**Problem Statements**

**1. Largest of Three Numbers**

**Description:**  
Write a function that takes three integers and returns the largest among them.

int findLargest(int a, int b, int c);

**Input:**  
Three integers a, b, c

**Output:**  
An integer – the largest number

**Example:**

Input: a = 5, b = 8, c = 3

Output: 8

**Constraints:**

* -1000 <= a, b, c <= 1000

**2. Grade Calculator**

**Description:**  
Return the grade for a student based on their marks.

char calculateGrade(int marks);

**Grading Criteria:**

* ≥90: 'A', 80–89: 'B', 70–79: 'C', 60–69: 'D', <60: 'F'

**Example:**

Input: marks = 85

Output: B

**Constraints:**

* 0 <= marks <= 100

**3. Leap Year Checker**

**Description:**  
Determine whether a given year is a leap year.

bool isLeapYear(int year);

**Example:**

Input: 2020

Output: true

**Constraints:**

* 1000 <= year <= 9999

**4. Character Type Identifier**

**Description:**  
Return a string indicating whether the given character is:

* "Alphabet", "Digit" or "Special Character"

string getCharType(char ch);

**Example:**

Input: ch = '#'

Output: "Special Character"

**Constraints:**

* Valid ASCII characters only.

**5. Quadratic Equation Roots**

**Description:**  
Given coefficients a, b, and c, return the type of roots:

* "Real and Equal", "Real and Distinct", "Imaginary"

string findRootType(int a, int b, int c);

**Example:**

Input: a=1, b=2, c=1

Output: "Real and Equal"

**Constraints:**

* a ≠ 0, -100 <= a, b, c <= 100

**6. Valid Triangle Checker**

**Description:**  
Return true if the angles form a valid triangle.

bool isValidTriangle(int angle1, int angle2, int angle3);

**Constraints:**

* 1 <= angle <= 178

**7. Electricity Bill Calculator**

**Description:**  
Calculate the electricity bill based on:

* First 100 units → ₹1.5/unit
* Next 100 units → ₹2.5/unit
* Beyond 200 → ₹3/unit
* If bill > ₹500 → Add ₹50 surcharge

double calculateBill(int units);

**Example:**

Input: units = 250

Output: 550.0

**8. Day of Week**

**Description:**  
Return the day name based on input 1 to 7. If invalid, return "Invalid".

string getDay(int num);

**Example:**

Input: 3

Output: "Wednesday"

**9. Discount Calculator**

**Description:**  
Return final price after discount based on purchase total and customer type.

double finalPrice(double total, bool isPremiumCustomer);

**Rules:**

* ₹1000: 10% discount
* Premium + > ₹1000: 15%
* Otherwise: no discount

**10. Login System**

bool login(string username, string password);

**Behavior:**

* Allow 3 attempts using a loop
* Return true if successful, otherwise false