Date: 10-9-2025

Experiment No: 10

I. Aim: Implement Naïve string matching algorithm

II. Theory:

Write algorithm for Naïve string matching

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Show stepwise procedure to find position of pattern in text, number of occurrences and number of shifts in the given string input.
Text: AAABCDJKSDABCE
Pattern: ABC

Procedure:

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III. Program:

```
#include <stdio.h>
#include <string.h>

void search(char* pat, char* txt)
{
   int i,j,count=0;
   int M = strlen(pat);
   int N = strlen(txt);
   for (i = 0; i <= N - M; i++)
   {
        for (j = 0; j < M; j++)
             if (txt[i + j] != pat[j])
                break;
            if (j== M)
                {
                  printf("\nPattern found at index %d \n", i);
                  printf("Number of shifts required %d \n\n",i);
                  count=count+1;
                }
   }
```

```
    printf("Number of occurences %d",count);
}

void main()
{
    char txt[20],pat[10];
    printf("\nEnter text : ");
    gets(txt);
    printf("\nEnter pattern : ");
    gets(pat);
    search(pat, txt);
    getch();
}
```

IV. Output:

V. Complexity:

Number of characters in text= n
Number of characters in pattern=m
Time complexity = O (m*n)

VI. Conclusion: Successfully implemented Naïve string matching algorithm to find occurrence of pattern in the text.