

Multi Dimensional Array(2-D Array)

Programs

1. Write a program in 'C' to print 2-D Array.

```
#include<stdio.h>
#include<conio.h>
void main()
{
    int i=0,j=0;
    int A[4][3];
    clrscr();
    printf("enter 2-D array elements");
    for(i=0;i<4;i++)
    {
        For(j=0;j<3;j++)
        {
            scanf("%d",&A[i][j]);
        }
    }
    Printf("Array elements are");
    for(i=0;i<4;i++)
    {
        for(j=0;j<3;j++)
        {
            printf("arr[%d] [%d] = %d \n",i,j,arr[i][j]);
        }
    }
    getch();
}
```

2. C Program to read a matrix and find sum, product of all elements of two dimensional (matrix) array

Solution

```
#include <stdio.h>
```

```
#include<conio.h>
```

```
void main()
```

```
{
```

```
    int matrix[10][10];
```

```
    int i,j,r,c;
```

```
    int sum,product;
```

```
    printf("Enter number of Rows :");
```

```
    scanf("%d",&r);
```

```
    printf("Enter number of Cols :");
```

```
    scanf("%d",&c);
```

```
    printf("\nEnter matrix elements :\n");
```

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

```
    {
```

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

```
    {  
        scanf("%d",&matrix[i][j]);  
    }  
}
```

```
sum      =0;  
product  =1;  
for(i=0;i< r;i++)  
{  
    for(j=0;j< c;j++)  
    {  
        Sum=sum + matrix[i][j];  
        Product = product * matrix[i][j];  
    }  
  
}  
  
printf("\nSUM of all elements : %d \nProduct of all elements :%d",sum,product);  
  
getch();  
}
```

Programs for practice.

- 1. Write a program in 'C' for addition of matrix.**
- 2. Write a program in 'C' for subtraction of matrix.**
- 3. Write a program in 'C' for multiplication of matrix.**
- 4. Write a program in 'C' for transpose of matrix.**