## **Application Specifications Document**

**Project Name**: Temperature Converter, Hypotenuse Calculator, and Dice Roller

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### **1. Overview**

This application will consist of three key functionalities: converting a temperature from Fahrenheit to Celsius, calculating the hypotenuse of a triangle, and simulating the rolling of two dice. The program will be developed using Object-Oriented Programming principles in Java and adhere to standard Java code conventions.

### **2. User Requirements**

* **Convert Fahrenheit to Celsius**: The user inputs a temperature in Fahrenheit, and the system converts it to Celsius.
* **Calculate Hypotenuse**: The user inputs the width and height (sides) of a right triangle, and the system computes the hypotenuse.
* **Roll Dice**: The system simulates the rolling of two six-sided dice and displays the sum of the dice rolls.

### **3. Functional Requirements**

* **Method 1**:
  + **Name**: fToC
  + **Purpose**: Convert Fahrenheit to Celsius
  + **Parameters**: double degreesF (Temperature in Fahrenheit)
  + **Return Type**: double (Temperature in Celsius)
* **Method 2**:
  + **Name**: hypotenuse
  + **Purpose**: Calculate the hypotenuse of a triangle
  + **Parameters**: int a (Width of triangle), int b (Height of triangle)
  + **Return Type**: double (Length of hypotenuse)
* **Method 3**:
  + **Name**: roll
  + **Purpose**: Simulate the rolling of two dice
  + **Parameters**: None
  + **Return Type**: int (Sum of dice rolls)

### **4. Non-Functional Requirements**

* The application must adhere to Java conventions.
* The application should be user-friendly and provide output in a readable format.

### **5. Input and Output Requirements**

* **Inputs**:
  + Fahrenheit temperature (double)
  + Width and height of a triangle (int)
* **Outputs**:
  + Converted Celsius temperature (double)
  + Length of the hypotenuse (double)
  + Sum of the dice rolls (int)

### **6. Tools and Technologies**

* **Programming Language**: Java
* **Java SDK Version**: [Insert Java SDK version]
* **IDE**: [Insert IDE]