School of Computing and Data Science
Sai University
Practice Set 3: C++ Basics

1. Create a class `Student` with private data members `name` and `age`. Write setter and getter methods to assign and retrieve their values. Demonstrate their use in `main()`.
2. Define a class `BankAccount` with a private member `balance`. Provide methods `setBalance()` and `getBalance()` to update and view the balance. Ensure that negative values cannot be assigned.
3. Write a program that defines a class `Book` with private members `title` and `price`. Implement setters and getters for both members, and print the details of the book object.
4. Create a class `Rectangle` with private data members `length` and `width`. Write setter and getter methods and calculate the area using them.
5. Define a class `Employee` with private members `id` and `salary`. Use setters and getters to initialize and display their values. In `main()`, create multiple employees and print their details.
6. Write a class `Car` with private members `brand` and `model`. Provide setter and getter methods. In `main()`, create an array of cars and use the methods to assign and print their values.
7. Implement a class `Circle` with a private data member `radius`. Provide setters and getters, and an additional method `getArea()` that uses the getter to calculate the area.
8. Create a class `Account` with private members `accountNumber` and `balance`. Provide setter and getter methods. In `main()`, ensure that account details can only be accessed through these methods.
9. Write a class `Temperature` with a private member `celsius`. Provide `setCelsius()` and `getFahrenheit()` methods to convert the stored temperature to Fahrenheit.
10. Define a class `University` with private members `name` and `ranking`. Provide setters and getters. Demonstrate in `main()` that private data members cannot be accessed directly, but only via the methods.