**Problem Statement**

The goal of this assignment is to the concept of **operator overloading** in C++ by implementing a program that demonstrates how operators can be overloaded to work with user-defined types. Specifically, the task is to create a class to represent complex numbers and overload various operators (e.g. \*, <<, >>) to perform arithmetic operations and input/output operations on complex numbers.

**Learning Outcomes**

* **Operator overloading** allows us to redefine the way operators behave for user-defined types (like classes).
* Overloading operators improves the readability and usability of a class because objects of the class can interact with operators naturally, just like built-in types.