

## **Educational Video Game „LediBug“**

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The project describes an educational web game called LediBug, which aims to teach children and novice programmers basic programming skills in an interactive and entertaining way. The project belongs to the field of educational software and game-based learning.

The game will be created using the Godot Engine and will run in a 2D on Web browser, where the interface is divided into two parts: on one side of the screen, the player has a text editor for writing code, using a Python-like syntax, and on the other side is a game environment in which the player controls ledybug using the written code.

Each level of the game is designed so that the player can overcome several different arrangements of obstacles using the same code, which helps develop logical thinking and an algorithmic approach. One of the main technical challenges of the project is the implementation of the logic for compiling and executing the code, as well as the correct detection of syntax and logical errors and their display to the user in a way that is understandable. Another important aspect is the game design, which gradually increases the difficulty of the levels and facilitates the learning process.

The ultimate goal of the project is to create an easy-to-understand, but at the same time educational game that will motivate eager users to learn the basics of programming.