System Requirements Specification Index

For

Math Functions

Version 1.0

IIHT Pvt. Ltd.
fullstack@iiht.com

Table of Contents

USE CASE DESCRIPTION

System Requirements Specification

1 Project Abstract

This assessment focuses on evaluating the understanding and ability to work with basic math functions and operations using Java. You need to utilize the Math class to perform operations like rounding numbers, finding square roots, performing exponentiation, and using trigonometric and logarithmic functions.

2 Assessment Tasks

Task 1: Absolute Value:

→ Use the Math.abs() method to find the absolute value of a number.

→ Example: Given a number -10, find its absolute value.

Task 2: Max and Min Values:

→ Use the Math.max() and Math.min() methods to find the maximum and minimum between two numbers.

→ Example: Find the maximum and minimum between 25 and 10.

Task 3: Square Root:

→ Use Math.sqrt() to calculate the square root of a number.

→ Example: Find the square root of 25.

Task 4: Exponentiation:

→ Use Math.pow() to calculate the power of a number.

→ Example: Calculate 2^3 (2 raised to the power of 3).

Task 5: Trigonometric Functions:

→ Use trigonometric functions like Math.sin(), Math.cos(), and Math.tan() to calculate sine, cosine, and tangent of an angle.

→ Example: Calculate the sine of an angle of 45 degrees.

Task 6: Logarithmic Operations

→ Use Math.log() to calculate the natural logarithm of a number.

→ Example: Find the natural log of 10.

3 Template Code Structure

3.1 Package: com.yaksha.assignment.MathFunctionsAssignment

Resources

Class/Interface	Description	Status
MathFunctionsAssignment (class)	• Main class demonstrating the use of mathematical functions such as: absolute value, max, min, square root, exponentiation, trigonometric functions, and logarithmic operations using the `Math` class.	Need to be implemented.

4 Execution Steps to Follow

1. **All actions like build, compile, running application, running test cases will be through Command Terminal.**
2. **To open the command terminal the test takers, need to go to Application menu (Three horizontal lines at left top) □ Terminal □New Terminal.**
3. **This editor Auto Saves the code.**
4. **If you want to exit(logout) and continue the coding later anytime (using Save & Exit option on Assessment Landing Page) then you need to use CTRL+Shift+B-command compulsorily on code IDE. This will push or save the updated contents in the internal git/repository. Else the code will not be available in the next login.**
5. **These are time bound assessments the timer would stop if you logout and while logging in back using the same credentials the timer would resume from the same time it was stopped from the previous logout.**
6. **To run your project use command:**
   mvn compile exec:java
   -Dexec.mainClass="com.yaksha.assignment.MathFunctionsAssignment"
7. **To test your project test cases, use the command**
   mvn test
8. **You need to use CTRL+Shift+B - command compulsorily on code IDE, before final submission as well. This will push or save the updated contents in the internal git/repository, and will be used to evaluate the code quality.**