String(স্টিং)

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16. Concate a string without using concate function.

17. C program to encryptand decrypt a string(এনক্রিপশন এন্ড ডিক্রিপশন)

1(1) - Print using string.(স্ট্রিং এর মাধ্যমে প্রিন্ট করা)

Output:

Golam Kibria

#include <stdio.h>

int main()

{

char ch[] = "Golam Kibria";

/\*char ch[] = "Golam \

kibria"; \*/

printf("%s\n", ch);

}

1(2) – Print string from the user.

Output:

Enter your full name Golam kibria

Full name is = Golam kibria

#include <stdio.h>

int main()

{

char ch[20];

printf("Enter your full name ");

gets(ch);

printf("Full name is = %s\n", ch);

}

2(1) - Display string character wise

Output:

k

i

b

r

i

a

#include <stdio.h>

int main()

{

char ch[] = "kibria";

int i = 0;

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

{

printf("%c\n", ch[i]);

i++;

}

}

2(2) - Display string character wise

Output:

k

i

b

r

i

a

#include <stdio.h>

int main()

{

char ch[] = "kibria";

int length, i;

length = strlen(ch);

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

{

printf("%c\n", ch[i]);

}

}

3(1)- Find a string length using strlen() function.

Output:

Length is = 6

#include <stdio.h>

int main()

{

char ch[10] = "kibria";

//scanf("%s", &ch);

//printf("The string is = %s\n", ch);

int length = strlen(ch);

printf("Length is = %d\n", length);

}

3(2)- Find a string length without using strlen() function.

Output:

Length is = 6

#include <stdio.h>

int main()

{

char ch[] = "kibria";

int i = 0, length = 0;

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

{

i++;

length++;

}

printf("Length is = %d\n", length);

(০ ততম ইনডেক্স মানে হলো ১ তম লেন্থ)

}

4(1)- Copy a string using strcpy() function.

Output:

Main string is = kibria

Copy string is = kibria

#include <stdio.h>

int main()

{

char ch1[20] = "kibria";

char ch2[20];

strcpy(ch2, ch1);

printf("Main string is = %s\n", ch1);

printf("Copy string is = %s\n", ch2);

}

4(2)- Copy a string using strcpy() function from the user.

Output:

Main string is = Golam kibria

Copy string is = Golam kibria

#include <stdio.h>

int main()

{

char ch1[20];

char ch2[20];

printf("Main string is = ");

//scanf("%s", &ch1);

gets(ch1);

strcpy(ch2, ch1);

printf("Copy string is = %s\n", ch2);

}

5(1) - Concat string using strcat() function.

Output:

Character is = My name is Golam kibria

#include <stdio.h>

int main()

{

char ch1[20] = "My name is ";

char ch2[20] = "Golam kibria";

strcat(ch1, ch2);

printf("Character is = %s\n", ch1);

}

5(2) - Concat string using strcat() function.

Output:

Character is = My name is Golam kibria

#include <stdio.h>

int main()

{

char ch1[20] = "My name is ";

strcat(ch1, "Golam kibria");

printf("Character is = %s\n", ch1);

}

5(3)- Concat string without strcat() function.

Output:

Character is = Golam kibria

#include <stdio.h>

int main()

{

char ch1[50] = "Golam ";

char ch2[] = "kibria";

int i = 0, length = 0, j = 0;

while (ch1[i] != '\0')

{

i++;

length++;

}

while (ch2[j] != '\0')

{

ch1[length + j] = ch2[j];

j++;

}

//ch1 এর ৫তম ইনডেক্সে বসবে ch2 এর ০তম ইনডেক্স এর মান

printf("Character is = %s\n", ch1);

}

6. Comparing a string using strcmp() function.

Output:

kibria

kibria

ch1 = kibria

ch2 = kibria

String are equal

#include <stdio.h>

int main()

{

char ch1[10]; // = "kibria";

char ch2[10]; // = "kibria";

scanf("%s %s", &ch1, &ch2);

printf("ch1 = %s\nch2 = %s\n", ch1, ch2);

int d = strcmp(ch1, ch2);

if (d == 0)

printf("String are equal\n");

else

printf("Strings are not equal\n");

}

7(1). Reverse a string using strrev() function.

Output:

Character is = kibria

Reverse is = airbik

#include <stdio.h>

int main()

{

char ch[] = "kibria";

printf("Character is = %s\n", ch);

strrev(ch);

printf("Reverse is = %s\n", ch);

}

7(2). Reverse a string using strrev() function form the user.

Output:

Character is = golam kibria

Reverse is = airbik malog

#include <stdio.h>

int main()

{

char ch[10];

printf("Character is = ");

gets(ch);

strrev(ch);

printf("Reverse is = %s\n", ch);

}

7(3). Reverse a string without strrev() function.

