

Moto_Info

Introduction

The Moto_Info program is a tool for people looking for a new car. Before finding their dream offer, potential buyers must search through at least 1000 of them. The Moto_Info program will perform an initial search on two popular classifieds websites and gather information about the number of used cars listed for sale on each of these platforms. The next step in the analysis will be to provide the user with the lowest, highest, and average prices of the listings found there. By doing this, the user will have a broader perspective and more information or suggestions on where to start their search.

Data

The data I would like to analyze includes numerical data such as quantity, minimum price, average price, and maximum price. Obtaining this data would be done automatically through web scraping methods on popular online classifieds portals.

Tools

IntelliJ IDEA

In order to create advanced or those simple, recreational IT programs for which the programmer or the organization for which the programmer is writing the program, a code editor is needed. A great editor is IntelliJ IDEA, a commercial integrated development environment that can compile a written script. The editor was written in Java language by the company "JetBrains". The first publication appeared on the market in the first quarter of 2001. This version had a set of tools to support refactoring. Currently, it offers many helpful tips and keyboard shortcuts to assist the programmer in his work. It supports 19 programming and automation languages such as "Java", "Python", "Scala" or languages designed for websites like "HTML", "CSS". IntelliJ IDEA also provides interoperability with many other open source development environments or tools, such as "GIT", "Apache Maven", "Apache Ant", "JUnit", "CVS" or "SVN". The editor also has an interesting for many IT fanatics, dark theme of the interface layout. There are many plugins available to extend the functionality of the raw version of IntelliJ IDEA such as "Rainbow Brackets" by "izhangzhihao" which improves code readability by cascading colors of overlapped rounded, square and bracket brackets, or the plugin "Snyk Security - Code, Open Source, Container, IaC Configurations" which analyzes the code written by the programmer and returns a report on the security of the created application. The reports are presented in a very readable manner and pose no problem in understanding them for novice programmers. "Snyk" also presents potentially possible solutions to problems related to security vulnerabilities. There are also recreational plugins created to bring a smile to the face of the IntelliJ IDEA code editor user, one such plugin is "Nyan Progress Bar" by "Dimitry Batkovich", which turns the existing compiler loading bar into a rainbow tail of the iconic character in the development community that is "Nyan Cat".

Python

A programming language with many frameworks dedicated to specific tasks, applications or programs and with a very extensive list of standard libraries is a wide range of possibilities for the programmer. The main idea behind this language is the clarity and readability of the source code. The main feature of the syntax is clarity and conciseness. Python supports various types of programming such as imperative, object-oriented and, to a much lesser extent than the previous two, functional. A distinctive point is the dynamic type system and automated memory management, which is why you won't encounter variable declarations in it, for example, integer, double, String. Python is a very popular programming language, which makes its interpreters available for many operating systems. The development is carried out as open source, whose trustee is the "Python Software Foundation", modelled on the "Apache Software Foundation". It is a non-profit organization. The implementation of the language, which is also standard, is written in the "C" language, "CPython". It is standard because others also exist. The implementation written in the "Java"

language is JPython, and written in "Common Lisp" and "IronPython" is "CLPython", for the ".NET" platform. The beginnings of Python took place in the early 1990s, its creator was Guido van Rossum. The language was intended to be a successor to the "ABC" language, and was developed at the Center for Mathematics and Computer Science in Amsterdam (CWI - Centrum voor Wiskunde en Informatica). Interestingly, the designer did not refer to an animal when he proceeded to choose the name of the programming language. He was a big fan of the comedy series, popular in the 1970s aired on "BBC" television under the title "Monty Python's Flying Circus". Based on information gleaned from the Internet, in 2020 there were 25 frameworks available for public use, dedicated to the Python language, written in Python as well as those written based on it. The "GeoFinderUI" application was written using the "Flask" framework. Flask is a micro web framework, it has this backend because it does not require individual tools or libraries. It is a great choice when designing and programming a web application.

Selenium

Selenium is an open source project, most commonly found in the form of a library available for many programming languages. The purpose of this package is to enable easy automation of access to the browser. A possible use of the functionality of this powerful tool is, for example, to search for a specific phrase typed automatically by the program, and then using Web Scraping technology, to find the information of interest to the user stored in the source code of a web page written in "HTML". For this to be possible, in addition to a correctly stored automation routine in a script of one of the languages including "C#", "JavaScript (Node JS)", "Groovy", "Ruby", "Java", "Perl", "PHP", "Scala" and "Python", a browser driver is needed. The official Selenium website provides 5 drivers for the most popular browsers, "Chrome", "Firefox", "Edge", "Internet Explorer" and "Safari". The package is available for 3 operating systems "Windows", "Linux", "macOS". The author of Selenium is Jason Huggins. In 2004 he created the tool for internal use in the company "ThoughtWorks". The project was quickly recognized as a great achievement and received great publicity. In 2005, Dan Fabulich and Nelson Sproul proposed the release of a series of patches to transform what was known as "Selenium Remote Control (RC)" into the Selenium tool very well known today in the IT community using mainly Web Scraping technologies. The name Selenium comes from a joke contained in one of the emails sent by Huggins. The joke was intended to foreground the competition, which was Mercury Interactive Corporation. Mercury is an Israeli company bought out by global technology giant HP Software Division. The humorous email had in its subject line the phrase "you can cure mercury poisoning by taking selenium supplements".