2022 Digital IC Design
Final Project

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Functional Simulation Result of LZ77 Encoder

Testing Pattern 0	Pass	Testing Pattern 1	Pass	Testing Pattern 2	Pass

```
-----------------------------------------------
--------- Encoding finished, ALL PASS ---------
-----------------------------------------------
** Note: $finish   : C:/dic2022/final_project/file/tb_Encoder.sv(285)
   Time: 664800 ns  Iteration: 1  Instance: /testfixture_encoder
1

# -----------------------------------------------
# --------- Encoding finished, ALL PASS ---------
# -----------------------------------------------
# ** Note: $finish     : C:/dic2022/final_project/file/tb_Encoder.sv(285)
#    Time: 534435 ns  Iteration: 1  Instance: /testfixture_encoder
1

-----------------------------------------------
--------- Encoding finished, ALL PASS ---------
-----------------------------------------------
** Note: $finish   : C:/dic2022/final_project/file/tb_Encoder.sv(285)
   Time: 584500 ns  Iteration: 1  Instance: /testfixture_encoder
1
```

Functional Simulation Result of LZ77 Decoder

Testing Pattern 0	Pass	Testing Pattern 1	Pass	Testing Pattern 2	Pass

```
----------------------------------------------------------
-------------- Decoding finished, ALL PASS ---------------
----------------------------------------------------------
----------------------------------------------------------
----- Interpolation finished, result is written out -----
----------------------------------------------------------
** Note: $finish    : C:/dic2022/final_project/file/tb_Decoder.sv(376)
   Time: 121010 ns  Iteration: 0  Instance: /testfixture_decoder
1

# ----------------------------------------------------------
# -------------- Decoding finished, ALL PASS ---------------
# ----------------------------------------------------------
# ----------------------------------------------------------
# ----- Interpolation finished, result is written out -----
# ----------------------------------------------------------
# ** Note: $finish    : C:/dic2022/final_project/file/tb_Decoder.sv(376)
#    Time: 121010 ns  Iteration: 0  Instance: /testfixture_decoder
# 1
```

```
----------------------------------------------------------
-------------- Decoding finished, ALL PASS --------------
----------------------------------------------------------
----------------------------------------------------------
----- Interpolation finished, result is written out -----
----------------------------------------------------------
** Note: $finish    : C:/dic2022/final_project/file/tb_Decoder.sv(376)
   Time: 121010 ns  Iteration: 0  Instance: /testfixture_decoder
1
```

Quality of Interpolated Results

Testing Pattern 0	PSNR 23.7970028 96730227	Testing Pattern 1	PSNR 24.5099628 50189638	Testing Pattern 2	PSNR 27.8758807 20521792

Description of your design

Encoder:
使用助教提供的 code，修改 search buffer、look-ahead buffer 長度
Decoder:
使用助教提供的 code，修改 search buffer、look-ahead buffer 長度
ELA:
跟作業四一樣，有修改 row 跟 column 大小

Scoring = Pattern 0 PSNR + Pattern 1 PSNR + Pattern 2 PSNR

The higher, the better.