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NAME : ANJALI SINHA

UNIVERSITY ROLL NO. : 2023248

SECTION : R

Q7. WAP to remove characters from a string except alphabets.

\*/

#include<stdio.h>

#include<string.h>

void main()

{

char a[100],b[100];

int i,l=0;

printf("enter the value of string ");

printf("\t\t\t\t\t\*\*\*\*\*INPUT\*\*\*\*\*\n");

gets(a);

for(i=0;a[i]!='\0';i++)

{

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

{

b[l]=a[i];

l++;

}

}

printf("\t\t\t\t\t\*\*\*\*\*OUTPUT\*\*\*\*\*\n");

printf("modified string ");

printf("%s", b);

}

\*\*\*\*\*INPUT\*\*\*\*\*

enter the value of string GRAPHICERA@123GEU.AC.IN

\*\*\*\*\*OUTPUT\*\*\*\*\*

modified string GRAPHICERAGEUACIN

\*\*\*\*\*INPUT\*\*\*\*\*

enter the value of string anjali@123sinha

\*\*\*\*\*OUTPUT\*\*\*\*\*

modified string anjalisinha

/\*

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Q6. Write a user defined function to find the highest frequency character in the string.

\*/

#include<stdio.h>

#include<string.h>

void fre(char []);

void main()

{

char a[100];

printf("\t\t\t\t\t\t\*\*\*\*\*INPUT\*\*\*\*\*\n");

printf("ENTER THE STRING ");

gets(a);

fre(a);

}

void fre(char a[100])

{

int i,j,current,max=0;

char s='\0';

for(i=0;a[i]!='\0';i++)

{

current=0;

for(j=i+1;a[j]!='\0';j++)

{

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

{

current++;

}

}

if(max<current)

{

max=current;

s=a[i];

}

}

printf("\t\t\t\t\t\t\*\*\*\*\*OUTPUT\*\*\*\*\*\n");

printf(" THE MOST FREQUENT CHARACTER USED IN THE INPUTTED STRING IS: %c",s);

}

\*\*\*\*\*INPUT\*\*\*\*\*

ENTER THE STRING WELCOME TO GRAPHIC ERA UNIVERSITY

\*\*\*\*\*OUTPUT\*\*\*\*\*

THE MOST FREQUENT CHARACTER USED IN THE INPUTTED STRING IS: E

\*\*\*\*\*INPUT\*\*\*\*\*

ENTER THE STRING UNIVERSE IS EVERYTHING

\*\*\*\*\*OUTPUT\*\*\*\*\*

THE MOST FREQUENT CHARACTER USED IN THE INPUTTED STRING IS: E

/\*

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SECTION : R

Q2. Write a C program to separate odd and even integers into separate array.

\*/

#include<stdio.h>

void main()

{

int i,n,e=0,o=0;

printf("\t\t\t\t\t\*\*\*\*\*INPUT\*\*\*\*\*\n");

printf("INPUT THE NUMBER OF ELEMENTS TO BE STORED IN THE ARRAY :");

scanf("%d", &n);

int a[n],b[e],c[o];

printf("INPUT %d ELEMENTSIN THE ARRAY:\n", n);

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

{

scanf("%d", &a[i]);

}

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

{

if(a[i]%2==0)

{

b[e]=a[i];

e++;

}

else

{

c[o]=a[i];

o++;

}

}

printf("\t\t\t\t\t\*\*\*\*\*OUTPUT\*\*\*\*\*\n");

printf("The even elements are : \n");

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

{

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

}

printf("The odd elements are : ");

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

{

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

}

}

\*\*\*\*\*INPUT\*\*\*\*\*

INPUT THE NUMBER OF ELEMENTS TO BE STORED IN THE ARRAY :3

INPUT 3 ELEMENTSIN THE ARRAY:

5

2

4

\*\*\*\*\*OUTPUT\*\*\*\*\*

The even elements are : 2 4

The odd elements are : 5

\*\*\*\*\*INPUT\*\*\*\*\*

INPUT THE NUMBER OF ELEMENTS TO BE STORED IN THE ARRAY :5

INPUT 5 ELEMENTSIN THE ARRAY:

25

47

42

56

32

\*\*\*\*\*OUTPUT\*\*\*\*\*

The even elements are : 42 56 32

The odd elements are : 25 47

/\*

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SECTION : R

Q3. WAP to find the sum of lower triangular elements of the matrix.

