An array is a group (or collection) of same data types.

Basic syntax for 1-dimensional array	Initialization of array
DataType ArrayName [Array size] Example: double balance[5]; The above line generates 5 consecutive empty space in memory of size double. Here the starting index is 0 and the last index is arraySize – 1 i.e in the above case 5-1=4	double balance[] = {1000.0, 2.0, 3.4, 7.0, 50.0}; Above is the memory representation of the initialized array. T access the elements at index 1 we use the array name[index] format. Example: balance[1] will access the value 2.0

Example 1 How to insert and print elements	Example 2- C program to pass an array containing ages of people to a function
| ```c
int mark[5] = {19, 10, 8, 17, 9}

// insert different value to third element
mark[3] = 9;

// take input from the user and insert in third element
scanf("%d", &mark[2]);

// take input from the user and insert in (i+1)th element
scanf("%d", &mark[i]);

// print first element of an array
printf("%d", mark[0]);

// print ith element of an array
printf("%d", mark[i-1]);
``` | ```c
#include <stdio.h>
float average(float age[]);

int main()
{
float avg, age[] = { 23, 55, 22, 3, 40, 18 };

avg = average(age);
/* Only name of array is passed   as argument. */

printf("Average age=%.2f", avg);
return 0;
}

float average(float age[])
{
   int i;
   float avg, sum = 0.0;
   for (i = 0; i < 6; ++i) {
   sum += age[i];
   }
   avg = (sum / 6.0);
   return avg;
}
``` |

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Task (10 marks)

1. Declare two **int** arrays A and B of size 5. Take user input for both arrays and determine whether the two arrays are strictly identical or not. Two arrays are strictly identical if both contain same values at same indices. Print "Strictly identical" or "Not identical" based on your finding.

2. Create an array of integer of size given by the user and fill it with values. Your task is to reverse the element of the arrays with the help of another array which will store the reverse array.

```
Enter size of array:3
Enter elements at a[0]: 1
Enter elements at a[1]: 2
Enter elements at a[2]: 3

 Reversed array: 3  2  1
```

3. Create an array of integer of size given by the user and fill it with values. Your task is to write a search function void search(int b[],int size,int value) which will be used to search a particular value given by the user from the array

```
Enter size of array:4
Enter elements at a[0]: 1
Enter elements at a[1]: 3
Enter elements at a[2]: 4
Enter elements at a[3]: 2
Enter value to search in array: 4
Value found at index 2.
```
.

4. Create an array of integer of size given by the user and fill it with values. Find the maximum elements from the array.

```
Enter size of array:4
Enter elements at a[0]: 1
Enter elements at a[1]: 5
Enter elements at a[2]: 10
Enter elements at a[3]: 2
The maximum element is 10 !
```