COUNING DIFFERENT TYPES OF CHARACTERS AND WORDS

Branch: CS

Class: B

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QUESTION: Implement File handling concept to Enter a word/docx file and perform following task.

1. Count and display the total number of characters
2. Count and display the total number of blank spaces.
3. Count and display the total number of punctuators (,.””,’).
4. Count and display the total number of articles used in the file.
5. Count and display the total number of following parts of speech that is
    - Total number of pronouns.
    - Total number of interrogative words.
    - Total number of adverbs.
6. Count the total number of uppercase and lowercase alphabets.
7. Count the total number of vowels and consonants.
8. Count the total number of total number of words that have at-least two vowels.
9. Count the total number of paragraphs.

Specific task Group Member-1 & 2

1. Count and replace total number of “is” with was in the file.
2. Count and replace total number of blank-space with “$” in the file.
3. Count and replace lowercase alphabets with uppercase

DESCRIPTION:

1. Header Files Used
    - #include<stdio.h>
    - #include<conio.h>

- #include<iostream>
- #include<string.h>

2. User Defined Functions Created
   - count_123()
     - To count number of characters, blank spaces and punctuation. ➲ Solves Question 1, 2 and 3.
   - count_4()
     - To count number of articles. ➲ Solves Question 4.
   - count_5()
     - To count number of pronouns, interrogative words and adverbs. ➲ Solves Question 5.
   - count_6()
     - To count number of Uppercase and Lowercase alphabets. ➲ Solves Question 6.
   - count_7()
     - To count number of vowels and consonants. ➲ Solves Question 7.
   - count_8()
     - To count number of words having at least 2 vowel. ➲ Solves Question 8.
   - count_9()
     - To count number of Paragraphs ➲ Solves Question 9.
   - st_1()
     - To replace “is” with “was” and count number of “is”. ➲ Solves Special Task 1.
   - st_2()
     - To replace “ ” with “$” and counting number of ” “. ➲ Solves Special Task 2.
   - st_3()
     - To replace lowercase character to uppercase character and counting number of lowercase character. ➲ Solves Special Task 3.
3. Main function
   - It takes input text from user and save it in file(“xyz.txt”) and calls all the function to count and replace the word according to the question.

CODE:

```
#include<stdio.h>

#include<conio.h>
```

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```
#include<iostream>
#include<string.h>

using namespace std;

/*================================================================================
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                                                    FUNCTION DECLARATIONS

================================================================================
==============*/

void count_123(); //counting character , blank space , punctuators
void count_4();   //counting artical void count_5();   //counting
pronouns , interrogatve , adverb void count_6();   //counting
uppercase and lowercase void count_7();   //counting vowels and
consontant void count_8();   //counting word with atleast 2
vowels

/*================================================================================
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                                                SPECIFIC TASK FUNCTION DECLARATIONS

================================================================================
=============*/

void st_1();        //changing 'is' to 'was' and counting no of is void
st_2();   //changing "space" to '$' and counting no of space void
st_3();   //changing 'lowwercase alphabet' to 'uppercase
alphabet'and counting no of lowwercase alphabet
```

COUNING DIFFERENT TYPES OF CHARACTERS AND WORDS


```
/*================================================================================
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                                                                MAIN FUNCTION

================================================================================
==============*/


int main()


{
        FILE *fp;
        int n , countpara=1;
char name[100];
//System(“cls”);
fp=fopen("D:\\xyz.txt","w");
        if (fp==NULL)
        {
                printf("File does not exist");
                return 0;
        }
        printf("Enter no of lines you want to enter : ");
        cin>>n;
        cout<<"=======================================E N T E R  Y O U R  T E X
T============================\n";
        //cout<<"1";
gets(name);     gets(name);
        if(strcmp(name,"\0")==0)        //count_9 counting Paragraph
        {
                countpara++;
```

```
        }
        fprintf(fp,"%s\n",name);
        for(int i=1 ; i<n ; ++i)
        {
                //cout<<i+1;
gets(name);
                if(strcmp(name,"\0")==0)
                {
                        countpara++;
                }
                fprintf(fp,"%s\n",name);
        }
        fclose(fp);     system("CLS");  cout<<"=========================S O L U T I O
N============================";
        count_123();
count_4();      count_5();
count_6();      count_7();
count_8();
        cout<<"\nNo of Paragraph are : "<<countpara;
cout<<"\n\n\t\t\tSpecific task\n\n";
        st_1();
st_2();  st_3(); //
Printing the content
of the Output file

        cout<<"\n\n\t\t\tOutput .txt file\n\n";
  char ch;
        fp=fopen("D:\\xyz.txt" , "r");
```

