```
import tensorflow as tf
print("Matrix Multiplication Demo")

x = tf.constant([1,2,3,4,5,6],shape=[2,3])
print(x)

y = tf.constant([7,8,9,10,11,12],shape=[3,2])
print(y)

z = tf.matmul(x,y)
print("Product:",z)

e_matrix_A = tf.random.uniform([2,2],minval=3,maxval=10,dtype=tf.float32,name="matrixA")
print("Matrix A:\n{}\n\n".format(e_matrix_A))

eigen_values_A, eigen_vectors_A = tf.linalg.eig(e_matrix_A)
print("Eigenvalues of A:\n{}\n\n".format(eigen_values_A))
print("Eigenvectors of A:\n{}".format(eigen_vectors_A))
```