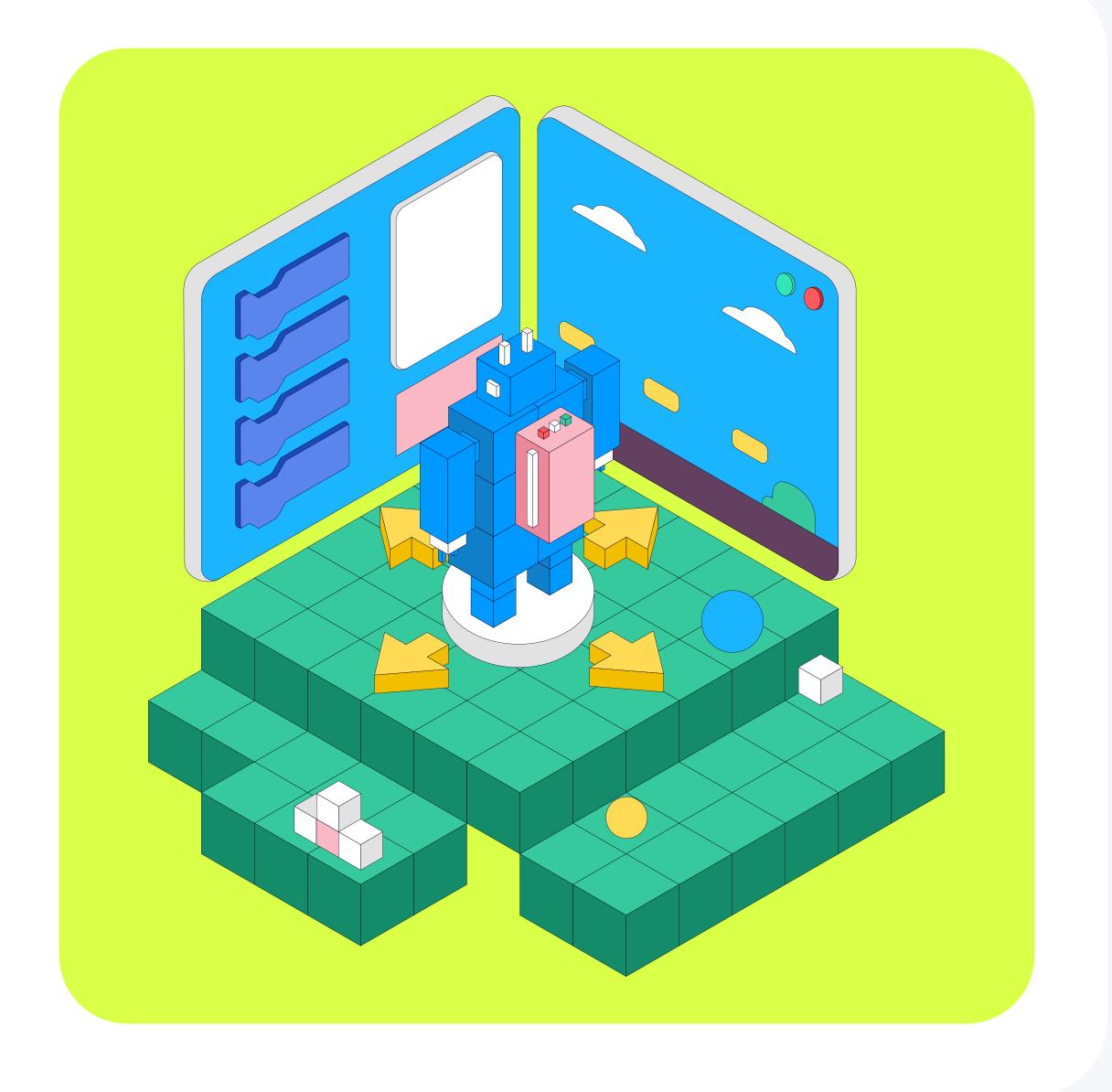# Creating computer programs in Python

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Beginner level

Materials prepared by the department
of methodological development department

Calculator. Part 1

tkinter is a library for creating graphic programs, that is, programs consisting of windows and widgets placed on them.

A widget is a graphical element on a window designed to interact with the program or display information. For example, it can be a button, an input field or an inscription.

To create a widget, you need to call the corresponding function from the tkinter library. As a parameter of this function it is necessary to pass the window on which the widget will be placed. And also the widget can be configured with various parameters (background and text color, font, etc.).

In order for the widget to appear on the window, it must be placed using the place command.

`window = tkinter.Tk()`

Creating the main program window

`window.mainloop()`

Function for updating the program window. It is written with the last line of the program.

`window.title('My calculator')`

Changing the window title

`window.geometry('300x300')`

Resizing the window

```python
button_add = tkinter.Button(window, text='+')
```

Check the occurrence of the left part in the right part.

```python
button_add.place(x=95, y=110)
```

Placing a widget in the box at the specified coordinates

```python
text = tkinter.Entry(window, width=20)
```

Creating an input field

```python
text.get()
```

Returns the text written by the user in the input field widget

text.insert(where, what)

Inserts text into the input field at a specified position

text .delete(from, to)

Deletes text from the input field from and to the specified position.
If "end" is passed to "to", the text is deleted with the last character.