\*/

#include<stdio.h>

void main()

{

int n;

int j,i,s=0;

printf("\t\t\t\t\t\*\*\*\*\*INPUT\*\*\*\*\*\n");

printf("Enter the no. of rows and coloumns: ");

scanf("%d", &n);

int a[n][n];

printf("The given array is:\n");

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

{

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

{

scanf("%d", &a[i][j]);

}

}

printf("\t\t\t\t\t\*\*\*\*\*OUTPUT\*\*\*\*\*\n");

printf("The elements being summed of the lower triangular matrix are: ");

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

{

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

{

if(i>j)

{

printf("%d ", a[i][j]);

s=s+a[i][j];

}

}

}

printf(" The sum of the lower triangular matrix elements is: %d", s);

}

\*\*\*\*\*INPUT\*\*\*\*\*

Enter the no. of rows and coloumns: 3

The given array is:

1 2 3

4 5 6

7 8 9

\*\*\*\*\*OUTPUT\*\*\*\*\*

The elements being summed of the lower triangular matrix are: 4 7 8

The sum of the lower triangular matrix elements is: 19

\*\*\*\*\*INPUT\*\*\*\*\*

Enter the no. of rows and coloumns: 4

The given array is:

1 2 3 4

5 6 7 8

9 10 11 12

13 14 15 16

\*\*\*\*\*OUTPUT\*\*\*\*\*

The elements being summed of the lower triangular matrix are: 5 9 10 13 14 15

The sum of the lower triangular matrix elements is: 66

/\*

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SECTION : R

Q5. Write a program in C to split string by space into word.

\*/

#include<stdio.h>

#include<string.h>

void main()

{

char a[100];

printf("\t\t\t\t\t\*\*\*\*\*INPUT\*\*\*\*\*\n");

printf("Input the string: ");

gets(a);

printf("\t\t\t\t\t\*\*\*\*\*OUTPUT\*\*\*\*\*\n");

for(int i=0;a[i]!='\0';i++)

{

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

if(a[i]==32 && a[i+1]!=' ')

{

printf("\n");

}

}

}

\*\*\*\*\*INPUT\*\*\*\*\*

Input the string: THIS IS A TEST STRING

\*\*\*\*\*OUTPUT\*\*\*\*\*

THIS

IS

A

TEST

STRING

\*\*\*\*\*INPUT\*\*\*\*\*

Input the string: hardwork is the key to success

\*\*\*\*\*OUTPUT\*\*\*\*\*

hardwork

is

the

key

to

success

/\*

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SECTION : R

Q4. Write a C program to find the max element of each row of a matrix.

\*/

#include<stdio.h>

void main()

{

int i,j,n,m;

printf("\t\t\t\t\t\*\*\*\*\*INPUT\*\*\*\*\*\n");

printf("Input the number of rows and columns respectively..");

scanf("%d%d", &n,&m);

int a[n][m];

printf("Input the elements of the array\n");

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

{

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

{

scanf("%d", &a[i][j]);

}

}

printf("\t\t\t\t\t\*\*\*\*\*OUTPUT\*\*\*\*\*\n");

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

{

int max=a[i][0];

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

{

if(max<a[i][j])

{

max=a[i][j];

}

}

printf("MAX of %d row is: %d\n", i+1,max);

}

}

\*\*\*\*\*INPUT\*\*\*\*\*

Input the number of rows and columns respectively..3 3

Input the elements of the array

5 16 20

78 90 100

200 12 13

\*\*\*\*\*OUTPUT\*\*\*\*\*

MAX of 1 row is: 20

MAX of 2 row is: 100

MAX of 3 row is: 200

\*\*\*\*\*INPUT\*\*\*\*\*

Input the number of rows and columns respectively..3 3

Input the elements of the array

1 2 3

4 5 6

7 8 9

\*\*\*\*\*OUTPUT\*\*\*\*\*

MAX of 1 row is: 3

MAX of 2 row is: 6

MAX of 3 row is: 9

/\*

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SECTION : R

Q1. Write a user define function in C to print all unique elements in the array.

\*/

int size;

#include <stdio.h>

void unique(int [],int);

int main()

{

int arr[100], size;

printf("\t\t\t\t\t\t\*\*\*\*\*INPUT\*\*\*\*\*\n");

printf("Enter the size of the array: ");

scanf("%d", &size);

printf("Enter the Elements of the array: ");

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

{

scanf("%d", &arr[i]);

}

unique(arr, size);

}

void unique(int arr[], int size)

{

printf("\t\t\t\t\t\*\*\*\*\*OUTPUT\*\*\*\*\*\n");

printf("Unique Elements in the array are: ");

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

{

int count = 0;

for (int j = 0; j < size; j++)

{

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

{

count = count + 1;

}

}

if (count == 1)

{

printf("%d ", arr[i]);

}

}

}

\*\*\*\*\*INPUT\*\*\*\*\*

Enter the size of the array: 5

Enter the Elements of the array: 1

2

3

1

2

\*\*\*\*\*OUTPUT\*\*\*\*\*

Unique Elements in the array are: 3

\*\*\*\*\*INPUT\*\*\*\*\*

Enter the size of the array: 4

Enter the Elements of the array: 3

2

2

5

\*\*\*\*\*OUTPUT\*\*\*\*\*

Unique Elements in the array are: 3 5