

Assignment 4: Array

Q.1: In what way does array differ from an ordinary variables?

Ans:

Array	Ordinary Variable.
Allows storage of multiple values of same datatype.	Allows holding a single value.
Values in array are stored sequentially in contiguous block of memory.	Values in ordinary variables are stored individually in different memory sections.
Suitable for usage in iteration process.	Not suitable for usage in iteration process.
Array occupies more memory.	Ordinary variable occupies less memory.

Q.2: Describe element storage mechanism in 2-D array.

Ans:

The array with row and column is called 2-D array.

Consider $A[\text{rowsize}][\text{columnsize}]$ i.e., $A[3][3]$

Here, while elements are provided, the number of columns of the first row is filled and so on until the number of rows are completed.

Eg: `int A[3][3];`

then,

	0	1	2
0	(1) 21	(2) 22	(3) 23
1	(4) 1	(5) 2	(6) 3
2	(7) 7	(8) 8	(9) 9

Here,
(n) = step number.

Q.37: How do you pass array to function?
What are the things to be considered during this process?

Ans:

Array is passed to function by call by reference method.

For declaration: `returntype functionname (datatype[], datatype).`

For ^{calling} definition: `functionname (variablename, size)`

For definition: `returntype functionname (datatype array name[],
datatype size)`

While During this process, the following points needs to be considered.

- i) While declaring function, the array size of 1-D array is not needed but is necessary for multi-D array.
- ii) The datatype of array must be provided.
- iii) While calling function, only the variable name is to be passed.