

Introduction to Scientific Computing Software HW2

Student ID : < **Student ID** >

Please use **MATLAB** and **data.mat** to solve following problems :

1. Use **strcat** function and **name** variable which in **data.mat** to show
"My Student ID:< **Student ID** >"
2. Use **Q** and **A** which load from **data.mat** :
 - (a) Calculate $Q^{-1}A^{10}Q$
 - (b) Produces a diagonal matrix **D** of eigenvalues of **A**
3. Solve the following system of equations in the form $PX = Q$

$$\begin{cases} 5x + 4y - 5 = 0 \\ 3x - 2y + 7 = 0 \end{cases}$$