

Programming for Kids: Learn to Code in Python by Making Fun Games

Outline

This course offers a gentle and fun introduction to the world of programming and game development, teaching basic coding and game design concepts. The goal of the course is to get kids comfortable and passionate about coding in a fun interactive way. It is also a great way for creative kids to express themselves by bringing their own game ideas to life.

Modules		Takeaways	Key Exercise
Module 1	Basic Blocks	<ul style="list-style-type: none"> Getting to know your programming environment What is coding, and why is it good for your kids? Plus, how to get the most from this course. Writing your first program in python Run Python programs, and change them to make them even cooler. 	<ul style="list-style-type: none"> Basic coding fundamentals Assignments 1
Module 2	Turtle Graphics in python	<ul style="list-style-type: none"> Intro to turtle graphics in python Creating our first turtle program We will build a winding spiral We will build a circle spiral Adding color to our turtle drawings Working with shapes and numbers 	<ul style="list-style-type: none"> Assignment 2
Module 3	Number and Variables in Python	<ul style="list-style-type: none"> Introduction to variables Numbers and simple math in python Python numbers and operators Math in the python shell Syntax Errors and how to handle them Programming with operators Learning all about Strings Improving our colorful Spiral with Strings Introduction to Lists in Python Finally making an application that will solve your math problems. Exciting isn't it. 	<ul style="list-style-type: none"> Assignment 3
Module 4	Loops and why are they useful	<ul style="list-style-type: none"> Introduction to Loops and their usage. Different types of loops and optimal ways to use them. Using FOR LOOPS to draw shapes Modifying FOR LOOPS Taking user input through FOR LOOPS WHILE LOOPS 	<ul style="list-style-type: none"> Assignment 4
Module 5	Conditions	<ul style="list-style-type: none"> Intro to conditions: What IF? If Statements, Comparison operators IF Statement example: Old Enough Else Statements, Polygons or Rosettes Even or Odd numbers Elif Statements 	<ul style="list-style-type: none"> Assignment 5
Module 6	Functions	<ul style="list-style-type: none"> Introduction to function in python Creating our first block of function Creating a random spiral function Using Parameters in our functions Using return values in our program We'll create our random smiley app. 	<ul style="list-style-type: none"> Assignment 6

- We will build a guessing game
 - We will build a rock paper scissor game
 - We will build a program to roll a dice
- Assignment 7