

# MINT

**Mint – Mathematical INTerpreter** is a small mathematical programming language with Interpreter, which is fully designed in java. Mint is developed for solving the problems in some areas such as **matrices, 2D-3D graph plotting, combinatorics, trigonometry, calculus** etc by writing the program that is given by the Mint specified language structure. Mint helps in many ways the students, professors and also the research people. Mint provides about 100 mathematical functions for the calculations. Since Mint has a built in Interpreter it can execute the source code in the fly and show the results. Mint has its own GUI for writing programs and the output console window. Both Input and output functions are also provided in Mint. Mint follows the C-style writing program. It is done in C-style so that it is easy to learn. **The Mint built in functions replace hundreds of C or C++ or Java source codes. A function done in more than 100 lines of code is done in a single statement using Mint.** This saves the time and enables fastness in developing the program.

The types of functions provided by Mint are

- **Basic Arithmetic Calculations**
- **Trigonometric and Logarithmic Calculations**
- **Integral, Differential Calculus ( Single Variable )**
- **Matrix Calculations**
- **Complex Number Calculations**
- **Big Number Calculations ( Values in the order of  $10^n$  )**
- **Graph Plotting ( 2D [static and animated] and 3D )**
- **Combinatrics ( Permutation and Combination )**
- **Miscellaneous Functions (I/O functions etc...).**

### Sample Examples:

#### **Sample Program**

```
y = 'sin(x^2)';  
d1 = dx(y, 'x');  
print('Derivative of f(x)=' + d1);  
value = eval('x=0.5;c = ' + d1 + ';return c;');  
print('Value f(0.1)=' + value);
```

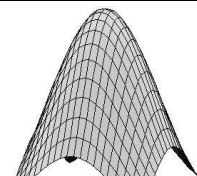
#### **Output**

Derivative of f(x)=2 \* 1 \* x ^ (2 - 1) \* cos(x ^ 2)

Value f(0.1)=0.9689124217106447

#### **Plotting Graphs, Eg: A 3D Graph**

Plot3D('cos(sqrt(x^2+y^2))\*7');



### Technical Specification:

The below is the system requirement for good working of [Mint](#)

<b>Operating System</b>	Windows 2000, Windows XP, Redhat Linux 8.0
<b>Language</b>	Java 1.4, Prolog
<b>Java Virtual Machine</b>	JRE 1.4
<b>Processor</b>	Pentium 450 MHz( minimum )
<b>Ram</b>	64 MB ( minimum)