Assignment= 20

1. program to count the number of vowels in each of the string which is entered by the user.

```c
#include <stdio.h>
int main()
{
        char str[5][20];int i,j,count=0;
        for(i=0;i<5;i++)
        {
          printf("\nEnter %d string :",i+1);
          fgets(str[i],20,stdin);
        }
        for(i=0;i<5;i++)
        {
                count=0;
                for(j=0;str[i][j];j++)
                {
                        if(str[i][j]=='a' ||str[i][j]=='e' || str[i][j]=='i' || str[i][j]=='o' ||
str[i][j]=='u' )
                        {
                                count ++;
                        }
                        else if(str[i][j]=='A' ||str[i][j]=='E' || str[i][j]=='I' || str[i][j]=='O'
|| str[i][j]=='U')
                        {
                                count ++;
                        }
                }
                if(count>0)
                printf("\nvowels in %d string is %d",i+1,count);
        }

        return 0;
}
```

2. write a program to sort 10 city names stored in a two dimensional array taken from the user.

```c
#include <stdio.h>
#include <string.h>
int main()
```

```c
{
    char str[10][20];int i,j,k,temp,count=0,c=-1;
    for(i=0;i<10;i++)
    {
        printf("\n Enter %d string : ",i+1);
        fgets(str[i],20,stdin);
    }
    for(i=0;i<10;i++)
    {
        c++;
        for(j=0;j<10;j++)
        {
            count=strlen(str[i]);
            count-=1;
            for(k=0;k<count-1;k++)
            {
                if(str[c][k]>str[c][k+1])
                {
                    temp=str[c][k];
                    str[c][k]= str[c][k+1];
                    str[c][k+1]=temp;
                }
            }
        }
    }
    for(i=0;i<10;i++)
    {
        printf("%s \n",str[i]);
    }
}
```

3. write a program to read and display a 2D array of strings in c language.

```c
#include <stdio.h>
int main()
{
    char str[10][20];int i,n;
    printf("Enter Size which you want to store the names :");
    scanf("%d",&n);
    printf("%d",n);
    printf("\nEnter names:\n");
    for(i=0;i<=n;i++)
```

```c
        {
         fgets(str[i],20,stdin);
        }
        printf("\nThe Enter names are :");
        for(i=0;i<=n;i++)
        {
                printf("%s",str[i]);
        }
        return 0;
}
```

4. write a program to search string from the list.

```c
#include <stdio.h>
int main()
{
        char str[10][20],str1[20];int i,n,j,count=0,l=0;
        printf("\nEnter Size :");
        scanf("%d",&n);
        printf("\nEnter strings : ");
        for(i=0;i<=n;i++)
        {
                fgets(str[i],20,stdin);
        }
        printf("\nEnter string you will be find :");
        fgets(str1,20,stdin);
        l=strlen(str1);
        l--;
        for(i=0;i<=n;i++)
        {
          count=0;
          for(j=0;j<l;j++)
          {
                if(str[i][j]!=str1[j])
                {
                        count=-1;
                    break;
                }
          }
          if(count==0)
    {
        printf("\n string lies in %d line",i);
        break;
```

```
        }
}
if(i>n)
printf("\nElement not found");
}
```

5. write a program to find string which are palindrome in the list of strings .

```c
#include <stdio.h>
#include <string.h>
int main()
{
        char str[5][20];int i,j,l,count,c;
        printf("\nEnter Strings :");
        for(i=0;i<5;i++)
        {
          fgets(str[i],20,stdin);
        }
        for(i=0;i<5;i++)
        {
                count=0;
                l=strlen(str[i]);
                l--;c=l;
                for(j=0;j<l/2;j++,c--)
                {
                        if(str[i][j]==str[i][c-1])
                        {

                        }
                        else
                        {
                        count++;
                        break;
                        }
                }
                if(count==0)
                {
                printf("%d is a panildrome string :",i+1);
                printf("\n");
        }
          else if(j>l/2)
          {
```

```c
                printf("%d is a panildrome string :",i+1);
                    printf("\n");
                }
            }
        return 0;
}
```

