

# Competitive Programming (Lecture - 1)

Abdulla Nur Faisal

4th year CSE, Eastern University

## 1 An Introduction to Programming Contests

- Solve problems based on mathematics, algorithms, data structures etc.
- Handle timed environment
- Common verdicts of online judge platforms
  - AC (Accepted)
  - WA (Wrong Answer)
  - TLE (Time Limit Exceeded)
  - MLE (Memory Limit Exceeded)
  - Compilation Error
  - Presentation Error
- Assume 100000000 (1e8) operations per second

## 2 Basics of C++

- Basic I/O
- Data types, Variables
- Arrays
- Conditional statements
- Loops
- Functions
- Structures

## 3 Time Complexity Analysis, Big O ( $\mathcal{O}$ )

## 4 Standard Template Library (STL)

- `std::pair`
- `std::vector`
- `std::sort`
- `std::set`
- `std::map`
- `std::stack`
- `std::queue`
- Research other STL functionalities

## 5 Long contest - 1