## String all question solution

## Ques 1: Comparision of two strings using built in function

```
#include <stdio.h>
void main()
char str[50],dup[50];
int cmp;
gets(str);
gets(dup);
cmp=strcmp(str,dup);
if(cmp==0)
printf("both are equal");
else if(cmp==-1)
printf("Both are unequal as first string is samller than second string");
else
printf("both ar unequal asfirst string is greater than second string");
Ques 2 WAP To check length of string using built in functions.
#include <stdio.h>
void main()
char str[50];
int len;
gets(str);
len=strlen(str);
printf("\n the length of string is : %d",len);
Ques 3: WAP To copy one string to another using built in functions.
#include <stdio.h>
void main()
char str[50],dup[50];
gets(str);
strcpy(dup,str);
```

```
printf("\n the string after copy: %s",dup);
Ques 4: WAP To convert lower case letter into upper case using built in functions.
#include <stdio.h>
void main()
char str[50];
gets(str);
strupr(str);
printf("\n string after conversion of lower case case letter into upper case is : %s",str);
Ques 5: WAP To convert upper case letter into lower case using built in
functions.
#include <stdio.h>
void main()
char str[50];
gets(str);
strlwr(str);
printf("\n string after conversion of upper case case letter into lower case is : %s",str);
Ques 6: WAP To reverse the string using built in functions.
#include <stdio.h>
void main()
char str[50];
gets(str);
strrev(str);
printf("\n the reverse of string is : %s",str);
Ques 7: concatenation of two strings using built in function
#include <stdio.h>
void main()
char str[50],dup[50];
int cmp;
```

```
gets(str);
gets(dup);
strcat(str,dup);
printf("\n first string is : %s",str);
printf("\n second string is : %s",str);
printf("\n string after concatenate is : %s",str);
}
Ques 8: WAP to toggled case characters i.e upper to lower lower to upper
#include <stdio.h>
void main()
char str[500];
int len:
printf("Enter any string: ");
gets(str);
while(str[len] != '\0')
if(str[len] >= 'a' \&\& str[len] <= 'z') { str[len] = str[len] - 32; } else if(str[len] >= 'A' \&\&
str[len]<='Z')
str[len] = str[len] + 32;
       len++;
printf("String after toggling case: %s", str);
Ques 9: WAP program to count total number of alphabets, digits and special
characters in a string
#include <stdio.h>
void main()
char str[500];
int alphabets, digits, others, index;
       alphabets = digits = others = index = 0;
       /* Input string from user */
       printf("Enter any string : ");
       gets(str);
       * Check each character of string for alphabet, digit or special character
```

```
while(str[index]!='\0')
         if((str[index]>='a' && str[index]<='z') || (str[index]>='A' && str[index]<='Z'))
           alphabets++;
         else if(str[index]>='0' && str[index]<='9')
           digits++;
         else
           others++;
         index++;
      }
       printf("Alphabets = %d\n", alphabets);
       printf("Digits = %d\n", digits);
       printf("Special characters = %d", others);
Ques 10: WAP program to count total number of vowel or consonant in a string
#include <stdio.h>
void main()
char str[500];
int index, len, vowel, consonant;
       /* Input string from user */
      printf("Enter any string: ");
      gets(str);
      vowel = 0;
       consonant = 0;
      len = strlen(str);
      for(index=0; index<len; index++)</pre>
```

```
if((str[index]>='a' && str[index]<='z') || (str[index]>='A' && str[index]<='Z'))
           // If the current character(str[i]) is a vowel
           if(str[index] =='a' || str[index]=='e' || str[index]=='i' || str[index]=='o' || str[index]=
             str[index] =='A' || str[index]=='E' || str[index]=='I' || str[index]=='O' || str[index]=
             vowel++;
           else
             consonant++;
        }
       }
       printf("Total number of vowel = %d\n", vowel);
       printf("Total number of consonant = %d\n", consonant);
}
Ques 11: WAP program to count total number of words in a string
#include <stdio.h>
void main()
char str[500];
int index, words;
       /* Input string from user */
       printf("Enter any string: ");
       gets(str);
       index = 0;
       words = 1;
       /* Runs a loop till end of string */
       while(str[index] != '\0')
         /* If the current character(str[index]) is white space */
         if(str[index]==' ' || str[index]=='\n' || str[index]=='\t')
         {
           words++;
         index++;
```

```
}
      printf("Total number of words = %d", words);
}
Ques 12: WAP program to reverse order of words in a string
#include <stdio.h>
void main()
char str[500], reverse[500];
int len, i, index, wordStart, wordEnd;
       printf("Enter any string: ");
      gets(str);
      len = strlen(str);
      index = 0;
       // Start checking of words from the end of string
       wordStart = len - 1;
       wordEnd = len - 1;
      while(wordStart > 0)
         // If a word is found
         if(str[wordStart] == ' ')
           // Add the word to the reverse string
           i = wordStart + 1;
           while(i <= wordEnd)</pre>
             reverse[index] = str[i];
             i++;
             index++;
           reverse[index++] = ' ';
           wordEnd = wordStart - 1;
```

```
wordStart--;
       // Finally add the last word
       for(i=0; i<=wordEnd; i++)</pre>
         reverse[index] = str[i];
         index++;
       }
       // Add NULL character at the end of reverse string
       reverse[index] = '\0';
       printf("Original string \n%s\n\n", str);
       printf("Reverse ordered words \n%s", reverse);
Ques 13: C program to find last occurrence of a character in string
#include <stdio.h>
void main()
char str[500];
char toFind;
int index=-1,len=0;
printf("Enter any string: ");
gets(str);
printf("Enter any character to find: ");
toFind = getchar();
while(str[len] != '\0')
// Update index if match is found
if(str[len] == toFind)
index = len;
len++;
printf("\nLast index of '%c' is %d", toFind, index);
```

```
Ques 14: C program to count all occurrences of a character in a given string
#include <stdio.h>
void main()
char str[500];
char toSearch;
int index, count;
      /* Input string and search character from user */
      printf("Enter any string: ");
      gets(str);
      printf("Enter any character to search: ");
      toSearch = getchar();
      count = 0;
      index=0;
      while(str[index] != '\0')
         * If character is found in string then
         * increment count variable
         if(str[index] == toSearch)
           count++;
        index++;
      }
      printf("Total occurrence of '%c' = %d", toSearch, count);
Ques 15: WAP to count number of characters in a string
#include <stdio.h>
void main()
char add[100];
```

```
int len, count=0;
printf("Enter your address:\t");
gets(add);
printf("Entered address is:\t");
puts(add);
for(len=0;add[len]!='\0';len++)
count++;
printf("\n the total charcaters in the string is : %d",count);
Ques 16: WAP to merge to strings in a string
#include <stdio.h>
void main()
char fname[100],sname[100];
int len, count=0,len2;
printf("Enter your first name:\t");
gets(fname);
printf("Enter your surname :\t");
gets(sname);
for(len=0;fname[len]!='\0';len++)
count++;
for(len2=0;sname[len2]!='\0';len2++)
fname[len]=sname[len2];
len++;
fname[len]='\setminus 0';
printf("\nString after concatenate are: %s",fname);
Ques 17 WAP to copy an string in another string
#include <stdio.h>
void main()
```

```
char add[100],dup[100];
int len:
printf("Enter your address:\t");
gets(add);
printf("Entered address is:\t");
puts(add);
for(len=0;add[len]!='\0';len++)
dup[len]=add[len];
dup[len]='\setminus 0';
printf("\n the string after copy is : %s",dup);
Ques 18 WAP to convert lower case letter into upper case in a string
#include <stdio.h>
void main()
char add[100];
int len:
printf("Enter your address:\t");
gets(add);
printf("Entered address is:\t");
puts(add);
for(len=0;add[len]!='\0';len++)
if(add[len] >= 'a' \&\& add[len] <= 'z')
add[len]=add[len]-32;
printf("\n Inputted String after conversion : %s",add);
Ques 19: WAP to print a string in reverse order by holding in another string.