6. from the list of ip address check weather the given ip address is correctin th list of ip address:

```c
#include <stdio.h>
#include <stdbool.h>
int main()
{
  char str[]="192.256.0.1";int x,count=0;
  char *ip=strtok(str,".");
  while(ip!=NULL)
  {
      x=atoi(ip);
      if(x>=0 && x<=255)
      {
        count ++;
      }
      else
      {
      printf("Invalid ip addres:");
      break;
  }
      ip=strtok(NULL,".");
  }
      if(count==4)
      printf("valid ip addres");
}
```

7. suppose we have a lists of email addresses and check weather all email addresses have @symbol in it.print the odd

```c
//email out
#include <stdio.h>
#include <stdbool.h>
int main()
{
```

```c
        char
str[6][30]={"abhayrajgiri456@gmail.com","minigoswami456@gmail.com","abh
ay576.com","savitagoswami."
,"abhi890@gmail.com","rahul890@gmail.com"};int i,j;
        bool t=true;
        for(i=0;i<6;i++)
        printf("%s\n",str[i]);
        printf("\n****************************************************************************");
        for(i=0;i<6;i++)
        {
                for(j=0;str[i][j];j++)
                {
                        if(str[i][j]=='@')
                        {
                                t=true;
                                break;
                        }
                        else
                        t=false;
                }
        if(t==true)
    {
        printf("%s\n",str[i]);
    }
 }
}
}
```

8. write a program to search string from the list if the string is present in the list then the the user will be applicable to used factorial functions otherwise error messages are printed.

```c
#include <stdio.h>
int main()
{
        char str[10][20],str1[20];int i,n,j,count=0,l=0,fact,sum=1;
        printf("\nEnter Size :");
        scanf("%d",&n);
        printf("\nEnter Usernames for adding in the list : ");
        for(i=0;i<=n;i++)
        {
                fgets(str[i],20,stdin);
        }
        printf("\nEnter username :");
```

```c
        fgets(str1,20,stdin);
        l=strlen(str1);
        l--;
        for(i=0;i<=n;i++)
        {
          count=0;
          for(j=0;j<l;j++)
          {
                if(str[i][j]!=str1[j])
                {
                        count=-1;
                     break;
                }
          }
           if(count==0)
      {
          printf("\n congrats you will be able to calculate the factorial of number
:");
          printf("\nEnter number for finding a factorial of a number :");
                scanf("%d",&fact);
                for(i=1;i<=fact;i++)
                 sum=sum*i;
                 printf("factorial of given number is %d",sum);
                 break;
          }
}
if(i>n)
printf("\nError username is invalid!!");
}
```

9. Write a program to find gap b/w the strings

```c
#include <stdio.h>
#include <math.h>
int main()
{
        char str[5][20]={"my","name","is","abhay","raj"};int
i,x,w1=-1,w2=-1,min=100,temp;
        char word1[]="my";
        char word2[]="abhay";
        for(i=0;i<5;i++)
        {
    if(strcmp(str[i],word1)==0)
      w1=i;
```

```c
   if(strcmp(str[i],word2)==0)
    w2=i;

     if(w1!=-1 && w2!=-1)
     min=abs(w2-w1);
  }
}
```

10.write a program to create authentication system

```c
#include <stdio.h>
int main()
{
      char str1[2][20],str[2][20],str2[20];int i,k=-1;
      for(i=0;i<2;i++)
      {
      printf("\nEnter String :");
      fgets(str1[i],20,stdin);
      printf("\nEnter Password :");
      fgets(str[i],20,stdin);
  }
  printf("\nEnter username :");
  fgets(str2,20,stdin);
  for(i=0;i<2;i++)
  {
      k=strcmp(str1[i],str2);
      if(k==0)
      printf("\n Verified :");
      }
}*/
```