

Informatika2-2014/FeladatVektorok

```
class Vector:

    def __init__(self,k):
        self.k = k
        self.coordinates = [0] * k

    def set(self,coordinates):
        self.coordinates = coordinates
        if len(self.coordinates) != self.k:
            self.k = len(self.coordinates)

    def set(self,idx,val):
        if self.k > idx:
            self.coordinates[idx] = val

    def __add__(self,other):
        if self.k == other.k:
            result = Vector(self.k)
            for i in range(self.k):
                result.coordinates[i] = self.coordinates[i] + other.coordinates[i]
            return result
        else:
            print "vectors with different size"

    def __sub__(self,other):
        if self.k == other.k:
            result = Vector(self.k)
            for i in range(self.k):
                result.coordinates[i] = self.coordinates[i] - other.coordinates[i]
            return result
        else:
            print "vectors with different size"

    def __mul__(self,other):
        if self.k == other.k:
            result = 0
            for i in range(self.k):
                result += self.coordinates[i] * other.coordinates[i]
            return result
        else:
            print "vectors with different size"
            return 0

    def __repr__(self):
        return str(self.coordinates)

vector_a = Vector(2)
vector_b = Vector(2)

vector_a.set(0,1)
vector_a.set(1,2)
vector_b.set(0,2)
vector_b.set(1,3)

print vector_a

print vector_b

vector_c = vector_a + vector_b
vector_d = vector_a - vector_b
vector_e = vector_a * vector_b
print vector_c
print vector_d
print vector_e
```