

CERTIFICATE

of proficiency in the C++ programming language

## **Essam A. El-Sherif**

is a C++ Certified Associate Programmer - **CPA** 

Exam Version: CPA-21-02

Scope

- Basic data types and flow control
- Functions and function overloading
- Data aggregates
- Fundamentals of the object-oriented approach
- Class hierarchy and inheritance
- User-defined operators and exceptions



This certificate can be verified at verify.openedg.org

Code: PmmQ.F2o4.LgbX



September 6, 2021

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Christopher Boguslawski President, C++ Institute