

Minimum Viable Product

The Stack is a web-based learning game for people new to computer programming. The core feature is a drag-and-drop system in which the player can move around code snippets or “blocks”, solving challenges by putting the code in the right order and formation. Different constructs and control elements are colour-coded to reinforce the player’s memory, and multiple levels are available, each introducing new programming concepts such as loops and conditional statements. Each set of levels builds upon the previous set, but learners with prior experience can skip ahead to find a more challenging problem. Program output is displayed at the touch of a button, and the clever design of the stackable “blocks” guarantees that all code is complete and produces good output, so that the player can test their skills outside of the premade levels. By creating an account, the user also gets access to other great features like a level checklist that tracks their progress as they complete the levels. One of the technical challenges of a system that produces output on whatever the player enters is that an interpreter is needed to process their input. With such an interpreter, The Stack becomes a simple graphical programming language in itself.