# Sasi Institute of Technology and Engineering (Autonomous)

2023-2027-CST

### Aim:

In the ancient city of Arithmetica, a unique method of encoding messages has been discovered, involving a special mathematical technique. The encoded messages require finding the product between pairs of numbers in a given list and then determining the maximum product achievable. Your task is to create a Python program to decipher these messages by finding and displaying the largest product that can be obtained by multiplying any two numbers from the provided list.

### **Input Format:**

The first line contains space-separated positive integers representing the elements of the list.

## **Output Format:**

The output is the integer that represents the maximum product achievable by multiplying any two numbers from the given list.

### **Constraints:**

The elements of the list must be positive.

### Example:

Input: 18 5 12 8 3 Output: 216

### **Explanation:**

In the list [18, 5, 12, 8, 3], the maximum product is obtained by multiplying 18 and 12, resulting in 216.

### Note:

For simplicity, the code for taking input and printing output is provided to you in the editor. You just need to fill in the required function body to find the maximum product.

# **Source Code:**

# maxproduct.py

```
def find_max_product(nums):
    numbers_list.sort(reverse=True)
    return numbers_list[0]*numbers_list[1]

input_numbers = input()
numbers_list = list(map(int, input_numbers.split()))
result = find_max_product(numbers_list)
print(result)
```

### Execution Results - All test cases have succeeded!

	Test Case - 1	
User Output		
12345		
20		

2
 2
ade
ட

User Output 18 5 12 8 3

216

ID: 23K61A0624

2023-2027-CST