

## Task 4

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**Question 1:** Write C++ Program that accomplish each of following questions

1. Write a program to store 7 elements in an **Array** and print it.
2. Find the sum of all elements of the **Array** from the previous question.
3. Calculate the average of the aforementioned **Array**.
4. Write a program to read 5 values in an **Array** and display them in reverse order.
5. Copy the elements of one array into another **Array** (**Tip:** assume any size).
6. Write a program to find the maximum and minimum element in an **Array** (**Note:** use what you declared in question 1 ).
7. Write program to count total number of even and odd elements in an **Array** of 20 element.

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**Question 2:** What is the output of the following program fragment (**Note:** trace the code first then check your answer by running the code into your editor)

```
#include <iostream>
#include <string>
using namespace std;
int main(int argc, char const *argv[])
{
    char s1[6] = "Hello";
    char s2[6] = "World";
    char s3[12] = s1 + " " + s2;
    cout<<s3;
    return 0;
}
```

```

////////////////////////////////////
#include <stdio.h>
void func(void)
{
    printf("Hello");
}
void main()
{
    func();
    func(2);
}
////////////////////////////////////
int main()
{
    int y = 10000;
    int y = 34;
    cout << "Hello World!" << y ;
    return 0;
}

```

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**Question 3: For those who want challenging problems** 🇸🇬 🇲🇻 🇵🇦 😂

1. Given an integer  $n$ , return true if it is a power of two. Otherwise, return false, An integer  $n$  is a power of two, if there exists an integer  $x$  such that  $n == 2^x$ .

**Input:**  $n = 1$       **Input:**  $n = 16$       **Input:**  $n = 3$   
**Output:** true      **Output:** true      **Output:** false

**Explanation:**  $2^0=1$  **Explanation:**  $2^4=16$  **Explanation:** not power of 2

2. Given an integer array `nums`, move all 0's to the end of it while maintaining the relative order of the non-zero elements.  
**(Note)** that you must do this in-place without making a copy of the array).

**Input:** `nums = [0,1,0,3,12]`  
**Output:** `[1,3,12,0,0]`

*Try your best 😊, Good luck 🤝*