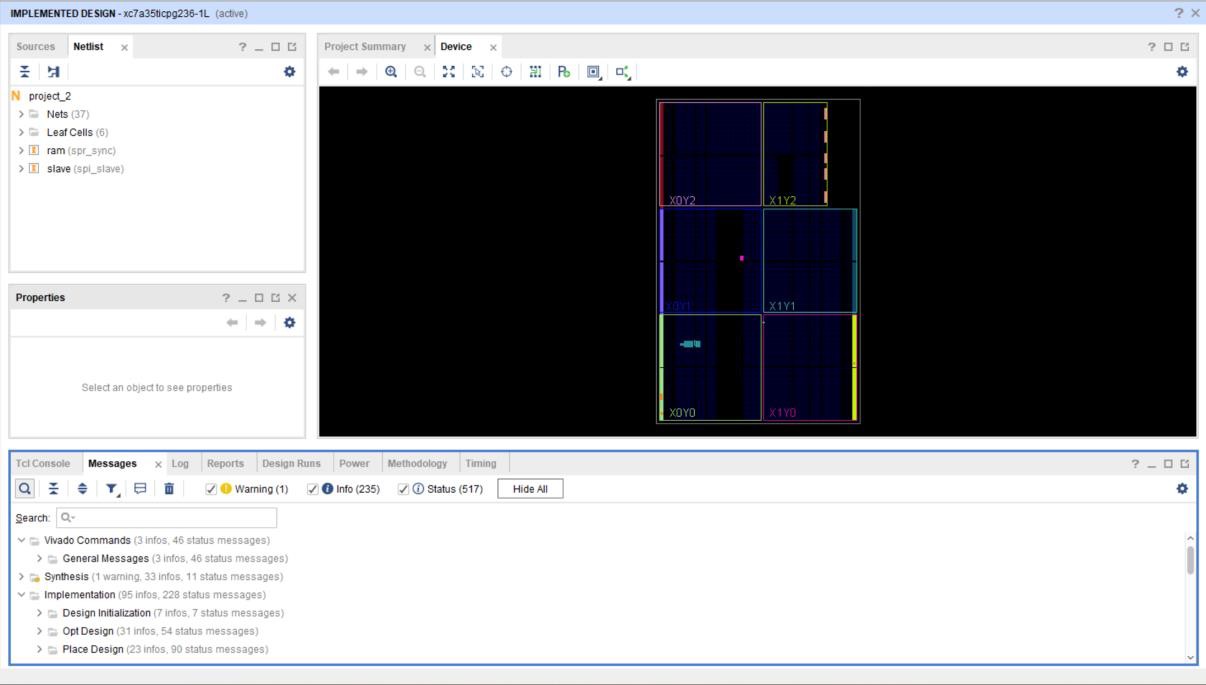
* Schematic



* Synthesis Reports



* Implementation



**We chose Gray encoding because it offers the best timing and resource utilization.**

