**ELEMENT-WISE ADDITION:**

**def add(v, w):**

"""Adds corresponding elements"""

assert len(v) == len(w), "vectors must be the same length"

return [v\_i + w\_i for v\_i, w\_i in zip(v,w)] “Zip is used to join two list together”

B =add([1,2,3], [4,5,6]) ;

print (B)

**ELEMENT-WISE MULTIPLICATION:**

**def Multiply(v, w):**

"""Adds corresponding elements"""

assert len(v) == len(w), "vectors must be the same length"

return [v\_i \* w\_i for v\_i, w\_i in zip(v,w)]

B =Multiply([1,2,3], [4,5,6]) ;

print (B)

**VECTOR ADDITION**

**def sumArray(V):**

addition = 0

for i in V:

addition = addition + i

print(addition)

sumArray([10, 12, 13]);

print (sumArray)

**VECTOR Average**

**def avgArray(V):**

addition = 0

for i in V:

addition = addition + i

print(addition/len(V))

avgArray([10, 12, 13]);

print (avgArray)

**DOT PRODUCT**

**def dot(v, w):**

"""Computes v\_1 \* w\_1 + ... + v\_n \* w\_n"""

assert len(v) == len(w), "vectors must be the same length"

return sum(v\_i \* w\_i for v\_i, w\_i in zip(v,w))

C =dot([1,2,3], [4,5,6]) ;

print (C)