

Object Oriented Programming

JAVA

WEEK-2

1. Given the float array, return the sum of all array elements.
[Note: Take a float array as input and display the sum of the array elements.]

2. Return the sum of the first, middle and last elements in the array if the length of the array is odd, and if the length is even then the sum of the first and last element should be displayed. [Hint: import required java.util.Array package]

3. Using java.util.Array, write a program to multiply two 3x3 matrix display the output as:

a1 a2 a3
a4 a5 a6
a7 a8 a9



Use
Exception
Handling

1. Given the float array, return the sum of all array elements.

[Note: Take a float array as input and display the sum of the array elements.]

Array Size	Input	Expected output
5	4 6 8 9 0	27.0
6	3 2 66 9 76 1 4	161.0
4	-6 6 -3 3	0
7	22 -6 43 -19 -40 -2 6	-2
6	a b c 1 4 7	Exception

2. Return the sum of the first, middle and last elements in the array if the length of the array is odd, if the length is even then the sum of the first and last element should be displayed. [Hint: import required java.util.Array package]

Array Size	Input	Expected output
5	36 23 67 897 27	Size of array is Odd Sum = 130
6	3 2 66 9 76 1 4	Size of array is even. Sum = 4
4	-6 6 -3 3 6	Exception

3. Using `java.util.Array`, write a program to multiply two 3x3 matrix display the output as:

a1 a2 a3
a4 a5 a6
a7 a8 a9

First Array	Second Array	Expected output
<pre>{ { 23, 22, 45 }, { 2, 12, 33 }, { 43, 53, 63 } };</pre>	<pre>{ { 0, 1, 1 }, { 2, 0, 2 }, { 3, 3, 0 } };</pre>	<pre>Resultant Matrix: 179 158 67 123 101 26 295 232 149</pre>
<pre>{ { -2, 22, 45 }, { -23, 12, 33 }, { 43, -53, 68 } };</pre>	<pre>{ { 32, 54, -1 }, { -42, 0, 26 }, { 73, 33, -44 } };</pre>	<pre>Resultant Matrix: 2297 1377 -1406 1169 -153 -1117 8566 4566 -4413</pre>

Bonus Program-3

A construction engineer at a brick manufacturing company finds it difficult to fill the gaps at the edges after building a wall. Each brick is of two sizes. The larger brick is used to stack through the main wall and smaller bricks are used to fill in the gaps. This worked well up until today, as he is running short on smaller bricks. He contemplates the action he can take, and finally decides to break the larger bricks into smaller ones that can be used for filling the edges. Implement a Java program for the cutting machine so that it would automate the process of cutting the larger brick into smaller sized bricks.

Assumption: Cuboid volume as array elements and display the size of the cut brick for the constructor engineer.

Bonus Program-3

Volume of Brick1	Volume of Brick2	Difference
12, 13, 14	12, 13, 14	0
12, 23, 34	43, 32, 21	19512.0
2, 4, 6	4, 6, 8	144.0
3, 33, 11	1,11,33	726.0
20,21,0	21,20,2	820

Bonus Program-4

Consider developing a database of new born babies at KMC maternity department with class name as NewBornBaby and attributes:

babyID : String

weight : String

dob : Date

motherName : String

gender: char (F/M)

Initially create a constructor with above parameters and insert minimum of 5 babies details.

Next for the above class let us introduce two more attributes as bcg:date and polio:date which specifies the BCG and polio dates for the baby. Assume that BCG should be given on 45th day and polio in 3rd month after the baby's birth.

Your application should take the baby's ID and mother's name as input and display the BCG and Polio date for respective baby. (Note: Display when the baby should be vaccinated)



SEE
YOU
NEXT
WEEK

