1. Write a program to find the length of a string without using strlen().

IPO:

Input: string s

Process: using while loop incrementing the value of i for every letter

Output: length of the string

Code:

#include<stdio.h>

void main()

{

char s[10] = "hello", i=0;

while(s[i] != '\0')

i++;

printf("The length of the string is %d", i);

}

Output:



1. Write a program to copy one string to another.

IPO:

Input: string a

Process: using for loop copying element form a to b

Output: copying the string

Code:

#include<stdio.h>

void main()

{

char a[10] = "hello", b[10], i;

for( i = 0 ; i<10;i++)

b[i] = a[i];

printf(“The copied string is “);

printf("%s",b);

}

Output:



1. Write a program to concatenate two strings.

IPO:  
Input: two strings a and b

Process: using for loop add each element of a and b to c

Output: concatenate two strings

Code:

#include<stdio.h>

void main()

{

char a[3] = "hi ",b[3] = "bye", c[6],i,j = 0;

for(i = 0; i < 6; i++)

{

if(i < 3)

c[i] = a[i];

else

{

c[i] = b[j];

j++;

}

}

for(i = 0; i < 6; i++)

printf("%c",c[i]);

}

Output:



1. Write a program to compare two strings.

IPO:

Input: two strings string1 and string 2

Process: using for loop compare each element of the two string

Output: compare the two strings

Code:

#include <stdio.h>

void main()

{

char string1[5] = "hello";

char string2[5] = "hello";

int n= 5 , result = 0;

for(int i = 0 ; i < n ; i++)

{

result = string1[i] - string2[i];

}

if (result == 0)

printf("The strings are equal");

else

printf("The strings are not equal");

}

Output:



1. Write a program to count vowels and consonants in a string.

IPO:

Input: string say a

Process: using for loop compare each element of the string with the vowels and increment the ecount

Else increment the ccount

Output: count the number of vowels and consonants

Code:

#include<stdio.h>

void main()

{

char a[5] = "hello" ,ecount = 0, ccount = 0,i;

for ( i = 0; i < 5 ;i++)

{

char c = a[i];

if(c == 'a' || c == 'e' || c == 'o' || c=='i' || c == 'u')

ecount++;

else

ccount++;

}

printf("Number of vowels = %d\nNumber of consonants = %d", ecount,ccount);

}

Output:



1. Write a program to convert lowercase to uppercase and vice versa

IPO:

Input: string say a

Process: using for loop convert the lowercase letter to uppercase using ASCII value and uppercase to lower case

Output: convert lowercase to uppercase

#include<stdio.h>

void main()

{

char a[5] = "Hello", i;

for(i=0; i < 5 ; i++)

{

if(a[i] >= 'a' && a[i] <= 'z')

a[i]=a[i]-32;

else

a[i] = a[i] +32;

}

for (i = 0 ; i < 5 ; i++)

printf("%c",a[i]);

}

Output:



1. Write a program to check if a string is palindrome.

IPO  
Input: string say a

Process: using for loop reverse the string a and store it b and check whether the two are equal

Output: Check whether the string is palindrome

Code:

#include<stdio.h>

void main()

{

char a[5] = "hello", b[5], i, flag = 0;

for( i = 0; i < 5 ;i++)

b[i] = a[4 - i];

for( i = 0; i < 5 ;i++)

{

if(b[i] !=a[i])

{

flag = 1;

break;

}

}

if(flag == 0)

printf("palindrome");

else

printf("not a palindrome");

}

Code:



1. Write a program to reverse a string.

IPO

Input: string say a

Process: using for loop reverse the string a and store it in b

Output: reverse the string a

#include<stdio.h>

void main()

{

char a[5] = "hello", b[5], i;

for(i = 0; i < 5 ; i++)

b[i] = a[4 - i];

for(i=0; i < 5; i++)

printf("%c",b[i]);

}

Output:



1. Write a program to count words in a string.

IPO

Input: string say a

Process: using for loop count the number of spaces in the string by incrementing the value of count and print the number of words , as count denotes the number of words

Output: to count the number of words

Code:

#include<stdio.h>

void main()

{

char a[25] = "I am learning C program", count = 1, i;

for( i = 0; i < 25 ;i++)

{

if(a[i] ==’ ‘)

count++;

}

printf("Number of words %d", count+1);

}

Output:



1. Write a program to find the frequency of each character in a string.

IPO:

Input: string say a

Process: using for loop calculating the frequency of each character in the string , simultaneously checking whether the character is already counted

Output:frequency of each character in the string

Code:

#include<stdio.h>

void main()

{

char a[10] = "abcdabcdee";

int i, j;

for(i = 0; i < 10 ; i++)

{

int c = 0;

for(j=0;j<i; j++)

{

if(a[i] == a[j])

{

c = 1;

break;

}

}

if(c == 1)

continue;

int count = 1;

for(j=i+1; j < 10 ;j++)

{

if(a[i] == a[j])

count++;

}

printf("%c - %d times\n", a[i], count);

}

}

Output:

