Ques 1 What is the use of memset function in C++?

memset is a C++ function and it is defined in cstring header file. It copies a single character for a specific number of times to an object.

```
char str [ ] = " Bhavya";
memset (str , 'a' , sizeof (str));
cout << str <<endl;
```

Output

aaaaaaaa } 1 more than no. of characters

There is 10 null character which is being converted to a as well.

Using memset function, we can set all the integer values in an integer array as 0 or -1.

```
memset (a, 0, sizeof (a));
memset (a, -1, sizeof (a));
```

memset (a, 1, sizeof (a)); → This will not
work as memset for integer array only
works for 0 & -1.

Ques 2 How to initialize array elements to a particular
value ?
We can do this by using loops. Lets say
we want to initialize the array elements to 1.

```
for (int i=0; i< 5; i++) {
        arr [i] = 1;
}
```

arr →

1	1	1	1	1

Ques 3 Implement swap function on your own.

Method - 1   Using temp variable

int a = 3 , int b = 5;

```
int temp = a;
a = b;
b = temp;
```

cout << a << endl; → 5
cout << b << endl; → 3

Method - 2   Using XOR operator

int a = 3, b = 5;
a = a ^ b;
b = a ^ b;

```
a = a ^ b;
cout << a <<endl;          → 5
cout << b;                 → 3
```

Dry run

a = 3 →   000 ---- 011
b = 5 →   000 ---- 101

000 -- 011 ^ 000 --- 101 = 000 -- 110 = 6

a = 6 → 000 --- 110

b = a ^ b → 000 -- 110 ^ 000 --- 101
          = 000 --- 011 = 3
b = 3 → 000 ---- 011
a = 6 → 000 --- 110

000 --- 011 ^ 000 -- 110
000 --- 101 = 5
a = 5 , b = 3   } Hence swapped

Method - 3   Using Arithemetic operators

```
int a = 3 , b = 5;
a = a + b;
b = a - b;
a = a - b;
cout << a << endl;
cout << b << endl;
```

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