2. Develop a Program in C for the following operations on Strings.
a) Read a mainString(STR),a PatternString(PAT)and aReplace String(REP)
b) Perform Pattern Matching Operation: Find and Replace all occurrences of PAT inSTR with REP if PAT
exists in STR. Report suitable messages in case PAT does notexist in STR.
Support the program with functions for each of the above operations. Don't use Built-in
functions.

```c
#include<stdio.h>
char STR[100],PAT[100],REP[100],ans[100];
void read()
{
__fpurge(stdin);
printf("\nEnter the MAIN string: \n");
scanf(" %[^\n]", STR);
printf("\nEnter a PATTERN string: \n");
scanf(" %s", PAT);
printf("\nEnter a REPLACE string: \n");
scanf(" %s", REP);
}
void compute()
{
 int i,j,c,m,k,flag=0;
 i = m = c = j = 0;
 while ( STR[c] != '\0')
 {
// Checking for Match
   if ( STR[m] == PAT[i])
    {
     i++;
      m++;

     if ( PAT[i] == '\0')
      {
//copy replace string in ans string
        flag=1;
      for(k=0; REP[k] != '\0';k++,j++)
      ans[j] = REP[k];
       i=0;
       c=m;
      }
     }
   else //mismatch
   {
    ans[j] = STR[c];
     j++;
     c++;
     m = c; i=0;
   }
 }
  if(flag==0)
  {
    printf("Pattern doesn't found!!!");
  }
  else
```

```c
  {
    ans[j] = '\0';
    printf("\nThe RESULTANT string is:%s\n" ,ans);
  }
}

void main()
{
   read();
   compute();
}
```