Assignment 8 Ritesh

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Read from a terminal using scanf function and print using printf function.
Program:-

```
#include
#include
int main()
{
char n[15];
printf("enter input string : ");
scanf("%s",n);
printf("entered input is: \n");
printf("%s\n",n);
return 0;
}
```

Output:-
enter input string : hello
entered input is:
hello

read a lines of text from a terminal using fgets function and print using puts function.

Program:-

```
#include
#include
int main()
{
char n[15];
printf("enter input string : ");
fgets(n,sizeof(n),stdin);
printf("entered input is: \n");
puts(n);
return 0;
}
```

Output:-

```
enter input string : hey c
entered input is:
hey c
```

3. convert
a. Upper case to Lower case
b. Lower case to Upper case
c. Toggle case
d. Sentence case

Program:-
a. Upper case to Lower case

```
#include
#include
int main() {
char a[15];
int i;
printf("enter your string in upper case : ");
scanf("%s",a);
for(i=0;i<=strlen(a);i++)
{
if (a[i]>=65&&a[i]<=90)
```

```
a[i]=a[i]+32;
}
printf("lowercase is : %s",a);
return 0;
}
```

OUTPUT:-

```
enter your string in upper case : HELLO
lowercase is : hello
```

b. Lower case to Upper case

Program:-

```
#include
#include
int main() {
char a[15];
int i;
printf("enter your string in LOWER case : ");
scanf("%s",a);
for(i=0;i<=strlen(a);i++)
{
if (a[i]>=95&&a[i]<=122)
a[i]=a[i]-32;
}
printf("UPPERcase is : %s",a);
return 0;
}
```

Output:-

```
enter your string in LOWER case : hello
UPPERcase is : HELLO
```

c. Toggle case
Program:-

```
#include
#include
int main() {
char a[15];
int i;
printf("enter your string: ");
fgets(a,sizeof(a),stdin);
for(i=0;i<=strlen(a);i++)
{
if (a[i]>=65&&a[i]<=90)
a[i]=a[i]+32;
else if (a[i]>=97&&a[i]<=122)
a[i]=a[i]-32;
}
printf("in toggle case is : %s",a);
return 0;
}
```

Output:-

```
enter your string in lower case : HEllo
upper case is : heLLO
```

d. Sentence case

Program:-

```
#include
#include
int main()
{
char str[30],i;

//READ A STRING

printf("Enter A String: ");
```

```
fgets(str,sizeof(str),stdin);
for(i=0;str[i]!='\0';i++)
{
if((str[i]>=65 && str[i]<=90) ||(str[i]>=97&&str[i]<=122))
{
if(i==0 || str[i-1]==' ')
{
if(str[i]>=97 && str[i]<=122);
{
str[i]=str[i]-32;
}
}
else
{
if(str[i]>=65 && str[i]<=90 )
{
str[i]=str[i]+32;
}
}
}
}

printf(" \n sentence case is : ");
puts(str);
return 0;
}
```

Output:-

Enter A String: how are you?

sentence case is : How Are You?

perform String Concatenation (With and Without String Handling Functions).
Program:-(with)

```
#include
#include
int main() {
char a[10]={'h','e','l','l','o','\0'};
char b[5]= {'c','\0'};
strcat(a,b);
puts(a);
return 0;
}
```

Output:-

helloc

Program:-(without)

```
#include

int main()
{
char str1[15],str2[5];
int i=0,j=0;
printf("\nEnter First String: ");
gets(str1);
printf("\nEnter Second String: ");
gets(str2);
while(str1[i]!='\0')
i++;
while(str2[j]!='\0')
{
str1[i]=str2[j];
j++;
i++;
}
str1[i]='\0';
printf("Concatenated String is %s",str1);
return 0;
}
```

Output:-

```
Enter First String: hello
Enter Second String: c
Concatenated String is helloc
```

perform String Reversal (With and Without String Handling Functions).

Program:-(with)

```
#include
#include
int main()
{
char str[15] = "helloc";

printf("The given string is =%s\n",str);

printf("After reversing string is =%s",strrev(str));

return 0;
```

Output:-

```
After reversing string is =colleh
```

Program:-(without)

```
include
#include
int main()
```

```
{
char str[15] = "helloc";
int len,i;

printf("The given string is =%s\n",str);
len=strlen(str);
printf("After reversing the string is \n");
for(i=len-1;i>=0;i--)
{
printf("%c",str[i]);
}
return 0;
}
```

Output:-
The given string is =helloc
After reversing the string is
colleh

perform Substring Extraction (With and Without String Handling Functions).

Program:-(with)

```
#include
#include
void main()
{
char a[25]="i am a good boy in class.";
char *sub;
sub=strstr(a,"good");
printf("substring is : %s",sub);0

}
```

Output:-
substring is : good boy in class.