Output:

Character is = kibria

Reverse is = airbik

#include <stdio.h>

int main()

{

char ch1[20] = "kibria";

char ch2[20];

int i = 0, length = 0, j;

//i and length for ch1 , j for ch2

while (ch1[i] != '\0')

{

i++;

length++;

}

for (j = 0, i = length - 1; i >= 0; i--, j++)

{

ch2[j] = ch1[i];

}

ch2[j] = '\0';

printf("Character is = %s\n", ch1);

printf("Reverse is = %s\n", ch2);

}

8. String swapping(এক স্ট্রিং এর উপাদান অন্য স্ট্রিং এ কপি করা)

Output:

Before swapping :

ch1 = Bangladesh

ch2 = Canada

After swapping :

ch1 = Canada

ch2 = Bangladesh

#include <stdio.h>

int main()

{

char ch1[20] = "Bangladesh";

char ch2[20] = "Canada";

char temp[20];

printf("Before swapping : \n");

printf("ch1 = %s\n", ch1);

printf("ch2 = %s\n", ch2);

strcpy(temp, ch1);

strcpy(ch1, ch2);

strcpy(ch2, temp);

printf("After swapping : \n");

printf("ch1 = %s\n", ch1);

printf("ch2 = %s\n", ch2);

}

9. Checking a string palindrome or not.

#include <stdio.h>

int main()

{

char ch1[20] = "kibria";

char ch2[20];

int i = 0, length = 0, j;

//i and length for ch1 , j for ch2

//printf("Enter a string = ");

//scanf("%s", &ch1);

while (ch1[i] != '\0')

{

i++;

length++;

}

for (j = 0, i = length - 1; i >= 0; i--, j++)

{

ch2[j] = ch1[i];

}

ch2[j] = '\0';

printf("Entered string is = %s\n", ch1);

printf("Reverse string is = %s\n", ch2);

int d = strcmp(ch1, ch2);

//সমান হলে d=0 হবে। কারন মাইনাস করলে 0 ই হবে

if (d == 0)

printf("String is palindrome\n");

else

printf("String is not palindrome\n");

}

Output:

Entered string is = kibria

Reverse string is = airbik

String is not palindrome

10(1) – strupr()

#include <stdio.h>

int main()

{

char ch[] = "kibria";

strupr(ch);

printf("Character is = %s\n", ch);

}

Output:

Character is = KIBRIA

#include <stdio.h>

int main()

{

char ch[10];

gets(ch);

strupr(ch);

printf("Character is = %s\n", ch);

}

Output:

kibria go

Character is = KIBRIA GO

10(2) – strlwr()

#include <stdio.h>

int main()

{

char ch[] = "KIBRIA";

strlwr(ch);

printf("Character is = %s\n", ch);

}

Output:

Character is = kibria

11(1). Determine number of vowels, cosonant, word, digit and others.

#include <stdio.h>

int main()

{

char str[100];

int i, vowel, consonant, digit, word, other;

i = vowel = consonant = digit = word = other = 0;

printf("Enter a string = ");

gets(str);

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

{

if (str[i] == 'a' || str[i] == 'e' || str[i] == 'i' || str[i] == 'o' || str[i] == 'u' ||

str[i] == 'A' || str[i] == 'E' || str[i] == 'I' || str[i] == 'O' || str[i] == 'U')

vowel++;

else if ((str[i] >= 'a' && str[i] <= 'z') || (str[i] >= 'A' && str[i] <= 'Z'))

consonant++;

else if (str[i] >= '0' && str[i] <= '9')

digit++;

else if (ch == ' ')

word++;

else

other++;

i++;

}

word++;

/\*space এর আগে 1 টা word অবশ্যই থাকবে,

তাই সেই word টাকে এখানে increment করে দিলাম।\*/

printf("Number of vowels = %d\n", vowel);

printf("Number of consonants = %d\n", consonant);

printf("Number of words = %d\n", word);

printf("Number of digits = %d\n", digit);

printf("Number of others = %d\n", other);

}

Output:

Enter a string = Golam, Kibria, 34#ezaz

Number of vowels = 7

Number of consonants = 8

Number of words = 3

Number of digits = 2

Number of others = 3

11(2). Determine number of capital and small letter.

#include <stdio.h>

int main()

{

char str[50];

int i, capital, small, digit;

i = capital = small = digit = 0;

printf("Enter a string = ");

gets(str);

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

{

if (str[i] >= 65 && str[i] <= 90)

capital++;

else if (str[i] >= 97 && str[i] <= 122)

small++;

else if (str[i] >= 48 && str[i] <= 57)

digit++;

i++;

}

printf("Number of capital letter = %d\n", capital);

printf("Number of small letter = %d\n", small);

printf("Number of digits letter = %d\n", digit);

}

Output:

Enter a string = Golam KIbria 34

Number of capital letter = 3

Number of small letter = 8

Number of digits letter = 2

12.আউটপুট হিসাবে স্ট্রিং এর প্রতিটি শব্দ আলাদা লাইন এ প্রিন্ট হবে। বিরামচিহ্ন গুলো প্রিন্ট হবে না এবং শব্দের প্রথম অক্ষর হবে বড় হাতের।