```
   while (1) {
ch = fgetc(fp);
if (ch == EOF) {
break;
      }
      printf("%c", ch);
   }
   fclose(fp);
          return 0;
}


/*================================================================================
================

                                                        FUNCTION DEFINATION

================================================================================
==============*/


void count_123()          //counting character , blank space , punctuators
{
          int countchar=0 , countspace=0 , countpunct=0;
          char ch;
FILE *fp;
          fp=fopen("D:\\xyz.txt","r");
while((ch=fgetc(fp))!=EOF)
          {
                    if(ch==' ')
                    {
                              countspace++;
```

```
                }
                else if(ch==39||ch==44||ch==34||ch==46)//39-' || 44-, || 34-" || 46-.
                {
                        countchar++;
countpunct++;
                }
                else if(ch=='\n')
                {

                }
                else
                {
                        countchar++;
                }
        }
        fclose(fp);
        cout<<"\nNo of Characters are : "<<countchar;
cout<<"\nNo of Spaces are : "<<countspace;      cout<<"\nNo of
Punction are : "<<countpunct;
}

void count_4() //counting artical
{
        char ch , word[20];
int i=0 , countartical=0; FILE
*fp;
```

```
        fp=fopen("D:\\xyz.txt","r");
while((ch=fgetc(fp))!=EOF)
        {
                if(ch==' ' || ch=='\0' || ch=='\n')
                {
                        word[i]='\0';
                        i=0;
                        //count=0;
                        if(strcmp(word, "an") == 0 || strcmp(word, "a") == 0)
                        {
                                countartical++;
                                //strcpy(word, "was");
                        }
                        //count=0;
                        //fprintf(ofp, "%s%c", word , ch);
                }
                else
                {
                        word[i]=ch;
                        ++i;
                }
        }
        fclose(fp);
        cout<<"\nNo of Artical are : "<<countartical;
}

void count_5() //counting pronouns , interrogatve , adverb
```

```
{
        int countpro=0 , countintro=0 , countadverb=0 , len=0;
        char pronous[24][5]={"I" , "i" , "He" , "he" , "Him" , "him" , "Her" , "her" , "It" , "it" , "Me" , "me" , "She" , "she" , "Them" , "them" , "They" , "they" , "Us" , "us" , "We" , "we" , "You" , "you"};
        char intro[16][7]={"What" , "what" , "Where" , "where" , "When" , "when" , "Why" , "why" , "Which" , "which" , "Who" , "who" , "Whose" , "whose" , "How" , "how"};
 //char adverb;  FILE *fp;
        fp=fopen("D:\\xyz.txt","r");
         if (fp==NULL)
   {
      printf("no such file.");
   }
        char word[100];
   while (fscanf(fp," %s ",word)==1)
   {
                for(int j=0 ; j<24 ; ++j)    //counting pronouns
                {
                        if(strcmp(pronous[j] , word)==0)
                        {
                                countpro++;
                        }
                }
                for(int j=0 ; j<16 ; ++j)    //counting interrogrative
                {
                        if(strcmp(intro[j] , word)==0)
                        {
                                countintro++;
                        }
```

```
                }
                len = strlen(word);
                if(word[len-1]=='y' && word[len-2]=='l') //counting adverb
                {
                        countadverb++;
                }
        }
        fclose(fp);
        cout<<"\nNo of Pronouns are : "<<countpro;
cout<<"\nNo of Interrogatives are : "<<countintro;
cout<<"\nNo of Adverbs are : "<<countadverb;
}

void count_6() //counting uppercase and lowercase
{
        int countupper=0 , countlower=0;
        char ch;
FILE *fp;
        fp=fopen("D:\\xyz.txt","r");
while((ch=fgetc(fp))!=EOF)
        {
                if(ch>=97&&ch<=122)
                {
                        countlower++;
                }
                else if(ch>=65&&ch<=90)
                {
```

```
                countupper++;
            }
        }
        fclose(fp);
        cout<<"\nNo of Uppercase Alphabet are : "<<countupper;
cout<<"\nNo of Lowercase Alphabet are : "<<countlower;
}

void count_7() //counting vowels and consontant
{
        int countvowel=0 , countcons=0;
        char ch;
FILE *fp;
        fp=fopen("D:\\xyz.txt","r");
while((ch=fgetc(fp))!=EOF)
        {
            if((ch>=97&&ch<=122) || (ch>=65&&ch<=90))
            {

         if(ch=='a'||ch=='e'||ch=='i'||ch=='o'||ch=='u'||ch=='A'||ch=='E'||ch=='I'||ch=='O'||ch=='U
')
                {
                    countvowel++;
                }
                else
                {
                    countcons++;
                }
```

```
                }
        }
        fclose(fp);
        cout<<"\nNo of vowels are : "<<countvowel;
cout<<"\nNo of consonants are : "<<countcons;

