

Practical -8 Basics of OOP

1) A bank application corresponding to the customer of ABC bank is being developed . It takes into consideration Name of customer, its account type (saving or current), balance corresponding to the account. Account type is by default fixed from the day when user creates and account in a bank.

Withdrawal & deposit are other operations which any customer would do. Also implement function called setbalance() & getbalance() . Ensure that minimum amount to be maintained is 1000/- in both savings and current . An error should be raised if such scenario occurs.

2) Design a class named Stopwatch. The class contains:

- The private data fields startTime and endTime with get methods.
- A constructor that initializes startTime with the current time.
- A method named start() that resets the startTime to the current time.
- A method named stop() that sets the endTime to the current time.
- A method named getElapsedTime() that returns the elapsed time for the stop watch in milliseconds.

Write a test program that measures the execution time of adding numbers from 1 to 1,000,000.

3) A small module for manipulation of complex numbers is being developed for ease of research related work. Implement add() for addition, mul() for multiplication , sub() for subtraction of two complex numbers. By default a complex number will be assigned an imaginary value of 3. Also ensure that mul() cannot be ever 0 ; so program should raise an error .