

Note: WAP = Write a program

1. WAP that takes n integer numbers, and sum up all the integers in that array.

| Sample input | Sample output |
|------------------|---------------|
| 5 1 2 3 4 5 | 15 |
| 6 5 6 7 8 0 1 | 27 |

2. WAP that takes n integer numbers, and multiply all the numbers in the odd indexed position. Indexing starts from 0.

| Sample input | Sample output |
|------------------|---------------|
| 5 1 2 3 4 5 | 8 |
| 6 5 6 7 8 0 1 | 48 |

3. WAP that takes a string as input, and shifts all the characters in the even indexed position by the following rule.

‘a’ becomes ‘b’

‘b’ becomes ‘c’

...

‘z’ becomes ‘a’

| Sample input | Sample output |
|--------------|---------------|
| abcdefg | bbddffh |
| zfmh | afuh |

4. WAP that takes 2 integer arrays as input, then computes the intersection of the two arrays.

| Sample input | Sample output |
|--------------------------------|---------------|
| 4 1 2 3 5 5 1 6 2 7 3 | 1 2 3 |
| 5 1 2 3 4 5 3 6 7 8 | |

5. WAP that takes 2 integer arrays as input, then computes the union of the two arrays.

| Sample input | Sample output |
|--------------------------------|---------------|
| 4 1 2 3 5 5 1 6 2 7 3 | 1 2 3 5 6 7 |

| | |
|-----------|-----------------|
| 5 | 1 2 3 4 5 6 7 8 |
| 1 2 3 4 5 | |
| 3 | |
| 6 7 8 | |

6. Write a class named '**Cuboid**'.

- Create 3 private variables in the class. **length, width and height.**
- Create 2 constructor. One is an empty constructor that takes nothing as input and initializes length, width and height as 0. Another constructor takes 3 values as input and initializes length, width and height as the given values.
- Write a public function named '**getVolume**' that calculates the volume of the Cuboid and returns the desired Volume.
- Write a public function named '**getSurfaceArea**' that calculates the surface area of the Cuboid and returns the desired value.
- Create an array of 'Cuboid' objects(like 4 or 5 objects) and initialize length, width and height with any value you like. But make sure to give different length, width, height to different objects.
- Sort the 'Cuboid' objects in the increasing order of Volume by writing a custom comparator.
- Sort the 'Cuboid' objects in the increasing order of surface area by writing a custom comparator.

Note: Volume = $l*w*h$

Surface Area = $2*l*w+2*l*h+2*h*w$

l = length, w = width , h = height