: **Python and Linear Algebra** :

Q1. **Vector** -

A vector is a tuple of one or more values called **scalars**. Vectors are often represented using a lowercase character such as **v**;

v = (v1, v2, v3)

Here v1, v2 and v3 are scalar values.
Scalar does not depend on direction but
vector depends on direction.

How to represent a vector in Python -

```
# create a vector
from numpy import array
v = array([1, 2, 3])
print(---?---)
```

Task 1 - Write above the proper variable to print vector.

Vector Multiplication -

Two vectors of equal length can be multiplied.

c = a*b

a*b = (a1*b1, a2*b2, a3*b3)

```
# multiply vectors
from numpy import array
a = array([1, 2, 3])
print(?)
b = array([1, 2, 3])
print(?)
c = a * b
print(?)
```

Task 2 - Please mention the variable names (fill up the ?) and complete the task.

Task 3 - Please write python code for vector addition, subtraction and division.

Task 4 - Write your understanding about vector and scalar.

Task 5 - Write a Python programme to check if a string is palindrome or not.

Task 6 - Write a Python programme to check if a number is palindrome or not.

Task 7 - Write about string with an example. Print a string in python.