MODULE :3.3

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•Write a program to find out the max number from given array using function.

ANS :-

#include <stdio.h>

int main() {

int n;

double arr[100];

printf("Enter the number of elements (1 to 100): ");

scanf("%d", &n);

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

{

printf("Enter number%d: ", i + 1);

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

}

// storing the largest number to

arr[0]

for (int i = 1; i < n; ++i) {

if (arr[0] < arr[i]) {

arr[0] = arr[i];

}

}

printf("Largest element = %.2lf",

arr[0]);

return 0;

}

OUTPUT :-

Enter the number of elements (1 to 100): 4

Enter number1 : 45543

Enter number2: 3

Enter number3: 4

Enter number4: 2

Largest element = 45543.00

• WAP of Addition, Subtraction, Multiplication and Division using Switch case.(Must Be Menu Driven)

ANS :-

#include<stdio.h>

main()

{

char choice;

float a,b,ans=0;

printf("\tEnter your choice \n\t1

for +\n\t 2 for - \n\t 3 for \* \n\t 4

for / \n\t :");

scanf("%c",&choice);

switch(choice)

{

case '1':

{

printf("Enter 2 number

:");

scanf("%f%f",&a,&b);

ans=a+b;

printf("Addition=%0.2f",ans);

break;

}

case '2':

{

printf("Enter 2 number

:");

scanf("%f%f",&a,&b);

ans=a-b;

printf("Subtraction=%0.2f",ans);

break;

}

case '3':

{

printf("Enter 2 number

:");

scanf("%f%f",&a,&b);

ans=a\*b;

printf("Multiplication=%0.2f",ans);

break;

}

case '4':

{

printf("Enter 2 number

:");

scanf("%f%f",&a,&b);

ans=a/b;

printf("Division=%0.2f",ans);

break;

}

}

}

OUTPUT :-

Enter your choice

1 for +

2 for –

3 for \*

4 for /

:3

Enter 2 number :3

4 Multiplication=12.00

• WAP to find reverse of string using recursion

ANS:-

#include <stdio.h>

Void reverseSentence();

Int main() {

Printf(“Enter a sentence: “);

reverseSentence();

return 0;

}

Void reverseSentence() {

Char c;

Scanf(“%c”, &c);

If (c != ‘\n’) {

reverseSentence();

printf(“%c”, c);

}

}

OUTPUT:-

Enter a sentence:

Patel nisha

ahsin letaP

• WAP to find factorial using recursion.

ANS :-

#include<stdio.h>

Long int multiplyNumbers(int n);

Int main()

{

Int n;

Printf(“Enter a positive integer: “);

Scanf(“%d”,&n);

Printf(“Factorial of %d = %ld”, n,

multiplyNumbers(n));

Return 0;

}

Long int multiplyNumbers(int n) {

If (n>=1)

Return n\*multiplyNumbers(n-1);

Else

Return 1;

}

OUTPUT:-

Enter a positive integer: 5

Factorial of 5 = 120

• WAP to take two Array input from user and sort them in ascending or Descending order as per user’s choice

ANS:-

#include <stdio.h>

int main ()

{

int num[20];

int i, j, a, n;

printf("enter number of elements in an array\n");

scanf("%d", &n);

printf("Enter the elements\n");

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

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

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

for (j = i + 1; j < n; ++j){

if (num[i] > num[j]){

a = num[i];

num[i] = num[j];

num[j] = a;

}

}

}

printf("The numbers in ascending order is:\n");

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

printf("%d\n", num[i]);

}

}

OUTPUT:-

enter number of elements in an array

5

Enter the elements

8

58

45

5

212

The numbers in ascending order is:

5

8

45

58

212

• WAP to make addition, Subtraction and multiplication of two matrix using 2-D Array

ANS:-

#include<stdio.h>

int main ()

{

int i,j,a1[2][2],a2[2][2];

for(i=0;i<2;i++)

{

for(j=0;j<2;j++)

{

printf("enter element:");

scanf("%d",&a1[i][j]);

}

}

printf("second element ");

for(i=0;i<2;i++)

{

for(j=0;j<2;j++)

{

printf("enter element :");

scanf("%d",&a2[i][j]);

}

}

for(i=0;i<2;i++)

{

for(j=0;j<2;j++)

{

printf(" %d ",a1[i][j]+a2[i][j]);

}

printf("\n");

}

printf("\n\n");

for(i=0;i<2;i++)

{

for(j=0;j<2;j++)

{

printf(" %d ",a1[i][j]-a2[i][j]);

}

printf("\n");

}

printf("\n\n");

for(i=0;i<2;i++)

{

for(j=0;j<2;j++)

{

printf(" %d ",a1[i][j]\*a2[i][j]);

}

printf("\n");

}

}

OUTPUT :-

enter element:10

enter element:20

enter element:30

enter element:40

second element enter element :10

enter element :11

enter element :12

enter element :12

20 31

42 52

0 9

18 28

100 220

360 480

• WAP Find out length of string without using inbuilt function

ANS:-

#include <stdio.h>

int main()

{

char string[50];

int i, length = 0;

printf("Enter the string: \n");

gets(string);

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

{

length++;

}

printf("The length of a string is the number of characters in it \n");

printf("So, the length of %s = %d\n", string, length);

}

OUTPUT:-

Enter the string:

sffdknbgbngkb

The length of a string is the number of characters in it

So, the length of sffdknbgbngkb = 13

• WAP to reverse a string and check that the string is palindrome or not.

ANS:-

#include <stdio.h>

#include <string.h>

int main()

{

char inputArray[100],

reversedArray[100];

printf("Enter the string for palindrome check \n");

scanf("%s", inputArray);

strcpy(reversedArray, inputArray);

strrev(reversedArray);

if(strcmp(inputArray, reversedArray) == 0 )

printf("%s is a palindrome.\n", inputArray);

else

printf("%s is not a palindrome.\n", inputArray);

return 0;

}

OUTPUT :-

Enter the string for palindrome check

hello

hello is not a palindrome.