MAT 335E Programming Algorithms
Lab-6 / CRN : 10611

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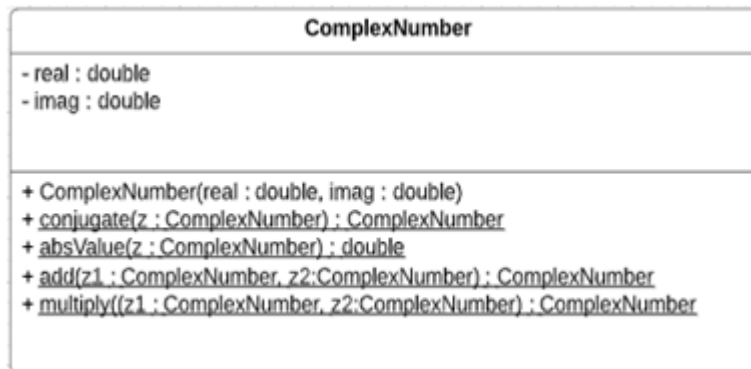
1 Question 1

Write a java source code that accomplishes the followings:

- Write a static method that takes a character as parameter and tests whether or not the character is alphabet or not. A character is considered to be an alphabet if it is between **a-z** or **A-Z**. Your function returns **true** if the character is alphabet and **false** if not.

IN MAIN METHOD:

- Generate a random character between the values 0 and 127 in ASCII table.

- Pass this random character to the function you coded.

- According to return value, print a simple message like "Character is alphabet" or "Character is not alphabet".

2 Question 2

Method information of the UML diagram of Complex Number are given below. Write a java source code of this class. Note that some getter and setter methods can be coded, if necessary.

- **conjugate()** : It finds the conjugate of complex number.
- **absValue()** : It finds length of complex number. (Hint: $|z| = \sqrt{z\overline{z}}$, where $\overline{z}$ refers to complex conjugate of the complex number z)
- **add()** : It finds the sum of two complex numbers.
- **multiply()** : It finds the multiplication of two complex numbers.