Lab Report #11

Course Code:

CSC141

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Lab # 11 Working with Strings in C

In-Lab Task 1:

Write a C Program that does the following:

1. Declares a C-String called '**m1**' and initializes it with text "Programming is great fun!".
2. Uses C-function puts() to print this string.
3. Asks the user to enter a String named '**m2**' (**Hint**: Use gets() function for this.)
4. Concatenates the two strings and stores the result in '**m3**'.

For example if the user enters **m2** as "Not Really!", **m3** should be "Programming is great fun! Not really!"
5. Inserts the user entered array (**m2**) into **m1** after "Programming is ..."

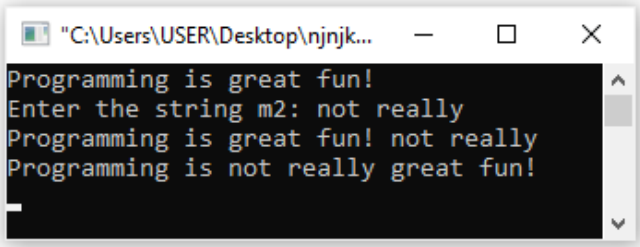
For the above example, the resultant String would become "Programming is Not really! great fun!"

PROGRAM AND OUTPUT:

```
#include<stdio.h>

int main()

{

   char m1[]="TODAY IS GREAT DAY";

   char m2[50];

   char m3[100]="";

   char mTemp[100]="";

   char m1LeftPart[100]="";

   char m1RightPart[100]="";

   int i,letterCounter=0;

   puts(m1);
```

```
    printf("Enter the string m2:");
    gets(m2);
    strcat(m3,m1);
    strcat(m3," ");
    strcat(m3,m2);

      puts(m3);
      for(i=0; i<18; i++)
      {
         m1LeftPart[i]=m1[i];
      }
      m1RightPart[18]='\0' ;
      for(i=18;i<strlen(m1);i++)
      {
         m1RightPart[letterCounter]=m1[i];
         letterCounter++;
      }
      m1RightPart[letterCounter]='\0';
      strcat(m1LeftPart,m2);
      strcat(m1LeftPart,m1RightPart);
      strcpy(m1,m1LeftPart);
      puts(m1);
      getchar();
      getchar();
}
```

```c
int main ()
{
    char ml[]="Programming is great fun!";
    char m2[50];
    char m3[100]="";
    char mTemp[100]="";
    char mlLeftPart[100]="";
    char mlRightPart[100]="";
    int i,letterCounter=0;
    puts(ml);
    printf("Enter the string m2: ");
    gets(m2);
    strcat(m3,ml);
    strcat(m3," ");
    strcat(m3,m2);
    puts(m3);
    for(i=0;i<15;i++){
        mlLeftPart[i]=ml[i];
    }
    mlRightPart[14]='\0';
    for(i=14;i<strlen(ml);i++){
        mlRightPart[letterCounter]=ml[i];
        letterCounter++;
        }
    mlRightPart[letterCounter]='\0';
    strcat(mlLeftPart,m2);
    strcat(mlLeftPart,mlRightPart);
    strcpy(ml,mlLeftPart);
    puts(ml);
    getchar();
    getchar();
}
```



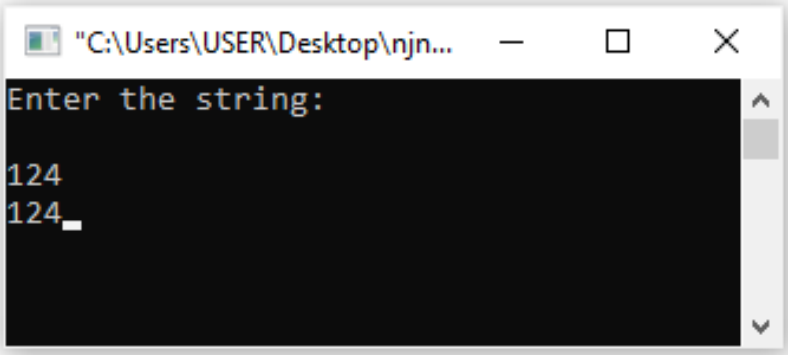
In-Lab Task 2 a:

Write a program that converts a string like "124" to an integer 124.

