

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 $PX = Q$

$$\begin{cases} 2x+ & 3y+ & 2z = & 13 \\ & x+ & y+ & 2z = & 9 \\ 3x+ & 5y+ & 4z = & 23 \end{cases}$$