#include <stdio.h>
void main()
char add[100],dup[100];
```

```
int len=0,le=0;
printf("Enter your address:\t");
gets(add);
printf("Entered address is:\t");
puts(add);
while(add[len]!='\setminus 0')
len++;
for(len=len-1;len>=0;len-)
dup[le]=add[len];
le++;
dup[le]='\setminus 0';
printf("\n %s",dup);
Ques 20:WAP to serach a character in string
#include <stdio.h>
void main()
char add[100], search;
int len,found=0;
printf("Enter your address:\t");
gets(add);
printf("Entered address is:\t");
puts(add);
printf("Enter the character you want to search:\t");
scanf("%c",&search);
for(len=0;add[len]!='\setminus 0';len++)
if(add[len]==search)
found++;
break;
if (found==1)
```

```
printf("\n Match found");
else
printf("match not found");
Ques 21 WAP to convert upper case letter into lower case in a string
#include <stdio.h>
void main()
char add[100];
int len:
printf("Enter your address:\t");
gets(add);
printf("Entered address is:\t");
puts(add);
for(len=0;add[len]!='\0';len++)
if(add[len] >= 'A' && add[len] <= 'Z')
add[len]=add[len]+32;
}
printf("\n Inputted String after conversion : %s",add);
Ques 22:WAP to check a string is palindrome or not
#include <stdio.h>
void main()
char str[50],str2[50];
int i=0, j=0;
printf("\nEnter any string: ");
gets(str);
while(str[i]!='\setminus 0')
i++;
printf("\n Check Size:%d\n",i);
for(i=i-1;i>=0;i-)
str2[j]=str[i];
```

```
j++;
str2[j]='\setminus 0';
printf("%s",str);
//printf("Reversed string:%s",str2);
for(i=0;str[i]!='\setminus 0';i++)
     if(str[i]!=str2[i])
1
2
        break;
if(str[i]=='\setminus 0')
printf("\nPALINDRONE STRING");
else
printf("\nNOT PALINDRONE");
Ques 23: WAP to replace a search character in string with another letter in a
string
#include <stdio.h>
void main()
char add[100],search,rep;
int len:
printf("Enter your address:\t");
gets(add);
printf("Entered address is:\t");
puts(add);
printf("Enter the character you want to search:\t");
scanf("%c",&search);
printf("Enter the character you want to replace with:\t");
scanf("%*c%c",&rep);
for(len=0;add[len]!='\setminus 0';len++)
if(add[len]==search)
add[len]=rep;
1
     }
printf("\n String after replacing that character: %s",add);
```

## Ques 24 Write a program in C to input a string and print it

```
#include <stdio.h>
#include <stdlib.h>
void main()
 char str[50];
 printf("\n\nAccept a string from keyboard :\n");
  printf("-----\n");
  printf("Input the string : ");
 fgets(str, sizeof str, stdin);
 printf("The string you entered is : %s\n", str);
Ques 25. Write a program in C to find the length of a string without using library
function.
#include <stdio.h>
#include <stdlib.h>
void main()
 char str[100]; /* Declares a string of size 100 */
  int l = 0:
   printf("\n\nFind the length of a string :\n");
   printf("-----\n");
   printf("Input the string : ");
   fgets(str, sizeof str, stdin);
 while(str[l]!='\setminus 0')
    l++;
 printf("Length of the string is : %d\n\n", l-1);
Ques 26. Write a program in C to separate the individual characters from a
string.
#include <stdio.h>
#include <stdlib.h>
```

```
void main()
 char str[100]; /* Declares a string of size 100 */
  int l = 0:
   printf("\n\nSeparate the individual characters from a string :\n");
   printf("-----\n"):
   printf("Input the string : ");
   fgets(str, sizeof str, stdin);
       printf("The characters of the string are : \n");
 while(str[l]!='\setminus 0')
   printf("%c ", str[l]);
   l++:
 printf("\n");
Ques 27. Write a program in C to print individual characters of string in reverse
order.
