15 יוני 1999

Pattern Matching מבני נתונים 2

```
char text[100];
char pat[100];
int f[100];

int match(char *text, int n,
          char *pat,  int m,
          int *f){

   int t = 0;  /*ptr to text */
   int p = 0;  /*ptr to pat */

   while(t<n && p<m){
      if(text[t] == pat[p]){
         t++; p++;
      }
      else{
         if(p == 0){
            t++;
         }
      else p = f[p-1] + 1;
      }
   }
   return p;
}
```

```
void find_fail(char *pat,
               int m, int *f){
   int p = 1;
   int j = 0;
   f[0] = -1;

   while(p < m){
      if(pat[p] == pat[j])
         f[p++] = j++;
      else
         if(j == 0)
            f[p++] = -1;
      else{
         j = f[j];
         if(j < 0)
            j = 0;
      }
   }
}
```

דוגמא

text =

```
    babcbabcabcaabcabcabcacabc
```

length = 26

pat =

```
    abcabcacab
```

length = 10

```
f = -1 -1 -1 0 1 2 3 -1 0 1
```

matched 10 characters of pat