

mix [347, 298]. The installation process is very st, you open a terminal by pressing [cod] [63]; have community --classic and bit [min [Fig-and the necessary super user privileges are ob-



g language. Our goal is to get familiar with and with the tools and ecosystem surrounding

My used programming languages [50]. We plot

e undisputed default language of choice

or research position, chances are that Python of Stack Overflow survey [103], Python was the sSorigt and HTML/CSS. In Githial's Octobers i most popular programming language, ranking s of Artificial Intelligence (Al) [271], Machine

[] as well as optimization, which are among the e aforementioned Octoverse report [113] states ies supporting both research and application de-

here are also many Python packages supporting ctivity to databases (DBs) [343], or support for

the around of memory available on your computes . one that $\overline{(ab)} \in \mathbb{Z}$.

of the hexagon. If we use the same six corners

base x, beight $\frac{1}{2}$, and bypotenuss r. This gives sing r = 1. We get $x^2 = 1 - (\frac{1}{2})^2 = 1 - \frac{1}{2}$ on to $s_{13}^2 = y^2 + (\frac{w}{2})^2$, which we can resolve $s^2 - 2sb + b^2$ and applying it to the first term. then gives us $s_{12}^2 = 2 - 2\sqrt{1 - \frac{s_0^2}{4}} - \frac{s_0^2}{4} + \frac{s_0^2}{4}$. We can pull th 2 from outside the root into the

is $D=2\tau$. Assuming that the circumference of can get closer to the actual ratio if we would

 $m^2 = 2 - \sqrt{4 - m^2}$. Thus, we have the really 6+++ = 6\sqrt{2-\sqrt{4-4\sqrt{2}}} = 6\sqrt{2-\sqrt{4-1}} We can actually repeat this step to get to xxx. I the number the edges. Repeating the above

(4.2)

in Listing 4.1. We begin by setting the number of edges x = 0 and the side length to x = 0, still choosing r = 1. In each iteration of the approximation, we simply set w == 2, which is equipalent to x = x ≥ 0 double the number of edges. We compute y = equit 2 = equit (x = y) have a requirement of edges. We compute y = equit 2 = equit (x = y) having imported the equit function from the minim models. We print the approximated value of r x = x / 2. Mixto how eligibarity we use the unicode characters r and n via the escapes (minimal) and huzzer, respectively, from back in Section 3.6.6 (and how nicely it indeed prints the greek character or in the atdoort in Listing 4.4). Either way, since Equations 4.1 and 4.2 are always the same, we can simply copy-pasts the lines of code for updating w_i , w_i , and printing the approximated value of v several of the approximation of π using the method of

a has py i_liu_bui.py gives in Listing 4.3.

give us end.1008285412302498. give us shd.1008280412302400. give us shd.132628612281237. I give us shd.139300203046872. give us shd.14103103080002.

ut) produced by this program. Indeed, each HINDRESSERVEN, we find that the first four urs or the obsides terminal in Figure 4.4. They If only very sporadically add such screenshots. I like Listings 4.3 and 4.4.







azu and configuring a virtual environment fo senonal GRHub account, and insurance in lipboard by clicking the button in Figure 15.1.2 is https://github.com/thomasiwine/databasesCude.git. If you wanted to close the repositor with the example codes for this book instead, you would use https://github.com/thomasiwine.

programingWithPythonCode.git It is important to understand, however, that creating projects by cloning Git repositories is by no means restricted to Gibbab. As stated before, Git is a client-server application. You could work in an