#include <stdio.h>
#include <string.h>
#include <stdlib.h>
void main()
 char str[100]; /* Declares a string of size 100 */
 int l,i;
   printf("\n\nPrint individual characters of string in reverse order :\n");
   printf("-----\n");
   printf("Input the string : ");
   fgets(str, sizeof str, stdin);
       l=strlen(str);
       printf("The characters of the string in reverse are : \n");
   for(i=l;i>=0;i--)
     printf("%c ", str[i]);
 printf("\n");
```

```
Ques 28. Write a program in C to count the total number of words in a string.
```

```
#include <stdio.h>
#include <string.h>
#include <stdlib.h>
#define str_size 100 //Declare the maximum size of the string
void main()
  char str[str_size];
  int i, wrd;
   printf("\n\nCount the total number of words in a string :\n");
   printf("Input the string : ");
   fgets(str, sizeof str, stdin);
  i = 0:
  wrd = 1;
  /* loop till end of string */
  while(str[i]!='\setminus 0')
    /* check whether the current character is white space or new line or tab
character*/
    if(str[i]==' ' || str[i]=='\n' || str[i]=='\t')
      wrd++;
    i++;
  printf("Total number of words in the string is: %d\n", wrd-1);
Ques 29. Write a program in C to compare the length of two strings without using
string library functions.
#include <stdio.h>
#define str_size 100 //Declare the maximum size of the string
int main()
```

```
char str1[str_size], str2[str_size];
int flg=0;
printf("\nCheck the length of two strings:");
printf("\n----");
printf("\nInput the 1st string : ");
fgets(str1, sizeof str1, stdin);
printf("Input the 2nd string: ");
fgets(str2, sizeof str2, stdin);
int i=1:
printf("\nString1: %s", str1);
printf("String2: %s", str2);
    /* Runs till both strings are equal */
while(str1[i] == str2[i])
  if(str1[i] == '\0' \&\& str2[i] == '\0')
    break;
  i++;
if((str1[i+1] == '\0') && (str2[i+1] == '\0'))
  flg=0;
else if ((str1[i+1] != '\0') \&\& (str2[i+1] == '\0'))
  flg=1;
else flg=2;
if(flg == 0)
  printf("\nThe length of both strings are equal.\n");
else if(flg == 1)
 printf("\nThe length of the first string is greater than the second string.\n\n");
else if(flg == 2)
 printf("\nThe length of the second string is greater than the first string.\n\n");
return 0;
```

}

## Ques 30. Write a program in C to count total number of alphabets, digits and special characters in a string.

```
#include <stdio.h>
#include <string.h>
#include <stdlib.h>
#define str_size 100 //Declare the maximum size of the string
void main()
{
  char str[str_size];
  int alp, digit, splch, i;
  alp = digit = splch = i = 0;
   printf("\n\nCount total number of alphabets, digits and special characters :\n");
   printf("-----\n"):
   printf("Input the string : ");
   fgets(str, sizeof str, stdin);
  /* Checks each character of string*/
  while(str[i]!='\setminus 0')
    if((str[i]>='a' && str[i]<='z') || (str[i]>='A' && str[i]<='Z'))
      alp++;
    else if(str[i] > = '0' \&\& str[i] < = '9')
      digit++;
    else
      splch++;
    i++;
  printf("Number of Alphabets in the string is : %d\n", alp);
```

```
printf("Number of Digits in the string is : %d\n", digit);
 printf("Number of Special characters in the string is : %d\n\n", splch);
}
Ques 31. Write a program in C to find maximum occurring character in a string.
