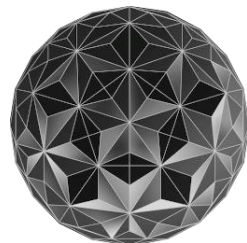




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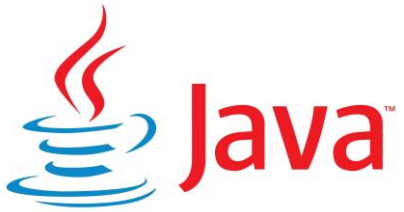
Why Java?

- 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):

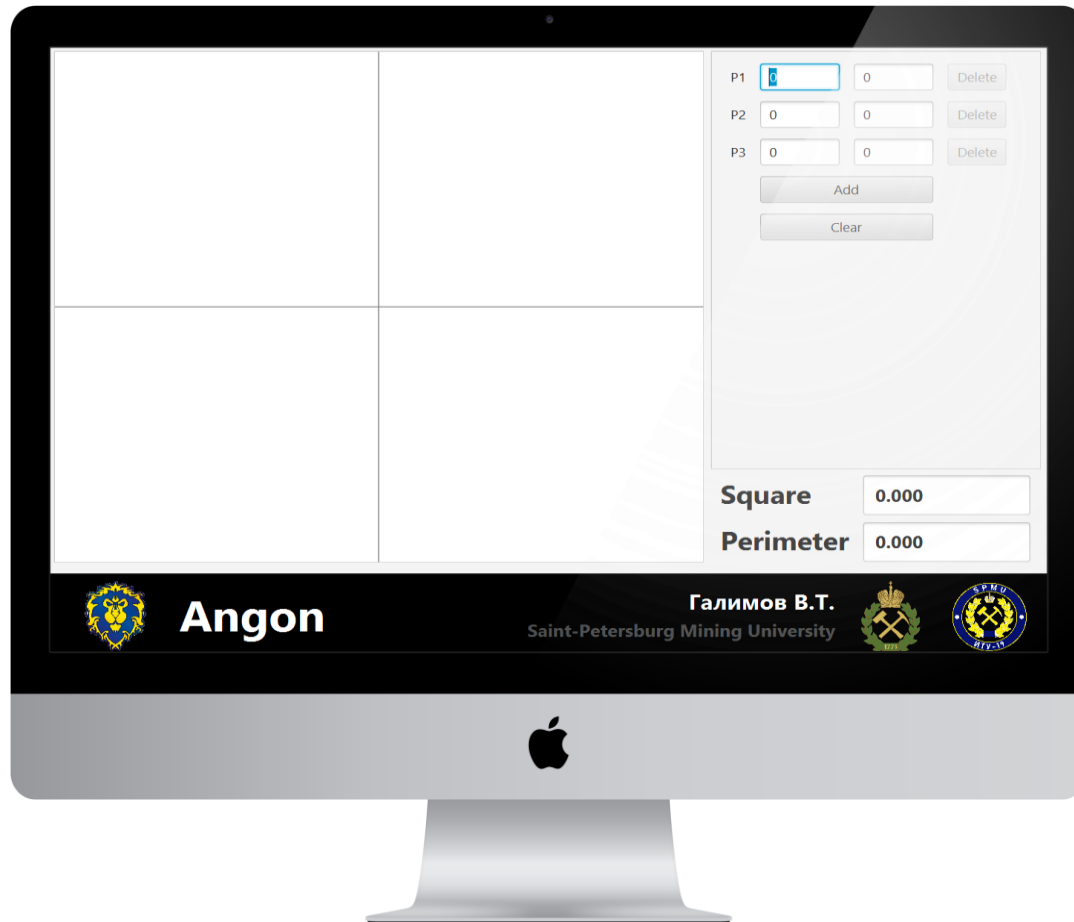
$$S = \frac{1}{2} |x_1 y_{i+1} + \dots + x_n y_1 - x_{i+1} y_i - \dots - x_1 y_n| = \frac{1}{2} \left| \sum_{i=1}^n (x_i y_{i+1} - x_{i+1} y_i) \right|,$$
$$n + 1 \equiv 1$$

