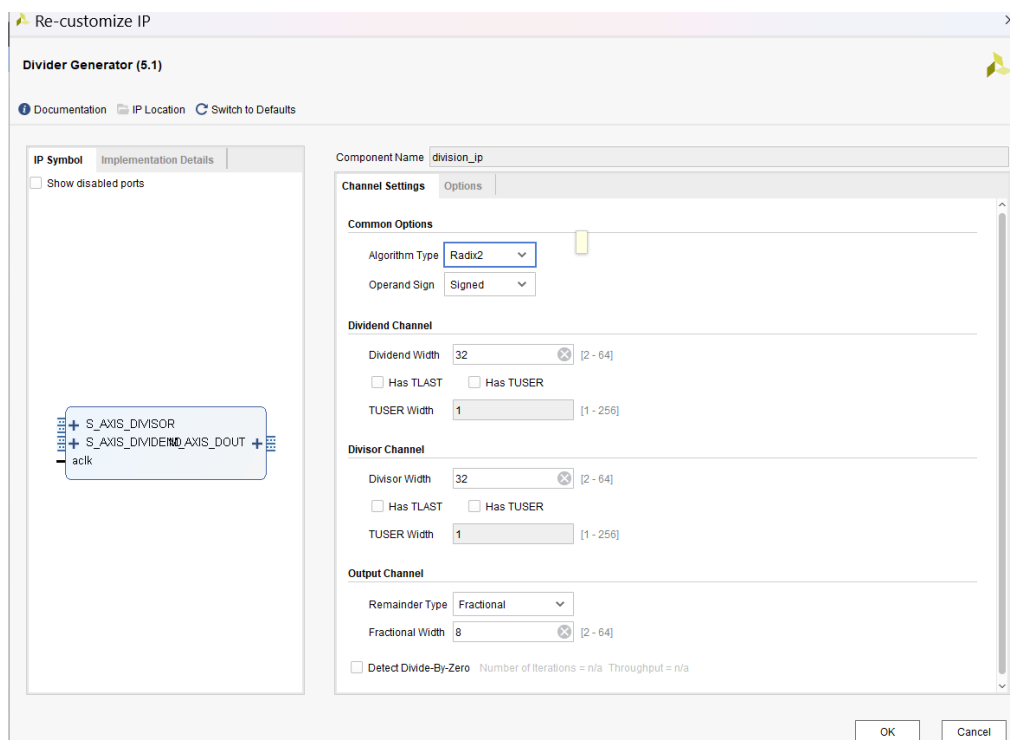


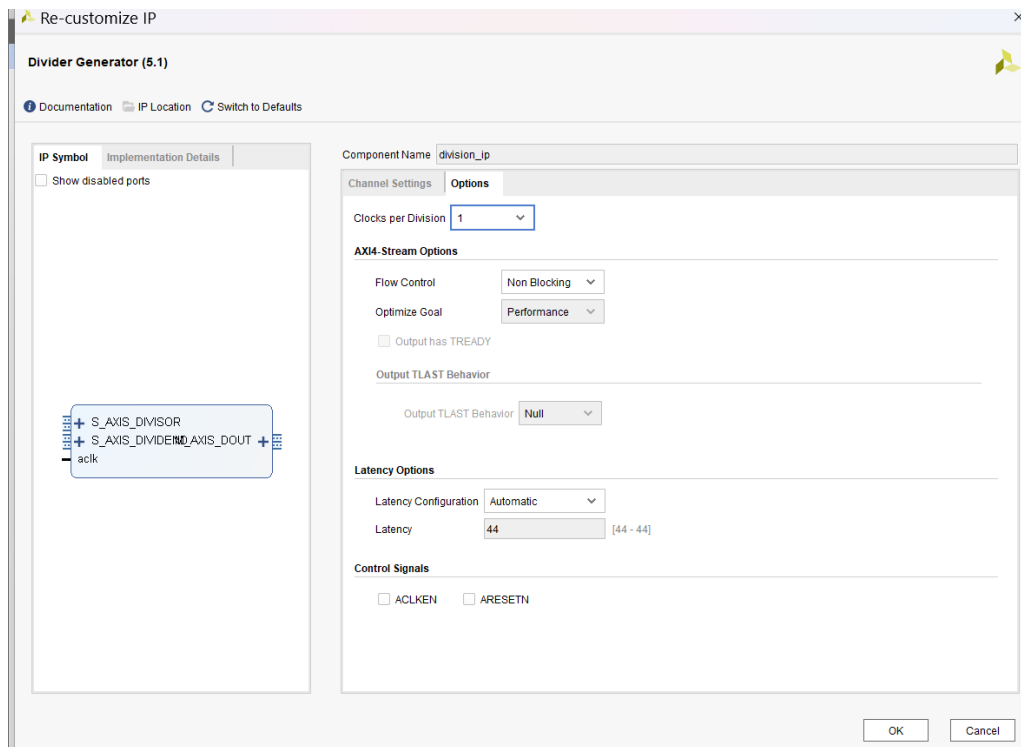
After copy pasting all the .v files for canny edge detection you will face some errors due to instantiation. To solve these follow the below steps:

Inside the Sobel module there is a DIVIDER GENERATOR instantiation named division\_ip.