#include <stdio.h>
#include <string.h>
#include <stdlib.h>
#define str_size 100 //Declare the maximum size of the string
#define chr_no 255 //Maximum number of characters to be allowed
void main()
  char str[str_size];
     int ch_fre[chr_no];
  int i = 0, max;
  int ascii;
   printf("\n\nFind maximum occurring character in a string :\n");
   printf("-----\n");
   printf("Input the string : ");
   fgets(str, sizeof str, stdin);
 for(i=0; i<chr_no; i++) //Set frequency of all characters to 0</pre>
    ch_fre[i] = 0;
 /* Read for frequency of each characters */
  i=0:
 while(str[i]!='\0')
    ascii = (int)str[i];
    ch_fre[ascii] += 1;
    i++;
```

```
max = 0;
  for(i=0; i<chr_no; i++)
    if(i!=32)
    if(ch_fre[i] > ch_fre[max])
      max = i;
    }
  printf("The Highest frequency of character '%c' appears number of times : %d \n\n",
max, ch_fre[max]);
}
Ques 32. Write a C program to sort a string array in ascending order.
#include <stdio.h>
#include <string.h>
void main()
 char str[100],ch;
 int i,j,l;
   printf("\n\nSort a string array in ascending order :\n");
   printf("-----\n");
   printf("Input the string : ");
   fgets(str, sizeof str, stdin);
 l=strlen(str);
 /* sorting process */
 for(i=1;i<l;i++)
  for(j=0;j< l-i;j++)
      if(str[j]>str[j+1])
      {
       ch=str[j];
       str[j] = str[j+1];
       str[j+1]=ch;
 printf("After sorting the string appears like : \n");
 printf("%s\n\n",str);
```

Ques 33. Write a program in C to read a string through keyboard and sort it using bubble sort.

```
#include <stdio.h>
#include <string.h>
void main()
 char name[25][50],temp[25];
 int n,i,j;
   printf("\n\nSorts the strings of an array using bubble sort :\n");
 printf("Input number of strings :");
 scanf("%d",&n);
printf("Input string %d :\n",n);
 for(i=0;i<=n;i++)
 {
   fgets(name[i], sizeof name, stdin);
  /*Logic Bubble Sort*/
  for(i=1;i<=n;i++)
      for(j=0;j \le n-i;j++)
       if(strcmp(name[j],name[j+1])>0)
      strcpy(temp,name[j]);
        strcpy(name[j],name[j+1]);
        strcpy(name[j+1],temp);
 printf("The strings appears after sorting :\n");
         for(i=0;i \le n;i++)
            printf("%s\n",name[i]);
Ques33. Write a program in C to extract a substring from a given string.
#include <stdio.h>
void main()
```

```
char str[100], sstr[100];
 int pos, l, c = 0;
   printf("\n\nExtract a substring from a given string:\n");
   printf("-----\n");
   printf("Input the string : ");
   fgets(str, sizeof str, stdin);
 printf("Input the position to start extraction :");
 scanf("%d", &pos);
 printf("Input the length of substring :");
 scanf("%d", &l);
 while (c < l)
  sstr[c] = str[pos+c-1];
   C++;
 sstr[c] = '\0';
 printf("The substring retrieve from the string is : \" %s\ "\n\n", sstr);
}
Ques 34. Write a C program to check whether a given substring is present in the
given string
#include <stdio.h>
void main()
{
     char str[80], search[20];
     int c1=0,c2=0,i,j,flg;
   printf("\n\nCheck whether a given substring is present in the given string :\n");
   printf("-----\n"):
   printf("Input the string : ");
   fgets(str, sizeof str, stdin);
```

```
printf("Input the substring to be search : ");
      fgets(search, sizeof search, stdin);
      while (str[c1]!='\setminus 0')
            c1++;
        c1--;
      while (search[c2]!='\0')
            c2++;
        c2--;
      for(i=0;i <= c1-c2;i++)
            for(j=i;j<i+c2;j++)
                  flg=1;
                  if (str[j]!=search[j-i])
                         flg=0;
                    break;
                   }
            if (flg==1)
                  break;
      if (flg==1)
            printf("The substring exists in the string.\n\n");
      else
            printf("The substring is not exists in the string. \n\);
Ques 35. Write a program in C to read a sentence and replace lowercase
characters by uppercase and vice-versa.
