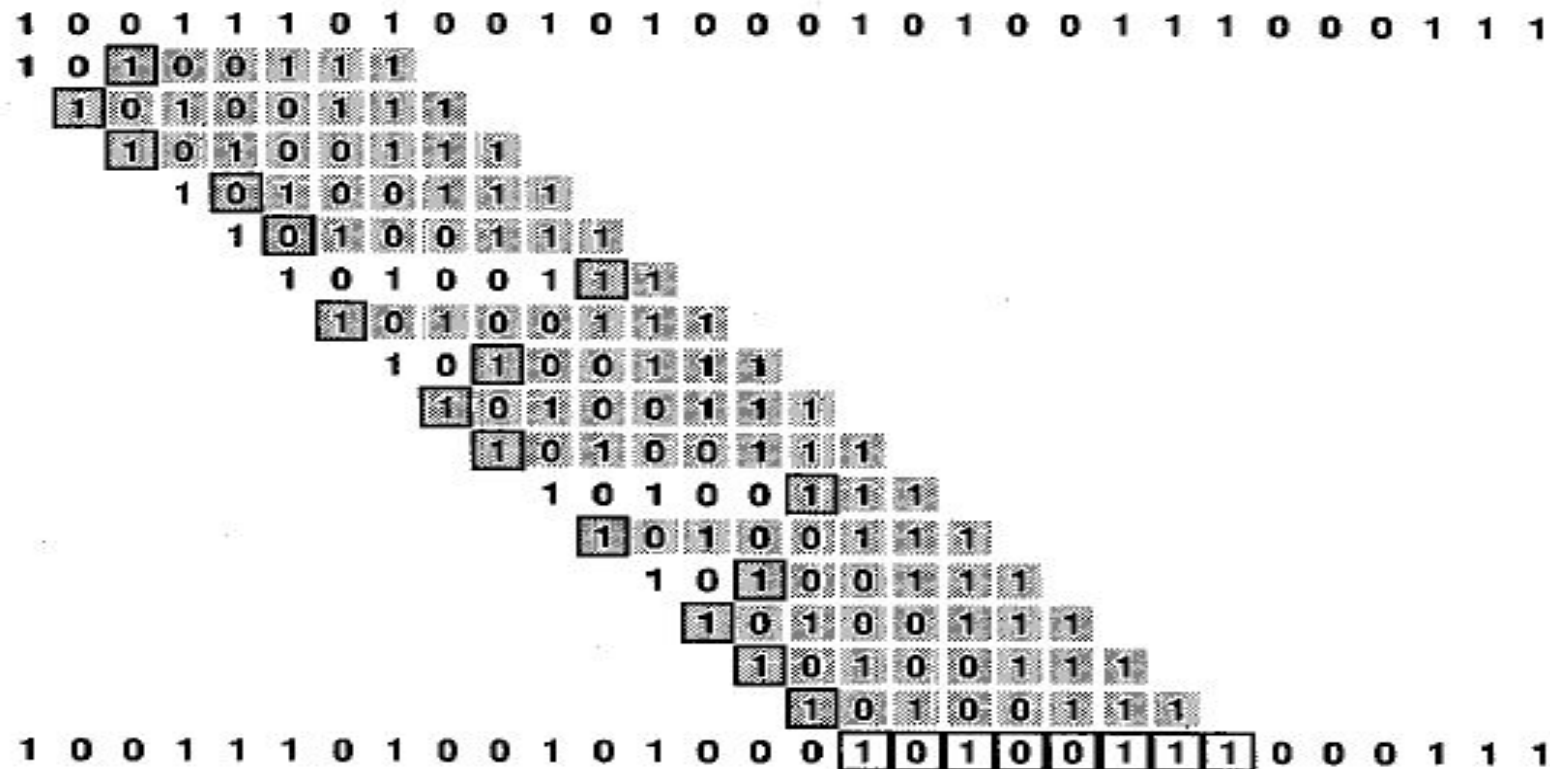# String Searching Techniques

- **Brute-Force Method**

- **Knuth-Morris-Pratt (KMP) Method**

- **Boyer-Moore Method**

- **Rabin-Karp Method**

Brute Force Method – String Searching Algorithm

In this method, for each possible position in the text T , we check whether the pattern P matches or not. Since the length of T is n, we have n-m+1 possible choices for comparisons. This is because we do not need to check last m-1 locations of T as the pattern length is m.

Example : Search Pattern P is **1 0 1 0 0 1 1 1** (m=8) and length of the text is (n=30)

Algorithm for searching the pattern P in text T using Brute Force

```
Algorithm BruteForceSearch(char T[], char P[],  int n, int m)
{
   for( int i=0; i<=n-m; i++)
     {  j=0;
        while( j<m && P[j]==T[i+j] ) do
                  j++;
        if(j==m)
            return i;
     }
     return -1;
}
```