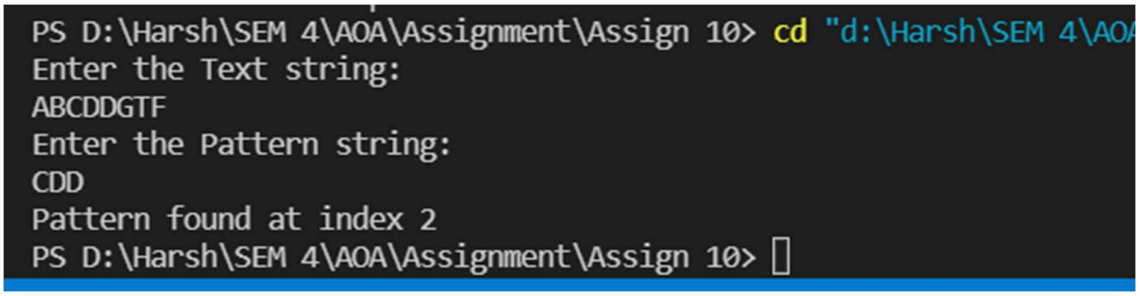
PROGRAM:

```
#include<stdio.h>
#include<string.h>
#define d 100

/* pat -> pattern
   txt -> text
   q -> A prime number
*/

void search(char pat[], char txt[], int q){
    int M = strlen(pat);
    int N = strlen(txt);
    int i, j;
    int p = 0;            // hash value for pattern
    int t = 0;           // hash value for txt
    int h = 1;
    for (i = 0; i < M-1; i++)
        h = (h*d)%q;
    for (i = 0; i < M; i++){
        p = (d*p + pat[i])%q;
        t = (d*t + txt[i])%q;
    }
    for (i = 0; i <= N - M; i++){
        if ( p == t ){
            for (j = 0; j < M; j++){
```

```
            if (txt[i+j] != pat[j])
                break;
        }
        if (j == M)
            printf("Pattern found at index %d \n", i);
    }
    if ( i < N-M ){
        t = (d*(t - txt[i]*h) + txt[i+M])%q;
        if (t < 0)
        t = (t + q);
    }
  }
}

int main(){
  char txt[50];
  char pat[50];
  printf("Enter the Text string: \n");
      scanf("%s", txt);
      printf("Enter the Pattern string: \n");
      scanf("%s", pat);
  int q = 101;
  search(pat, txt, q);
  return 0;
}
```

OUTPUT:


PS D:\Harsh\SEM 4\AOA\Assignment\Assign 10> cd "d:\Harsh\SEM 4\AOA
Enter the Text string:
ABCDDGTF
Enter the Pattern string:
CDD
Pattern found at index 2
PS D:\Harsh\SEM 4\AOA\Assignment\Assign 10>