

LZW decompression – Special case

Text = A A B A B A B A A

dictionary: A:0 B:1
codeword length: 1

step	position in string	longest string in dictionary	b	add to dictionary	code
1	1				

LZW decompression – Special case

Text = A A B A B A B A A

dictionary: A:0 B:1 AA:2

codeword length: 2

step	position in string	longest string in dictionary	b	add to dictionary	code
1	1	A	0	AA	10

LZW decompression – Special case

Text = A A B A B A B A A

dictionary: A:0 B:1 AA:2

codeword length: 2

step	position in string	longest string in dictionary	b	add to dictionary	code
1	1	A	0	AA	10
2	2	A	00		

LZW decompression – Special case

Text = A A B A B A B A A

dictionary: A:0 B:1 AA:2 AB:3
codeword length: 2

step	position in string	longest string in dictionary	b	add to dictionary	code
1	1	A	0	AA	10
2	2	A	00	AB	11

LZW decompression – Special case

Text = A A **B** A B A B A A

dictionary: **A:0 B:1 AA:2 AB:3**
codeword length: **2**

step	position in string	longest string in dictionary	b	add to dictionary	code
1	1	A	0	AA	10
2	2	A	00	AB	11
3	3	B	01		

LZW decompression – Special case

Text = A A B A B A B A A

dictionary: A:0 B:1 AA:2 AB:3 BA:4
codeword length: 3

step	position in string	longest string in dictionary	b	add to dictionary	code
1	1	A	0	AA	10
2	2	A	00	AB	11
3	3	B	01	BA	100

LZW decompression – Special case

Text = A A B A B A B A A

dictionary: A:0 B:1 AA:2 AB:3 BA:4
codeword length: 3

step	position in string	longest string in dictionary	b	add to dictionary	code
1	1	A	0	AA	10
2	2	A	00	AB	11
3	3	B	01	BA	100
4	4	AB	011		

LZW decompression – Special case

Text = A A B A B A B A A

dictionary: A:0 B:1 AA:2 AB:3 BA:4 ABA:5
codeword length: 3

step	position in string	longest string in dictionary	b	add to dictionary	code
1	1	A	0	AA	10
2	2	A	00	AB	11
3	3	B	01	BA	100
4	4	AB	011	ABA	101

LZW decompression – Special case

Text = A A B A B A B A A

dictionary: A:0 B:1 AA:2 AB:3 BA:4 ABA:5
codeword length: 3

step	position in string	longest string in dictionary	b	add to dictionary	code
1	1	A	0	AA	10
2	2	A	00	AB	11
3	3	B	01	BA	100
4	4	AB	011	ABA	101
5	6	ABA	101		

LZW decompression – Special case

Text = A A B A B A B A A

dictionary: A:0 B:1 AA:2 AB:3 BA:4 ABA:5 ABAA:6
codeword length: 3

step	position in string	longest string in dictionary	b	add to dictionary	code
1	1	A	0	AA	10
2	2	A	00	AB	11
3	3	B	01	BA	100
4	4	AB	011	ABA	101
5	6	ABA	101	ABAA	110

LZW decompression – Special case

Text = A A B A B A B A A

dictionary: A:0 B:1 AA:2 AB:3 BA:4 ABA:5 ABAA:6
codeword length: 3

step	position in string	longest string in dictionary	b	add to dictionary	code
1	1	A	0	AA	10
2	2	A	00	AB	11
3	3	B	01	BA	100
4	4	AB	011	ABA	101
5	6	ABA	101	ABAA	110
6	9	A	000		

LZW decompression – Special case

Compressed file: 0000101110100

dictionary: A:0 B:1
codeword length: 1

step	position in file	old string	code from dictionary	string	add to dictionary	code
0	1	-	0	A		

LZW decompression – Special case

Compressed file: 0000101110100

dictionary: A:0 B:1
codeword length: 2

step	position in file	old string	code from dictionary	string	add to dictionary	code
0	1	-	0	A	-	-

LZW decompression – Special case

Compressed file: 000101110100

dictionary: A:0 B:1 AA:2
codeword length: 2

step	position in file	old string	code from dictionary	string	add to dictionary	code
0	1	-	0	A	-	-
1	2	A	00	A	AA	10

LZW decompression – Special case

Compressed file: 000**0**101110100

dictionary: **A:0 B:1 AA:2 AB:3**
codeword length: **3**

step	position in file	old string	code from dictionary	string	add to dictionary	code
0	1	-	0	A	-	-
1	2	A	00	A	AA	10
2	4	A	01	B	AB	11

LZW decompression – Special case

Compressed file: 0000101110100

dictionary: A:0 B:1 AA:2 AB:3 BA:4
codeword length: 3

step	position in file	old string	code from dictionary	string	add to dictionary	code
0	1	-	0	A	-	-
1	2	A	00	A	AA	10
2	4	A	01	B	AB	11
3	6	B	011	AB	BA	100

LZW decompression – Special case

Compressed file: 00001011**101**00

dictionary: **A:0 B:1 AA:2 AB:3 BA:4**
codeword length: **3**

step	position in file	old string	code from dictionary	string	add to dictionary	code
0	1	-	0	A	-	-
1	2	A	00	A	AA	10
2	4	A	01	B	AB	11
3	6	B	011	AB	BA	100
4	9	AB	101			

not in the dictionary use $s = \text{oldS} + \text{oldS.charAt}(0)$

LZW decompression – Special case

Compressed file: 00001011**101**00

dictionary: **A:0 B:1 AA:2 AB:3 BA:4 ABA:5**
codeword length: **3**

step	position in file	old string	code from dictionary	string	add to dictionary	code
0	1	-	0	A	-	-
1	2	A	00	A	AA	10
2	4	A	01	B	AB	11
3	6	B	011	AB	BA	100
4	9	AB	101	ABA	ABA	101

not in the dictionary use $s = \text{oldS} + \text{oldS.charAt}(0)$
 $= \text{AB} + \text{A} = \text{ABA}$

LZW decompression – Special case

Compressed file: 0000101110100

dictionary: A:0 B:1 AA:2 AB:3 BA:4 ABA:5 ABAA:6
codeword length: 3

step	position in file	old string	code from dictionary	string	add to dictionary	code
0	1	-	0	A	-	-
1	2	A	00	A	AA	10
2	4	A	01	B	AB	11
3	6	B	011	AB	BA	100
4	9	AB	1010	ABA	ABA	101
5	13	ABA	00	A	ABAA	110

Text = A A B A B A B A A