

Input: $X = x_1, x_2, \dots, x_N$ $x_i \in \{0, 1\}$

Output: $Y = y_1, y_2, \dots, y_N$ $y_i \in \{0, 1\}$ where 0,1 repeat at least L times and

$$\sum_{i=1}^N (x_i - y_i)^2 \text{ becomes minimum}$$

Consider $e(i, j, v)$ $1 \leq i \leq N, 1 \leq j \leq L, v \in \{0, 1\}$

$e(i, j, v)$ is the error value when the value v continues j times at position i .

Here,

$$e(1, 1, v) = (x_1 - v)^2$$

$$e(i, 1, v) = \min_k e(i-1, L+k, 1-v) + (x_i - v)^2$$

$$e(i, j, v) = e(i-1, j-1, v) + (x_i - v)^2$$