Table 1. GF() with primitive polynomial

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| --- | --- | --- |
| **GF** | **Binary Representation** | **Decimal** |
| α 0 | 0 0 0 0 0 0 | 0 |
| α 1 | 0 0 0 0 0 1 | 1 |
| α 2 | 0 0 0 0 1 0 | 2 |
| α 3 | 0 0 0 1 0 0 | 4 |
| α 4 | 0 0 1 0 0 0 | 8 |
| α 5 | 0 1 0 0 0 0 | 16 |
| α 6 | 1 0 0 0 0 0 | 32 |
| α 7 | 0 0 0 0 1 1 | 3 |
| α 8 | 0 0 0 1 1 0 | 6 |
| α 9 | 0 0 1 1 0 0 | 12 |
| α 10 | 0 1 1 0 0 0 | 24 |
| α 11 | 1 1 0 0 0 0 | 48 |
| α 12 | 1 0 0 0 1 1 | 35 |
| α 13 | 0 0 0 1 0 1 | 5 |
| α 14 | 0 0 1 0 1 0 | 10 |
| α 15 | 0 1 0 1 0 0 | 20 |
| α 16 | 1 0 1 0 0 0 | 40 |
| α 17 | 0 1 0 0 1 1 | 19 |
| α 18 | 1 0 0 1 1 0 | 38 |
| α 19 | 0 0 1 1 1 1 | 15 |
| α 20 | 0 1 1 1 1 0 | 30 |
| α 21 | 1 1 1 1 0 0 | 60 |
| α 22 | 1 1 1 0 1 1 | 59 |
| α 23 | 1 1 0 1 0 1 | 53 |
| α 24 | 1 0 1 0 0 1 | 41 |
| α 25 | 0 1 0 0 0 1 | 17 |
| α 26 | 1 0 0 0 1 0 | 34 |
| α 27 | 0 0 0 1 1 1 | 7 |
| α 28 | 0 0 1 1 1 0 | 14 |
| α 29 | 0 1 1 1 0 0 | 28 |
| α 30 | 1 1 1 0 0 0 | 56 |
| α 31 | 1 1 0 0 1 1 | 51 |
| α 32 | 1 0 0 1 0 1 | 37 |
| α 33 | 0 0 1 0 0 1 | 9 |
| α 34 | 0 1 0 0 1 0 | 18 |
| α 35 | 1 0 0 1 0 0 | 36 |
| α 36 | 0 0 1 0 1 1 | 11 |
| α 37 | 0 1 0 1 1 0 | 22 |
| α 38 | 1 0 1 1 0 0 | 44 |
| α 39 | 0 1 1 0 1 1 | 27 |
| α 40 | 1 1 0 1 1 0 | 54 |
| α 41 | 1 0 1 1 1 1 | 47 |
| α 42 | 0 1 1 1 0 1 | 29 |
| α 43 | 1 1 1 0 1 0 | 58 |
| α 44 | 1 1 0 1 1 1 | 55 |
| α 45 | 1 0 1 1 0 1 | 45 |
| α 46 | 0 1 1 0 0 1 | 25 |
| α 47 | 1 1 0 0 1 0 | 50 |
| α 48 | 1 0 0 1 1 1 | 39 |
| α 49 | 0 0 1 1 0 1 | 13 |
| α 50 | 0 1 1 0 1 0 | 26 |
| α 51 | 1 1 0 1 0 0 | 52 |
| α 52 | 1 0 1 0 1 1 | 43 |
| α 53 | 0 1 0 1 0 1 | 21 |
| α 54 | 1 0 1 0 1 0 | 42 |
| α 55 | 0 1 0 1 1 1 | 23 |
| α 56 | 1 0 1 1 1 0 | 46 |
| α 57 | 0 1 1 1 1 1 | 31 |
| α 58 | 1 1 1 1 1 0 | 62 |
| α 59 | 1 1 1 1 1 1 | 63 |
| α 60 | 1 1 1 1 0 1 | 61 |
| α 61 | 1 1 1 0 0 1 | 57 |
| α 62 | 1 1 0 0 0 1 | 49 |
| α 63 | 1 0 0 0 0 1 | 33 |

Table 2. Each steps for finding error-location polynomial

|  |  |  |  |
| --- | --- | --- | --- |
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|  |  |  |  |

The **Error-Location Polynomial** is

The **Error Evaluator Polynomial** is

So the **Error Pattern** is

Table 3. Error locations and error magnitudes

|  |  |
| --- | --- |
| **Error Location** | **Error Magnitude** |
|  |  |
|  |  |
|  |  |
|  |  |
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Table 4. Each steps for finding error-location polynomial and error-value evaluator

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
| -1 |  |  | 0 |
| 0 |  |  | 1 |
| 1 |  |  |  |
| 2 |  |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |

The error pattern is same as the results done by Berlekamp-Massey Algorithm.