

Homework 1

- Write a Python program that takes as input a **numpy** $N \times M$ matrix and applies the Zoom-In operation (kx , with k entered by the user via the input function) and, subsequently, performs replication-type interpolation. Specifically:
 - Define the Zoom-In function (`def Zoom-In(x)`).
 - Define the Interpolation function (`def Interp(x)`).
 - Create the numpy array m of random values between 0 and 255 of size $N \times M$.
 - Execute the Zoom-In function ($m_z = \text{Zoom-In}(m)$).
 - Execute the Interp function ($m_i = \text{Interp}(m_z)$).
 - Print the result (`print(m_i)`).