W2D3 Solution C: Compression inverted index using **Elias-γ** method

<table>
<tr><td>Inverted index</td><td>(964, 17), (1488, 63), (2240, 24), (3168, 32)</td></tr>
<tr><td>d-gaps</td><td>(964, 17), (524, 63), (752, 24), (928, 32)</td></tr>
<tr><td>Binary of d-gaps</td><td>964 ≡ 11 1100 0100
17 ≡ 1 0001
524 ≡ 10 0000 1100
63 ≡ 11 1111
752 ≡ 10 1111 0000
24 ≡ 1 1000
928 ≡ 11 1010 0000
32 ≡ 10 0000</td></tr>
<tr><td>Find the highest degree of 2 for each d-gap</td><td><table><tr><td>964</td><td>17</td><td>524</td><td>63</td><td>752</td><td>24</td><td>928</td><td>32</td></tr><tr><td>9</td><td>4</td><td>9</td><td>5</td><td>9</td><td>4</td><td>9</td><td>5</td></tr></table></td></tr>
<tr><td>Generate bit sequence</td><td><table><tr><td>964</td><td>17</td></tr><tr><td>1 1111 1111 0 1 1100 0100</td><td>1111 0 0001</td></tr></table>
<table><tr><td>524</td><td>63</td></tr><tr><td>1 1111 1111 0 0 0000 1100</td><td>1 1111 0 1 1111</td></tr></table>
<table><tr><td>752</td><td>24</td></tr><tr><td>1 1111 1111 0 0 1111 0000</td><td>1111 0 1000</td></tr></table>
<table><tr><td>928</td><td>32</td></tr><tr><td>1 1111 1111 0 1 1010 0000</td><td>1 1111 0 0 0000</td></tr></table></td></tr>
<tr><td>Calculate the size after compression:</td><td>(9+4+9+5+9+4+9+5)*2 + 8 = 116 bits

⌈116 bits/8⌉ = 15 Bytes</td></tr>
<tr><td>Add extra bits to the end of the bit sequence</td><td>15 * 8 = 120 bits
120 bits - 116 bits = 4 extra bits

<table><tr><td>4 extra bits</td></tr><tr><td>1111</td></tr></table></td></tr>
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