Program:-(without)

```
#include

int main()
{
char str[100], sub[100];
int pos, len, c = 0;

printf("Input a string: ");
gets(str);

printf("Enter the starting position of substring: ");
scanf("%d", &pos);
printf("Enter the length of substring: ");
scanf("%d",&len);

while (c < len) {
```

```
sub[c] = str[pos+c-1];
c++;
}
sub[c] = '\0';

printf("Required substring is \"%s\"\n", sub);

return 0;
}
```

Output:-

```
Input a string: he is good doctor in our locality
Enter the starting position of substring: 5
Enter the length of substring: 15
Required substring is "s good doctor i"
```

7. copy one string into another and count the no of elements copied. (With and Without String Handling Functions).
Program:-(with)

```
#include
#include
int main() {
char a[15]="hello c";
char b[15];
int i,c=0;
strcpy(b,a);
for(i=0;b[i]!='\0';i++)
{
c++;
}
printf("after copying string is : %s",b);
printf("\nno of element copied is %d",c);
return 0;
}
```

Output:-

```
after copying string is : hello c
no of element copied is 7
```

Program:-(without)

```
#include
#include
int main()
{
char s1[15],s2[20];
int i,c=0;

printf("input the string : ");
gets(s1);
for(i=0;s1[i]!='\0';i++) // or for(i=0;s1[i];i++)
{
s2[i]=s1[i];
c++;
}
s2[i]='\0';
printf("original string s1='%s'\n",s1);
printf("copied string s2='%s'",s2);
printf("\nelement copied : %d",c);
return 0;
}
```

Output:-

```
input the string : hello c
original string s1='hello c'
copied string s2='hello c'
element copied : 7
```

8. read a string and prints if it is a palindrome or not.

Program:-

```
#include
#include
int main()
{
char str[20];
int i, len;
int c= 0;
printf("Enter a string: ");
scanf("%s", str);

len = strlen(str);
```

```
for(i=0;i < len ;i++)
{
if(str[i] != str[len-i-1])
{
c=1;
break;
}
}

if (c)
{
printf("%s is not a palindrome", str);
}
else
{
printf("%s is a palindrome", str);
}
return 0;
}
```

Output:-
Enter a string: guug
is a palindrome

9. read a line of text and count all occurrences of particular word.
Program:-

```
#include
#include
int main()
{
char s[200],w[200];
int n,a[200],i,j,k=0,l,found=0,t=0;

printf("input the string : ");
gets(s);
printf("Enter word for serching inside the string: ");
gets(w);
for(i=0;s[i];i++)
{
if(s[i]==' ')
{
a[k++]=i;
```

```
}
}
a[k++]=i;
j=0;
for(i=0;i {
n=a[i]-j;
if(n==strlen(w))
{
t=0;
for(l=0;w[l];l++)
{
if(s[l+j]==w[l])
{
t++;
}
}
if(t==strlen(w))
{
found++;
}
}
j=a[i]+1;
}
printf(" your word '%s' is occurred %d times in your inputed string.",w,found);


}
```

Output:-

```
input the string : i am going i am eating i am playing i am sleeping
Enter word for serching inside the string: am
your word 'am' is occurred 4 times in your inputed string.
```

10. read a string and rewrite it in the alphabetical order.
Program:-

```
#include
#include
int main()
{
char str[100],temp;
int i,j;
printf("Enter the string: ");
gets(str);
printf("%s in alphabetical order is: ",str);
for(i=0;str[i];i++)
{
for(j=i+1;str[j];j++)
{
if(str[j] {
temp=str[j];
str[j]=str[i];
str[i]=temp;
}
}
}
printf("%s\n",str);
return 0;
}
```

Output:-

```
Enter the string: zyxw
in alphabetical order is: wxyz
```

11. Print the Words Ending with Letter S

Program:-

```
#include
#include
void main()
{
char str[50];
int i, t, j, len;
printf("Enter a string : ");
fgets(str,sizeof(str),stdin);
len = strlen(str);
str[len] = ' ';
printf("words end with s : \n");
for (t = 0,i = 0; i {
if ((str[i]==' ') && (str[i-1] == 's'))
{
for (j = t; j < i; j++)
printf("%c", str[j]);
t = i + 1;
printf("\n");
}
else
{
if (str[i] == ' ')
{
t = i + 1;
}
}
}
}
```

Output:-

```
Enter a string : cats mats rats pat
words end with s :
cats
mats
rats
```

12. Delete All Repeated Words in the line of text.

Program:-

```
#include
#include
int main()
{
char str[50];
int i, j, k;

printf("\ninput a String : ");
```

```
gets(str);

for(i = 0; i < strlen(str); i++)
{
for(j = i + 1; str[j] != '\0'; j++)
{
if(str[j] == str[i])
{
for(k = j; str[k] != '\0'; k++)
{
str[k] = str[k + 1];
}
}
}
}
printf("\n After Removing Duplicate Words = %s ", str);

return 0;
}
```

Output:-

```
input a String :
itally
After Removing Duplicate Words = italy
```
