***Assignment No. 3b***

5. Implement following operations on string with pointers

I. Length II. Palindrome

III. String Comparison IV. Copy

V. Reverse VI. Substring

Roll No.:66

Batch: - S3

#include <stdio.h>

#include<ctype.h>

#include<stdlib.h>

void reverse(char \*a);

int palindrome(char \*a);

void copy(char \*b,char \*a);

int compare(char \*a,char \*b);

void search(char \*a,char \*b);

int main()

{ char a[50],b[50];

int result,ch;

do

{printf("\n\*\*\*MENU\*\*\*\*");

printf("\n1.Reverse");

printf("\n2.Palindrome");

printf("\n3.Copy");

printf("\n4.String Comparison");

printf("\n5.String Searching(substring)");

printf("\n6.Quit");

printf("\n\nEnter Your Choice:");

scanf("%d",&ch);

switch(ch)

{

case 1: printf("Enter a String:");

scanf("%s",a);

reverse(a);

printf("\n Result=%s",a);

break;

case 2: printf("\nEnter a String:");

scanf("%s",a);

result=palindrome(a);

if(result==0)

printf("\n Not a palindrome");

else

printf("\n A palindrome");

break;

case 3: printf("\n Enter a String:");

scanf("%s",a);

copy(b,a);

printf("\n Result=%s",b);

break;

case 4: printf("\nEnter 1st string:");

scanf("%s",a);

printf("\nEnter 2nd string:");

scanf("%s",b);

result=compare(a,b);

if(result==0)

printf("\nBoth are same.");

else

if(result>0)

printf("\n 1st>2nd");

else

printf("\n 1st<2nd");

break;

case 5: printf("\nEnter 1st string:");

scanf("%s",a);

printf("\nEnter 2nd string:");

scanf("%s",b);

search(a,b);

break;

case 6: exit(0);

default: printf("Invalid choice");

break;

}

}while(ch!=6);

}

void reverse(char \*a)

{ char \*p,\*q;

char temp;

p=q=a;

while(\*q!='\0')

q++;

q--;

while(p<q)

{

temp=\*p;

\*p=\*q;

\*q=temp;

p++;q--;

}

}

int palindrome(char \*a)

{

char \*p,\*q;

p=q=a;

while(\*q!='\0')

q++;

q--;

while(p<q)

{

if(\*p!=\*q)

return(0);

p++;q--;

}

return(1);

}

void copy(char \*b,char \*a)

{

while(\*a!='\0')

{

\*b=\*a;

a++;b++;

}

\*b='\0';

}

int compare(char \*a,char \*b)

{

while(\*a!='\0')

{

if(\*a > \*b)

return(1);

if(\*a < \*b)

return(-1);

a++;b++;

}

return(0);

}

void search(char \*a ,char \*b)

{

int lena,lenb;

char \*i,\*j,\*k;

for(lena=0;\*(a+lena)!='\0';lena++);

for(lenb=0;\*(b+lenb)!='\0';lenb++);

for(i=a;i<=a+lena-lenb+1;i++)

{

k=i;

for(j=b;\*k==\*j&& \*j!='\0';j++,k++);

if(\*j=='\0')

printf("\nString found at location:%ld",i-a+1);

}

}

--------------OUTPUT-------------

\*\*\*MENU\*\*\*\*

1.Reverse

2.Palindrome

3.Copy

4.String Comparison

5.String Searching(substring)

6.Quit

Enter Your Choice:1

Enter a String:Abhishek

Result=kehsihbA

\*\*\*MENU\*\*\*\*

1.Reverse

2.Palindrome

3.Copy

4.String Comparison

5.String Searching(substring)

6.Quit

Enter Your Choice:2

Enter a String:Ashwin

Not a palindrome

\*\*\*MENU\*\*\*\*

1.Reverse

2.Palindrome

3.Copy

4.String Comparison

5.String Searching(substring)

6.Quit

Enter Your Choice:3

Enter a String:Pankaj

Result=Pankaj

\*\*\*MENU\*\*\*\*

1.Reverse

2.Palindrome

3.Copy

4.String Comparison

5.String Searching(substring)

6.Quit

Enter Your Choice:4

Enter 1st string:Ashwin

Enter 2nd string:Pankaj

1st<2nd

\*\*\*MENU\*\*\*\*

1.Reverse

2.Palindrome

3.Copy

4.String Comparison

5.String Searching(substring)

6.Quit

Enter Your Choice:5

Enter 1st string:Ashwin

Enter 2nd string:Naik

\*\*\*MENU\*\*\*\*

1.Reverse

2.Palindrome

3.Copy

4.String Comparison

5.String Searching(substring)

6.Quit

Enter Your Choice:6