#include <stdio.h>
#include <string.h>
#include <ctype.h>
void main()
```

```
char str[100];
int ctr, ch, i;
   printf("\n\nReplace lowercase characters by uppercase and vice-versa :\n");
   printf("-----\n");
      printf("Input the string : ");
   fgets(str, sizeof str, stdin);
i=strlen(str);
ctr = i; /*shows the number of chars accepted in a sentence*/
printf("\nThe given sentence is : %s",str);
printf("After Case changed the string is: ");
for(i=0; i < ctr; i++)
 ch = islower(str[i]) ? toupper(str[i]) : tolower(str[i]);
 putchar(ch);
 printf("\n\n");
}
Ques 36. Write a program in C to find the number of times a given word 'the'
appears in the given string.
#include <stdio.h>
#include <string.h>
void main()
{
     int ctr=0,i,freq=0;
   int t,h,e,spc;
     char str[100];
   printf("\n\nFind the number of times the word 'the ' in any combination appears
:\n");
   printf("-----\n");
```

```
printf("Input the string : ");
      fgets(str,sizeof str,stdin);
    ctr=strlen(str);
      /*Counts the frequency of the word 'the' with a trailing space*/
      for(i=0;i <= ctr-3;i++)
            t=(str[i]=='t'||str[i]=='T');
            h=(str[i+1]=='h'||str[i+1]=='H');
            e=(str[i+2]=='e'||str[i+2]=='E');
            spc=(str[i+3]==''||str[i+3]=='\setminus 0');
            if ((t\&\&h\&\&e\&\&spc)==1)
              freq++;
      }
      printf("The frequency of the word \'the\' is : %d\n\n",freq);
Ques 37. Write a program in C to remove characters in String Except Alphabets.
#include <stdio.h>
#include <string.h>
void main(){
 char str[150];
  int i,j;
   printf("\n\nRemove characters in String Except Alphabets :\n");
   printf("-----\n");
      printf("Input the string : ");
 fgets(str,sizeof str,stdin);
 for(i=0; str[i]!='\0'; ++i)
    while (!((str[i]>='a'\&\&str[i]<='z') || (str[i]>='A'\&\&str[i]<='Z' || str[i]=='\0')))
      for(j=i;str[j]!='\setminus 0';++j)
        str[j]=str[j+1];
      str[j]='\0';
```

```
}
 printf("After removing the Output String : %s\n\n",str);
Ques38: Write a program in C to Find the Frequency of Characters.
#include <stdio.h>
void main(){
 char str[1000],choice;
 int i,ctr=0;
   printf("\n\nFind the Frequency of Characters :\n");
   printf("-----\n"):
     printf("Input the string : ");
  fgets(str,sizeof str,stdin);
 printf("Input the character to find frequency: ");
 scanf("%c",&choice);
 for(i=0;str[i]!='\0';++i)
   if(choice==str[i])
     ++ctr;
 printf("The frequency of '%c' is : %d\n\n", choice, ctr);
Ques 39: Write a program in C to find the largest and smallest word in a string.
#include <stdio.h>
#include <string.h>
#include <ctype.h>
void main()
 char str[100], word[20], mx[20], mn[20], c;
  int i = 0, j = 0, flg = 0;
   printf("\n\nFind the largest and smallest word in a string :\n");
   printf("-----\n");
     printf("Input the string : ");
```

```
i = 0;
  do
  {
    fflush(stdin);
    c = getchar();
    str[i++] = c;
  } while (c != '\n');
  str[i - 1] = '\0';
  for (i = 0; i < strlen(str); i++)
    while (i < strlen(str) && !isspace(str[i]) && isalnum(str[i]))
      word[j++] = str[i++];
    if (j!=0)
      word[j] = '\setminus 0';
      if (!flg)
        flg = !flg;
        strcpy(mx, word);
        strcpy(mn, word);
      if (strlen(word) > strlen(mx))
        strcpy(mx, word);
      if (strlen(word) < strlen(mn))</pre>
        strcpy(mn, word);
      j = 0;
  printf("The largest word is '%s' \nand the smallest word is '%s' \nin the string:
'%s'.\n", mx, mn, str);
```