# Ques-C Program to Calculate Average Using Arrays?

#include <stdio.h>

int main(){

int n, i;

float num[100], sum=0.0, average;

printf("Enter the numbers of data: ");

scanf("%d",&n);

while (n>100 || n<=0)

{

printf("Error! number should in range of (1 to 100).\n");

printf("Enter the number again: ");

scanf("%d",&n);

}

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

{

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

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

sum+=num[i];

}

average=sum/n;

printf("Average = %.2f",average);

return 0;

# }

# Ques2-C Program to Find Largest Element of an Array?

#include <stdio.h>

int main(){

int i,n;

float arr[100];

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

scanf("%d",&n);

printf("\n");

for(i=0;i<n;++i) /\* Stores number entered by user. \*/

{

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

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

}

for(i=1;i<n;++i) /\* Loop to store largest number to arr[0] \*/

{

if(arr[0]<arr[i]) /\* Change < to > if you want to find smallest element\*/

arr[0]=arr[i];

}

printf("Largest element = %.2f",arr[0]);

return 0;

# }

# Ques3-C Program to Add Two Matrix Using Multi-dimensional Arryas?

#include <stdio.h>

int main(){

int r,c,a[100][100],b[100][100],sum[100][100],i,j;

printf("Enter number of rows (between 1 and 100): ");

scanf("%d",&r);

printf("Enter number of columns (between 1 and 100): ");

scanf("%d",&c);

printf("\nEnter elements of 1st matrix:\n");

/\* Storing elements of first matrix entered by user. \*/

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

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

{

printf("Enter element a%d%d: ",i+1,j+1);

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

}

/\* Storing elements of second matrix entered by user. \*/

printf("Enter elements of 2nd matrix:\n");

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

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

{

printf("Enter element a%d%d: ",i+1,j+1);

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

}

/\*Adding Two matrices \*/

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

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

sum[i][j]=a[i][j]+b[i][j];

/\* Displaying the resultant sum matrix. \*/

printf("\nSum of two matrix is: \n\n");

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

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

{

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

if(j==c-1)

printf("\n\n");

}

return 0;

# }

# Ques4-C Program to Multiply to Matrix Using Multi-dimensional Arrays?

#include <stdio.h>

int main()

{

int a[10][10], b[10][10], mult[10][10], r1, c1, r2, c2, i, j, k;

printf("Enter rows and column for first matrix: ");

scanf("%d%d", &r1, &c1);

printf("Enter rows and column for second matrix: ");

scanf("%d%d",&r2, &c2);

/\* If colum of first matrix in not equal to row of second matrix, asking user to enter the size of matrix again. \*/

while (c1!=r2)

{

printf("Error! column of first matrix not equal to row of second.\n");

printf("Enter rows and column for first matrix: ");

scanf("%d%d", &r1, &c1);

printf("Enter rows and column for second matrix: ");

scanf("%d%d",&r2, &c2);

}

/\* Storing elements of first matrix. \*/

printf("\nEnter elements of matrix 1:\n");

for(i=0; i<r1; ++i)

for(j=0; j<c1; ++j)

{

printf("Enter elements a%d%d: ",i+1,j+1);

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

}

/\* Storing elements of second matrix. \*/

printf("\nEnter elements of matrix 2:\n");

for(i=0; i<r2; ++i)

for(j=0; j<c2; ++j)

{

printf("Enter elements b%d%d: ",i+1,j+1);

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

}

/\* Initializing elements of matrix mult to 0.\*/

for(i=0; i<r1; ++i)

for(j=0; j<c2; ++j)

{

mult[i][j]=0;

}

/\* Multiplying matrix a and b and storing in array mult. \*/

for(i=0; i<r1; ++i)

for(j=0; j<c2; ++j)

for(k=0; k<c1; ++k)

{

mult[i][j]+=a[i][k]\*b[k][j];

}

/\* Displaying the multiplication of two matrix. \*/

printf("\nOutput Matrix:\n");

for(i=0; i<r1; ++i)

for(j=0; j<c2; ++j)

{

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

if(j==c2-1)

printf("\n\n");

}

return 0;

# }