★ ARRAYS ★

Set of values Having Same name & datatype are called array

Total memory required by an array = Size of the array × Size of the datatype

Syntax

data_type ArrayName[size];

for eg

int numbers[7];

data-type = int
ArrayName = numbers
Size = 7

this type can be used for user to define elements in array

for defining arrays in program it is given as

int numbers[3] = {3, 5, 7};

★ Multi-Dimentional Arrays ★

As the name suggest an multi-dimentional array has more than 1 dimention

It is an Homogeneous collection of items where each element is accessed using multiple indices

- What is a Dimention in Array?

⇒ Dimention refers to number of indices required to access an element

It essential describes the Structure of an Array

ie 1-D Array is a List or a Line

2-D Array is like a table. Like 3×3 grid

3D array is a cube or a Block of data

1D Array defination

```
arr[3] = {1, 2, 3};
```

2D Array defination

```
matrix[2][3] = {
    { 1, 2, 3 },
    { 1, 2, 3 }
};
```

3D Array defination

```
tensor[2][2][2] {
    {1, 2}, { 1, 2 }
},
    {  { 1, 2 }, {1, 2}  };
```