}

void count_8() //counting word with atleast 2 vowels
{
        char ch , word[20];     int i=0 ,
countword=0 , count=0;          FILE
*fp;
        fp=fopen("D:\\xyz.txt","r");
while((ch=fgetc(fp))!=EOF)
        {
                if(ch==' ' || ch=='\0' || ch=='\n')
                {
                        word[i]='\0';
                        i=0;
                        if(count>=2)
                        {
                                countword++;
                                //strcpy(word, "was");
                        }
                        count=0;
                        //fprintf(ofp, "%s%c", word , ch);
```

```
                }
                else
                {
                        word[i]=ch;
                        ++i;

        if(ch=='a'||ch=='e'||ch=='i'||ch=='o'||ch=='u'||ch=='A'||ch=='E'||ch=='I'||ch=='O'||ch=='U
')
                        {
                                count++;
                        }
                }
        }
        fclose(fp);
        cout<<"\nNo of word with more than two vowel are : "<<countword;
}

/*================================================================================
================

                                        SPECIFIC TASK FUNCTION DEFINATION

================================================================================
==============*/

void st_1()     //changing 'is' to 'was' and counting no of is
{
        FILE *ifp, *ofp;
   char ch, word[100];
        int countis=0 , i=0;
```

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```
   ifp = fopen("D:\\xyz.txt", "r");
ofp = fopen("D:\\change.txt", "w");
if (ifp == NULL || ofp == NULL) {
printf("Can't open file.");
      exit(0);
   }
   // comparing word with file
//rewind(ifp);    while((ch=fgetc(ifp))!=EOF)
          {
                    if(ch==' ' || ch=='\0' || ch=='\n')
                    {
                              word[i]='\0';
                              i=0;
                              //count=0;
                              if(strcmp(word, "is") == 0)
                              {
                                        countis++;
                                        strcpy(word, "was");
                              }
                              fprintf(ofp, "%s%c", word , ch);
                    }
                    else
                    {
                              word[i]=ch;
                              ++i;
                    }
          }
```

```
   fclose(ifp);
fclose(ofp);
   rename("D:\\change.txt", "D:\\temp.txt");
remove("D:\\change.txt");    remove("D:\\xyz.txt");
rename("D:\\temp.txt", "D:\\xyz.txt");
remove("D:\\temp.txt");           cout<<"\nNo of is
are : "<<countis;
}

void st_2()        //changing "space" to '$' and counting no of space
{
            FILE *ifp, *ofp;
   char ch;    int countspace=0;    ifp
= fopen("D:\\xyz.txt", "r");    ofp =
fopen("D:\\change.txt", "w");    if
(ifp == NULL || ofp == NULL) {
printf("Can't open file.");       exit(0);
   }
   // comparing word with file
   //rewind(ifp);
while((ch=fgetc(ifp))!=EOF)
            {
    //   fscanf(ifp, "%c", ch);

      if (ch==32){
                              countspace++;
         // for deleting the word
         ch=36;
```

```
    }

    // In last loop it runs twice
fprintf(ofp, "%c", ch);
  }
  fclose(ifp);    fclose(ofp);
rename("D:\\change.txt", "D:\\temp.txt");
remove("D:\\change.txt");
remove("D:\\xyz.txt");
          rename("D:\\temp.txt", "D:\\xyz.txt");
remove("D:\\temp.txt");          cout<<"\nNo of
space are : "<<countspace;
}

void st_3()       //changing 'lowwercase alphabet' to 'uppercase alphabet'and counting no of
lowwercase alphabet
{
          FILE *ifp, *ofp;
  char ch;    int lowercase=0;    ifp =
fopen("D:\\xyz.txt", "r");    ofp =
fopen("D:\\change.txt", "w");    if
(ifp == NULL || ofp == NULL) {
printf("Can't open file.");       exit(0);
  }
  // comparing word with file
  //rewind(ifp);
while((ch=fgetc(ifp))!=EOF)
          {
```

```
    //   fscanf(ifp, "%c", ch);


       if (ch>=97&&ch<=122){
                                    lowercase++;
          // for deleting the word
ch -=32;
       }


       // In last loop it runs twice
fprintf(ofp, "%c", ch);
   }
   fclose(ifp);
fclose(ofp);
   rename("D:\\change.txt", "D:\\temp.txt");
remove("D:\\change.txt");     remove("D:\\xyz.txt");
rename("D:\\temp.txt", "D:\\xyz.txt");
remove("D:\\temp.txt");            cout<<"\nNo of
lowercases are : "<<lowercase;
}
```

OUTPUT SCREENSHOT:

COUNING DIFFERENT TYPES OF CHARACTERS AND WORDS