

# Pattern Searching | C++ Foundation

Given a text of length  $N$  `txt[0..N-1]` and a pattern of length  $M$  `pat[0..M-1]`, write a function `search(char pat[], char txt[])` that prints all occurrences of `pat[]` in `txt[]`. You may assume that  $N > M$ .

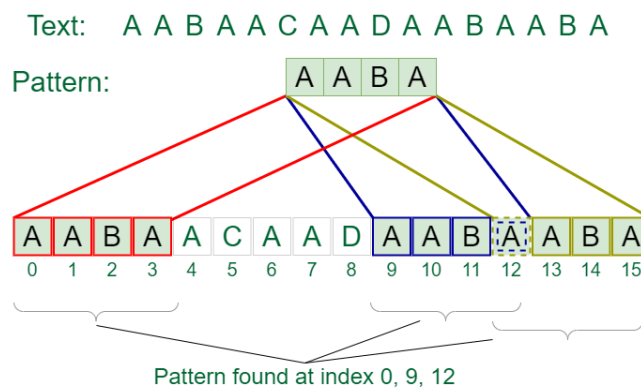
## Examples:

**Input:** `txt[] = "THIS IS A TEST TEXT"`, `pat[] = "TEST"`

**Output:** *Pattern found at index 10*

**Input:** `txt[] = "AABAACAADAABAABA"`, `pat[] = "AABA"`

**Output:** *Pattern found at index 0, Pattern found at index 9, Pattern found at index 12*



```
#include<iostream>
using namespace std;

void printIndex(string text, string pat)
{
    int found = text.find(pat);
    while(found != string::npos)
    {
        cout << "Pattern found at " << found << '\n';
    }
}
```

```
        found = text.find(pat, found+1);
    }
}

int main()
{
    string text, pat;
    cin >> text >> pat;
    printIndex(text, pat);
    return 0;
}
```

## Output

```
Pattern found at 0
```