Angon // Galimov_Vadim

Geometrica

SPMU.ITM-19

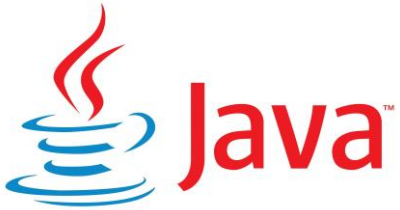
Why Java?

- Cross-platform
- OOP
- High-level
- Popular
- Beautiful
- Java-style

May 2021	May 2020	Change	Programming Language	Ratings	Change
1	1		C	13.38%	-3.68%
2	3	↑	Python	11.87%	+2.75%
3	2	↓	Java	11.74%	-4.54%
4	4		C++	7.81%	+1.69%
5	5		C#	4.41%	+0.12%
6	6		Visual Basic	4.02%	-0.16%
7	7		JavaScript	2.45%	-0.23%
8	14	⇈	Assembly language	2.43%	+1.31%
9	8	↓	PHP	1.86%	-0.63%
10	9	↓	SQL	1.71%	-0.38%
11	15	⇈	Ruby	1.50%	+0.48%
12	17	⇈	Classic Visual Basic	1.41%	+0.53%
13	10	↓	R	1.38%	-0.46%
14	38	⇈	Groovy	1.25%	+0.96%
15	13	↓	MATLAB	1.23%	+0.06%
16	12	⇊	Go	1.22%	-0.05%
17	23	⇈	Delphi/Object Pascal	1.21%	+0.60%
18	11	⇊	Swift	1.14%	-0.65%
19	18	↓	Perl	1.04%	+0.16%
20	34	⇈	Fortran	0.83%	+0.51%

TIOBE Rating — May 2021

Tools used



Oracle
Java
JDK 15.0.2

Gluon
JavaFX
15.0.1

JetBrains
IntelliJ IDEA
CE 2021.1.1

Gluon
SceneBuilder
15.0.1

Apache
Maven
3.8.1

The math

The Triangle method (Gauss formula):

$$S = \frac{1}{2}|x_i y_{i+1} + \ldots + x_n y_1 - x_{i+1} y_i - \ldots - x_1 y_n| = \frac{1}{2}\left|\sum_{i=1}^{n}(x_i y_{i+1} - x_{i+1} y_i)\right|,$$

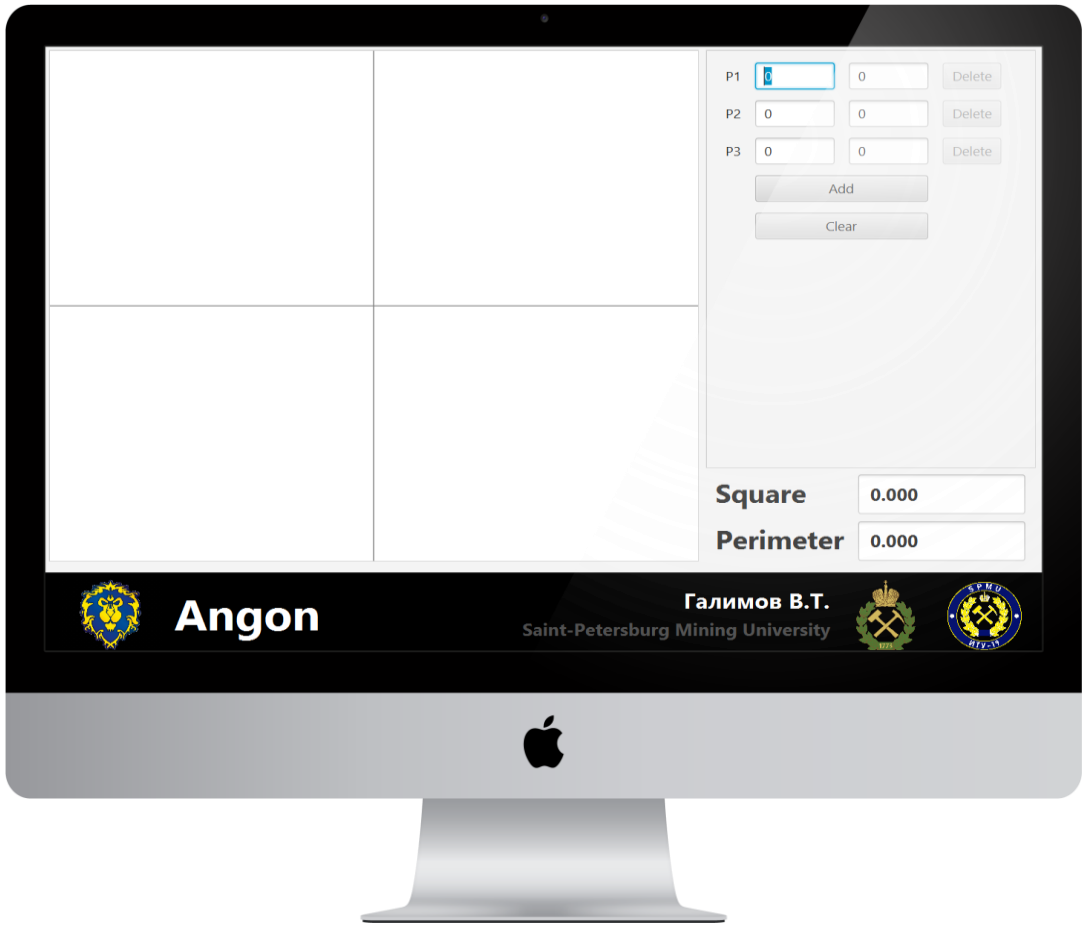
$$n + 1 \equiv 1$$

Calculating perimeter using the Pythagorean theorem:

$$P = \sum_{i=1}^{n} d_i = \sum_{i=1}^{n} \sqrt{\Delta x_i{}^2 + \Delta y_i{}^2} = \sum_{i=1}^{n} \sqrt{[x_{i+1} - x_i]^2 + [y_{i+1} - y_i]^2}, n + 1 \equiv 1$$

Standalone

Standalone means to stand alone, no compromise

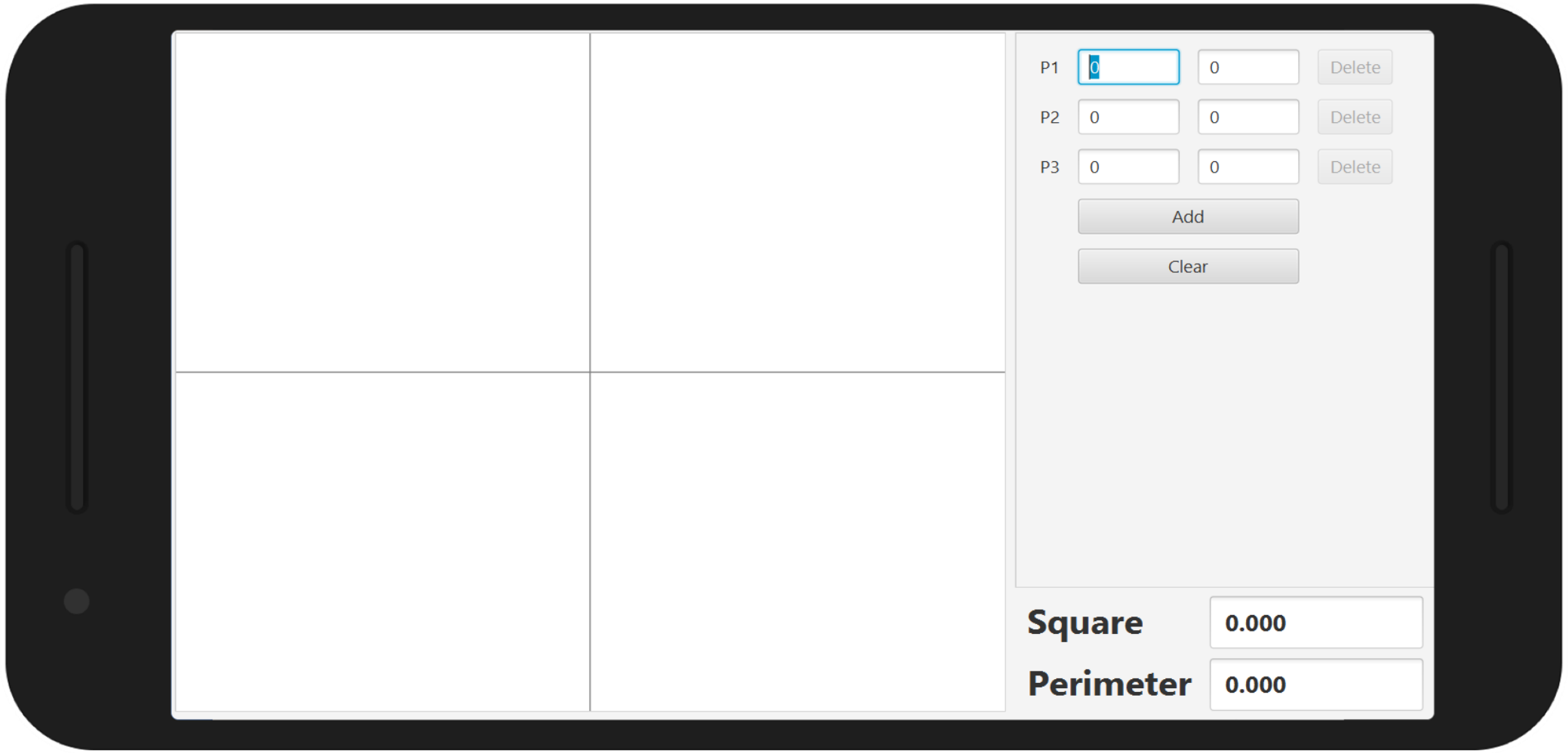


No JRE
No IDE
No archiver

Only OS with GUI

Portable

The app can be easily ported to Android



Beautiful and simple

Apple-style interface — easy and clear

Auto-updating
Auto-selecting
Zoomable
Pannable

~~Tedious~~

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