Output:

golam kibria ezaz

Golam

Kibria

Ezaz

#include <stdio.h>

#include <string.h>

int main()

{

char s[100], ch;

int i, length, wordstarted = 0;

gets(s);

length = strlen(s);

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

{

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

{

if (wordstarted == 0)

{

wordstarted = 1;

ch = 'A' + s[i] - 'a';

printf("%c", ch);

}

else

{

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

}

}

else if ((s[i] >= 'A' && s[i] <= 'Z') || (s[i] >= '0' && s[i] <= '9'))

{

if (wordstarted == 0)

{

wordstarted = 1;

}

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

}

else

{

if (wordstarted == 1)

{

wordstarted = 0;

printf("\n");

}

}

}

return 0;

}

13(1). Binary to Decimal.

Output:

Decimal value is = 22

#include <stdio.h>

#include <math.h>

#include <string.h>

int main()

{

char binary[] = "10110";

int length = 5;

int position = 4;

int decimal = 0;

int i;

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

{

decimal = decimal + (binary[i] - '0') \* pow(2, position);

position--;

}

printf("Decimal value is = %d\n", decimal);

}

13(2). Binary to Decimal from the user.

Output:

Enter the binary number = 111

Decimal value is = 7

#include <stdio.h>

#include <math.h>

#include <string.h>

int main()

{

char binary[65];

int length;

int position;

int decimal = 0;

int i;

printf("Enter the binary number = ");

scanf("%s", &binary);

length = strlen(binary);

position = length - 1;

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

{

decimal = decimal + (binary[i] - '0') \* pow(2, position);

position--;

}

printf("Decimal value is = %d\n", decimal);

}

14(1). Decimal to Binary.

Output:

The binary number is = 10110

#include <stdio.h>

int main()

{

int decimalnumber = 22;

int binarynumber = 0;

int rem, temp = 1;

while (decimalnumber != 0)

{

rem = decimalnumber % 2;

decimalnumber = decimalnumber / 2;

binarynumber = binarynumber + rem \* temp;

temp = temp \* 10;

}

printf("The binary number is = %d\n", binarynumber);

}

14(2). Decimal to Binary from the user.

Output:

Enter any decimal number = 12

The binary number is = 1100

#include <stdio.h>

int main()

{

int decimalnumber;

int binarynumber = 0;

int rem, temp = 1;

printf("Enter any decimal number = ");

scanf("%d", &decimalnumber);

while (decimalnumber != 0)

{

rem = decimalnumber % 2;

decimalnumber = decimalnumber / 2;

binarynumber = binarynumber + rem \* temp;

temp = temp \* 10;

}

printf("The binary number is = %d\n", binarynumber);

}

15(1). Lower to Upper.

Output:

Bangladesh

BANGLADESH

#include <stdio.h>

int main()

{

char country[] = "Bangladesh";

int i, length = 10;

printf("%s\n", country);

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

{

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

{

country[i] = 'A' + (country[i] - 'a');

}

}

printf("%s\n", country);

}

15(2). Lower to Upper from the user.

Output:

bangladesh

BANGLADESH

#include <stdio.h>

int main()

{

char country[30];

int i;

gets(country);

int length = strlen(country);

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

{

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

{

country[i] = 'A' + (country[i] - 'a');

}

}

printf("%s\n", country);

//puts(country);

}

16. Concate a string without using concate function.

Output:

Bangladesh

#include <stdio.h>

int main()

{

char s1[] = "Bangla", s2[] = "desh", s3[12];

int i, j, length1 = 6, length2 = 4;

//i for s1 and j for s3.

for (i = 0, j = 0; i < length1; i++, j++)

{

s3[j] = s1[i];

}

for (i = 0; i < length2; i++, j++)

{

s3[j] = s2[i];

//s3 er soptom upadan hoby s2 er protom upadan.

}

s3[j] = '\0';

printf("%s\n", s3);

}

17. C program to encryptand decrypt a string(এনক্রিপশন এন্ড ডিক্রিপশন)

#include <stdio.h>

int main()

{

int i, x, n;

char str[100];

printf("\nPlease enter a string:\n");

gets(str);

n = strlen(str);

printf("\nPlease choose following options:\n");

printf("1 = Encrypt the string.\n");

printf("2 = Decrypt the string.\n");

scanf("%d", &x);

if (x == 1)

{

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

{

str[i] = str[i] + 1;

//the key for encryption is 1 that is added to ASCII value

}

printf("\nEncrypted string: %s\n", str);

}

else if (x == 2)

{

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

{

str[i] = str[i] - 1;

//the key for encryption is 1 that is subtracted to ASCII value

}

printf("\nDecrypted string: %s\n", str);

}

else

printf("\nError\n");

}

Output:

Please enter a string :

golam kibria

Please choose following options :

1 = Encrypt the string.

2 = Decrypt the string.

1

Encrypted string : hpmbn!ljcsjb