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

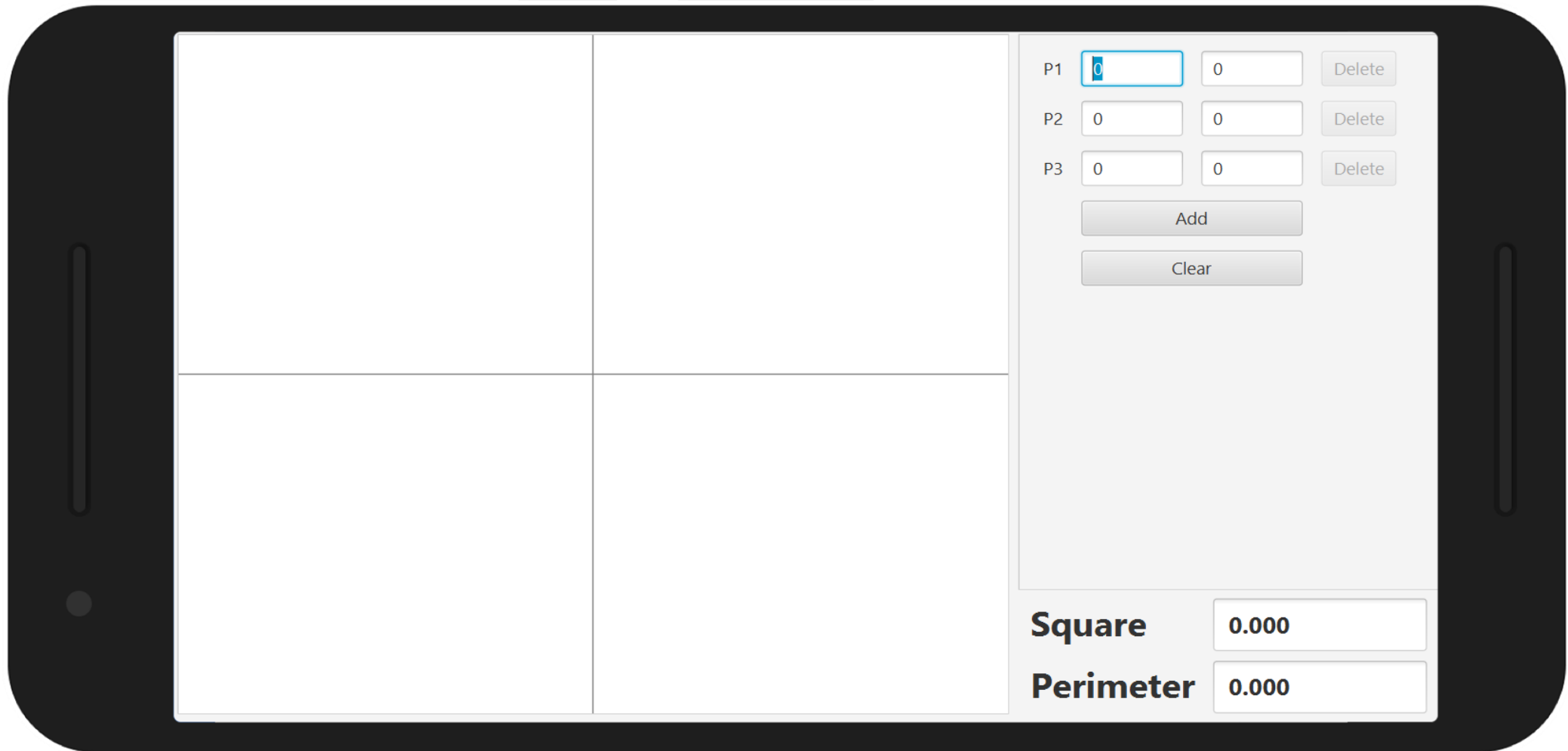
No IDE

No archiver

Only OS with GUI

Portable

The app can be easily ported to **Android**



Beautiful and simple

Apple-style interface — easy and clear

The screenshot shows a software interface with a large empty square on the left. On the right, there is a control panel with three rows of input fields labeled P1, P2, and P3. Each row has a 'Delete' button. Below these are 'Add' and 'Clear' buttons. At the bottom of the panel, there are two fields: 'Square' and 'Perimeter', both displaying '0.000'. The bottom of the interface features a black bar with the 'Angon' logo, the name 'Галимов В.Т.', the text 'Saint-Petersburg Mining University', and two circular logos.

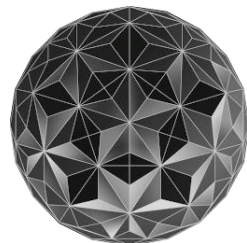
Auto-updating
Auto-selecting
Zoomable
Pannable

~~Tedious~~



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