

LAB PROGRAMS

Data Structure and Applications

2. Design, Develop and Implement a Program in C for the following operations on string.

a. Read a main String (STR), a Pattern String (PAT) and a Replace String (REP)

b. Perform Pattern Matching Operation: Find and Replace all occurrences of PAT in STR with REP if PAT exists in STR. Report suitable messages in case PAT does not exist in STR

Support the program with **functions** for each of the above operations. **Don't use Built-in functions.**

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

```
char str[100],pat[100],rep[100],ans[100];
```

```
int i,j,k,c,m,flag=0;
```

```
void stringmatch()
```

```
{
```

```
    i=m=c=0;
```

```
    while(str[c]!='\0')
```

```
    {
```

```
        if(str[m]==pat[i])
```

```
        {
```

```
            i++;
```

```
            m++;
```

```
            if(pat[i]!='\0')
```

```
            {
```

```
                flag=1;
```

```
                for(k=0;rep[k]!='\0';k++,j++)
```

```
                    ans[j]=rep[k];
```

```
            i=0;
```

```
            c=m;
```

```

        }
    }
else
{
    ans[j]=str[c];
    j++;
    c++;
    m=c;
    i=0;
}
}
ans[j]='\0';
}
void main()
{
system("cls");
printf(" Enter a main string\n");
gets(str);
printf("Enter a pattern string\n");
gets(pat);
printf("Enter a replacing string\n");
gets(rep);
stringmatch();
if(flag==1)
printf("The resultant string is:  %s",ans);
else
printf("Pattern does not found\n");
getch();
}

```