Assignment 2. Marks 10

Posted on 14.08.2021 and due on 21.08.2021 midnight

Solve the following problems numerically. Where relevant, use multiple (about 5) input parameters. Put checks for any unusual input(s) and division by 0.

1. Define two (**A**, **B**) 3 × 3 and two (**C**, **D**) 1 × 3 matrices and store them in multiple files. Find **C**·**D**, **AB** and **CA, BD**. [**2**]

2. Define your own class / structure *myComplex* and calculate the sum, product and division of two complex numbers. Also calculate the conjugate, modulus and phase angle of a complex number. [**2**]

3. Find the average distance between two points on a straight line made of N discrete points. [**2**]

4. Google which 24 countries played in the last 2019 FIFA women's World Cup football final and their capital cities. Write a game of hangman (graphics not needed) to guess the capital cities offering 40% of the word length as (integer) number of chances for wrong guess. [**4**]