PROGRAM AND OUTPUTS:

```
#include <stdio.h>
#include<conio.h>
#include<string.h>
void main()
{
 char str[80];
  int i=0;

    printf("Enter the string:\n\n");
    gets(str);

    i=atoi(str);
    printf("%d",i);

    getch();
}
```

```c
#include<stdio.h>
#include<conio.h>
#include<string.h>

void main() {

char str[100];
int i;

printf("Enter the string: \n\n");

gets(str);

i=atoi(str);  /* 'atoi' is a function to convert a string into an integer */

printf("%d",i);

getch();

}
```



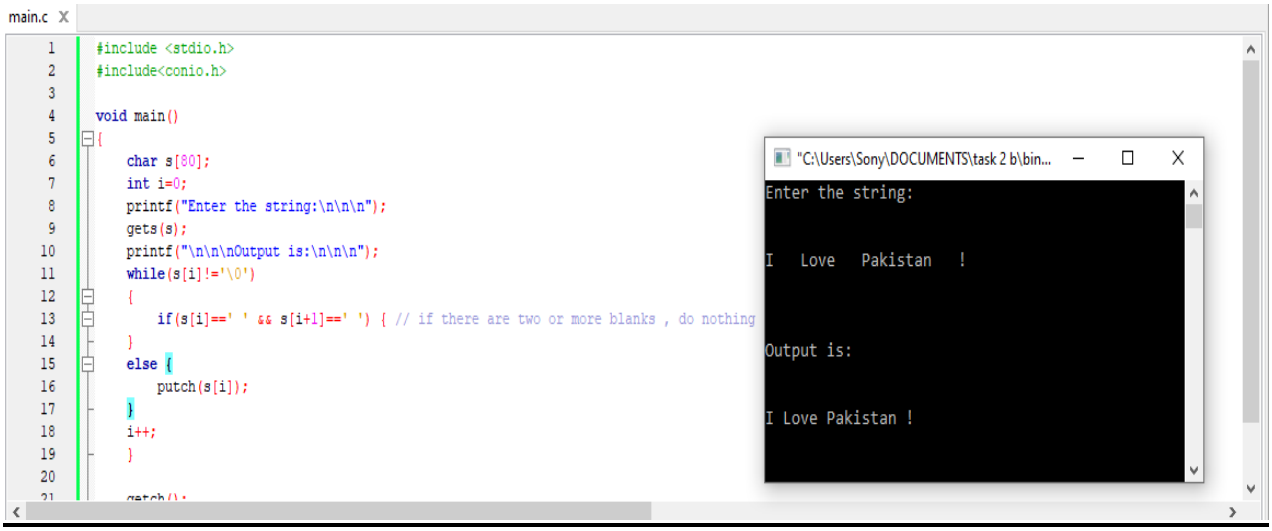
In-Lab Task 2 b:

Write a program that replaces two or more consecutive blanks in a string by a single blank. For example, if the input is
“Grim return to the planet of apes!!”
the output should be
“Grim return to the planet of apes!!”

PROGRAM AND OUTPUT:

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

void main()
{
   char s[80];
   int i=0;
   printf("Enter the string:\n\n\n");
   gets(s);
   printf("\n\n\nOutput is:\n\n\n");
   while(s[i]!='\0')
   {
      if(s[i]==' ' && s[i+1]==' ') { // if there are two or more blanks , do nothing
   }
   else {
      putch(s[i]);
```

```
    }
    i++;
    }

    getch();
}
```


main.c
#include <stdio.h>
#include<conio.h>
void main()
{
char s[80];
int i=0;
printf("Enter the string:\n\n\n");
gets(s);
printf("\n\n\nOutput is:\n\n\n");
while(s[i]!='\0')
{
if(s[i]==' ' && s[i+1]==' ') { // if there are two or more blanks , do nothing
}
else {
putch(s[i]);
}
i++;
}
"C:\Users\Sony\DOCUMENTS\task 2 b\bin...
Enter the string:
I Love Pakistan !
Output is:
I Love Pakistan !

Critical Analysis / Conclusion

In this lab I learnt the usage of strings using different functions which were defined within the string.h library and I Learnt how to convert strings to an integers using atoi() function.

Moreover I also learnt how to reduce the numbers of spaces within a string to a single space between each words. Overall this Lab was full of new informations and knowledge about programming.

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