For creating the instance follow the steps:

Go to IP Catalog in project manager >>> search for divider generator IP >>> make its settings as shown below

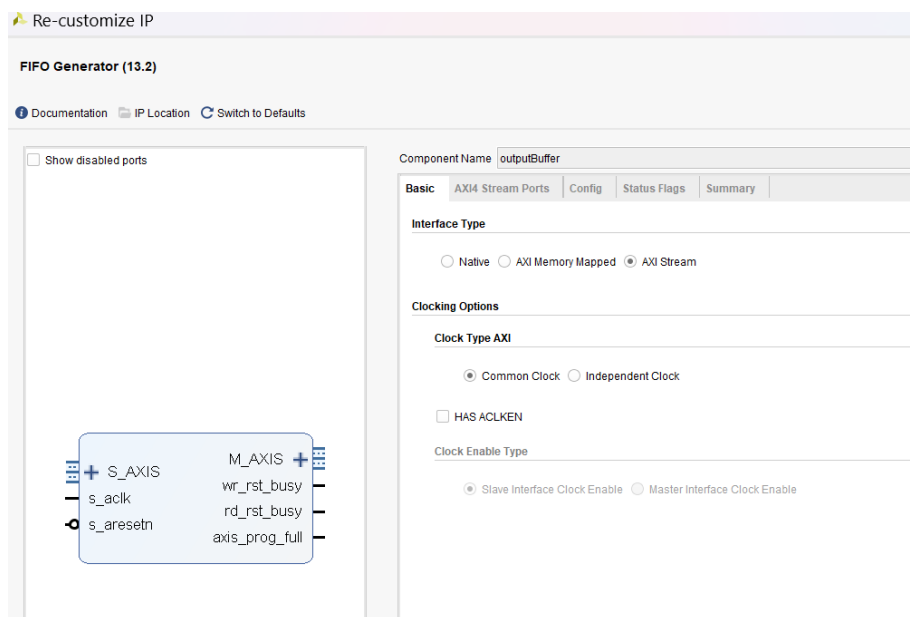




NB – change the component name as division\_ip

We also want to instantiate an output buffer, for these follow the steps:

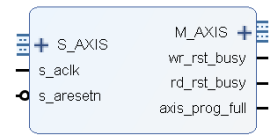
Go to IP Catalog in project manager >>> search for fifo generator IP  
>>> make its settings as shown below



FIFO Generator (13.2)

Documentation IP Location Switch to Defaults

Show disabled ports



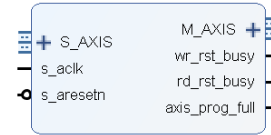
Component Name outputBuffer

Basic	AXI4 Stream Ports	Config	Status Flags	Summary
TDATA NUM BYTES 1 [0,1,2..512]				
TID WIDTH 0 [0 - 32]				
TDEST WIDTH 0 [0 - 32]				
TUSER WIDTH 0 [0 - 4096]				
<input type="checkbox"/> HAS TSTRB TSTRB WIDTH 1 [1 - 1]				
<input type="checkbox"/> HAS TKEEP TKEEP WIDTH 1 [1 - 1]				
<input checked="" type="checkbox"/> TREADY				
<input type="checkbox"/> TLAST				
Calculated Width: 8				

FIFO Generator (13.2)

Documentation IP Location Switch to Defaults

Show disabled ports



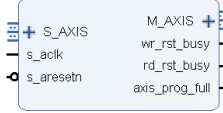
Component Name outputBuffer

Basic	AXI4 Stream Ports	Config	Status Flags	Summary
TDATA NUM BYTES 1 [0,1,2..512]				
TID WIDTH 0 [0 - 32]				
TDEST WIDTH 0 [0 - 32]				
TUSER WIDTH 0 [0 - 4096]				
<input type="checkbox"/> HAS TSTRB TSTRB WIDTH 1 [1 - 1]				
<input type="checkbox"/> HAS TKEEP TKEEP WIDTH 1 [1 - 1]				
<input checked="" type="checkbox"/> TREADY				
<input type="checkbox"/> TLAST				
Calculated Width: 8				

FIFO Generator (13.2)

Documentation IP Location Switch to Defaults

Show disabled ports



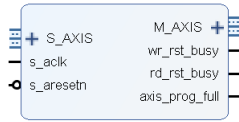
Component Name outputBuffer

Basic	AXI4 Stream Ports	Config	Status Flags	Summary
<b>Configuration Options</b>				
<input checked="" type="radio"/> FIFO <input type="radio"/> Register Slice				
<b>FIFO Options</b>				
FIFO Implementation Type Common Clock Block RAM				
FIFO Application Type				
<input checked="" type="radio"/> Data FIFO <input type="radio"/> Packet FIFO <input type="radio"/> Low Latency Data FIFO				
Latency : 2				
FIFO Width: 8 FIFO Depth: 16 Actual FIFO Depth : 18				
<b>ECC And Output Register Options</b>				
<input type="checkbox"/> ECC <input type="checkbox"/> Single Bit Error Injection <input type="checkbox"/> Double Bit Error Injection				
<input type="checkbox"/> Embedded Registers				
<b>Data Threshold Parameters</b>				
Programmable Full Type Single Programmable Full Threshold Constant				
Full Threshold Assert Value 8 [5 - 15]				
Programmable Empty Type No Programmable Empty Threshold				
<input type="checkbox"/> Provide FIFO Occupancy Data Counts				

FIFO Generator (13.2)

Documentation IP Location Switch to Defaults

Show disabled ports



Component Name outputBuffer

Basic AXI4 Stream Ports Config Status Flags Summary

FIFO Generator Summary

Selected Simulation Model

Interface Type : AXI Stream  
Model Generated : Behavioral Model

Clocking Summary

Clocking Scheme: Common Clock

AXI Stream Summary

Configuration Type : FIFO Memory Type: Block RAM  
Application Type Data FIFO BRAM Resource (s) (18K/36K) : 1/0  
Width/Depth 8 / 18 Latency : 2

AXI Stream Additional Features Summary

Occupancy Data Count Not Selected  
Interrupt Flag (UnderFlow/Overflow) Not Selected / Not Selected