SEMINAR REPORT

ON

PRICE COMPARISON

SUBMITTED BY

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UNDER THE GUIDANCE OF

Prof. M. B. RANGDAL

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

PRADNYA NIKETAN EDUCATION SOCIETY, PUNE.
NAGESH KARAJAGI ORCHID COLLEGE OF ENGINEERING & TECHNOLOGY, SOLAPUR - 413002

(AFFILIATED TO DR. BABASAHEB AMBEDKAR TECHNOLOGICAL UNIVERSITY, LONERE MAHARASHTRA (DBATU))

2022 – 2023

CERTIFICATE

This is to certify that the seminar entitled **PRICE COMPARISON** has been completed by following students of TE CSE class in a satisfactory manner under our guidance.

Mr. KEDAR SWAMI

Mr.ISHWAR DAMA

Mr. YASHRAJ VIBHUTE

The seminar is found to be complete in partial fulfillment for the award of Degree of Bachelor of Computer Science & Engineering of Dr. Babasaheb Ambedkar Technological University, Lonere, Raigad.

Prof. M.B. Rangdal	(Dr. V.V.BAG)	(Dr. J. B. DAFEDAR)
SEMINAR GUIDE	HOD	PRINCIPAL

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Place: NKOCET, Solapur
Date: 24/12/2022

SEMINAR APPROVAL SHEET

The project entitled **PRICE COMPARISON** submitted by the following students

Mr. KEDAR SWAMI

Mr. ISHWAR DAMA

Mr. YASHRAJ VIBHUTE

is hereby approved in partial fulfillment for the award of Degree of Bachelor of Computer Science & Engineering of Dr. Babasaheb Ambedkar Technological University, Lonere, Raigad.

EXAMINERS

1. _____

2. _____

3. _____

4. _____

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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ACKNOWLEDGEMENT

I would also like to extend my gratitude to the principal sir “DR. J. D. DAFEDAR” and HOD “Dr. V.V.BAG” for providing me with all facilities that were required.

I would like to express my special thanks to “PROF. M. B. RANGDAL SIR” who gave me the golden opportunity to do this seminar of **Price Comparison through Web Scraping**

Abstract

Crypto currencies are a type of digital currencies based on cryptography principles.Crypto currencies are a unique combination of three characteristics: they provide anonymity, they are independent of central authority and they provide protection from double spending attack.

Nowadays there are many websites available to deal with the Crypto currencies .All websites provide different prices of a particular Crypto currency at the same time.

So the investor requires to have watch for the price of particular Crypto currency on various website at same time and for that the investors requires numbers of monitors at same time So to provide the actual current or updated price of the particular Crypto currency for the real time

To resolve this problem we have developed a project that compares the values of Crypto currency from various websites and displays it on our interface and also updates the real time values continuously on the same interface .

So it is very useful for all the investors to monitor the current prices of the crypto currency from various websites at run time so the investors can get a good deal and also saves the time of investors . The cost for the various monitors and its connectivity is also reduced .

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CHAPTER 1: INTRODUCTION

1.1 Problem Statement : -

To develop an efficient interface for the investors to monitor the price of different crypto currencies from different websites at same time .

1.2 Significance of the Project :-

What is cryptocurrency?

Cryptocurrency is a digital payment system that doesn't rely on banks to verify transactions. It's a peer-to-peer system that can enable anyone anywhere to send and receive payments. Instead of being physical money carried around and exchanged in the real world, cryptocurrency payments exist purely as digital entries to an online database describing specific transactions. When you transfer cryptocurrency funds, the transactions are recorded in a public ledger. Cryptocurrency is stored in digital wallets.

Cryptocurrency received its name because it uses encryption to verify transactions. This means advanced coding is involved in storing and transmitting cryptocurrency data between wallets and to public ledgers. The aim of encryption is to provide security and safety.

The first cryptocurrency was Bitcoin, which was founded in 2009 and remains the best known today. Much of the interest in cryptocurrencies is to trade for profit, with speculators at times driving prices skyward.

How does cryptocurrency work?

Cryptocurrencies run on a distributed public ledger called blockchain, a record of all transactions updated and held by currency holders.

Units of cryptocurrency are created through a process called mining, which involves using computer power to solve complicated mathematical problems that generate coins. Users can also buy the currencies from brokers, then store and spend them using cryptographic wallets.

If you own cryptocurrency, you don't own anything tangible. What you own is a key that allows you to move a record or a unit of measure from one person to another without a trusted third party.Although Bitcoin has been around since 2009, cryptocurrencies and applications of blockchain technology are still emerging in financial terms, and more uses are expected in the future. Transactions including bonds, stocks, and other financial assets could eventually be traded using the technology.

Cryptocurrency examples

There are thousands of cryptocurrencies. Some of the best known include:

Bitcoin:

Founded in 2009, Bitcoin was the first cryptocurrency and is still the most commonly traded. The currency was developed by Satoshi Nakamoto – widely believed to be a pseudonym for an individual or group of people whose precise identity remains unknown.

Ethereum:

Developed in 2015, Ethereum is a blockchain platform with its own cryptocurrency, called Ether (ETH) or Ethereum. It is the most popular cryptocurrency after Bitcoin.

Litecoin:

This currency is most similar to bitcoin but has moved more quickly to develop new innovations, including faster payments and processes to allow more transactions.

Ripple:

Ripple is a distributed ledger system that was founded in 2012. Ripple can be used to track different kinds of transactions, not just cryptocurrency. The company behind it has worked with various banks and financial institutions.Non-Bitcoin cryptocurrencies are collectively known as “altcoins” to distinguish them from the original.

1.3 Objectives:-

The objective of this project is to develop a price comparison website that will have the following functions:

1. To provide customers with a list of price comparison and highlight the cheapest price

2. To increase price consciousness among consumers.

3. To ensure that the price database is updated regularly so that customers will be able to get accurate results

4. To provide service for users to find the product’s price.

CHAPTER 2: METHODOLOGY

2.1 Requirements :-

Software requirements : -

1) Installing Python
2) Selenium Module
3) Tkinter Module

2.2 Procedure :-

What is Web Scraping?

Web scraping is an automatic method to obtain large amounts of data from websites. Most of this data is unstructured data in an HTML format which is then converted into structured data in a spreadsheet or a database so that it can be used in various applications. There are many different ways to perform web scraping to obtain data from websites. These include using online services, particular API's or even creating your code for web scraping from scratch. Many large websites, like Google, Twitter, Facebook, StackOverflow, etc. have API's that allow you to access their data in a structured format. This is the best option, but there are other sites that don't allow users to access large amounts of data in a structured form or they are simply not that technologically advanced. In that situation, it's best to use Web Scraping to scrape the website for data.

How Web Scrapers Work?

Web Scrapers can extract all the data on particular sites or the specific data that a user wants. Ideally, it's best if you specify the data you want so that the web scraper only extracts that data quickly. For example, you might want to scrape an Amazon page for the types of juicers available, but you might only want the data about the models of different juicers and not the customer reviews.

So, when a web scraper needs to scrape a site, first the URLs are provided. Then it loads all the HTML code for those sites and a more advanced scraper might even extract all the CSS and Javascript elements as well. Then the scraper obtains the required data from this HTML code and outputs this data in the format specified by the user. Mostly, this is in the form of an Excel spreadsheet or a CSV file, but the data can also be saved in other formats, such as a JSON file.

Why is Python a popular programming language for Web Scraping?

Python seems to be in fashion these days! It is the most popular language for web scraping as it can handle most of the processes easily. It also has a variety of libraries that were created specifically for Web Scraping.

Selenium is an open source umbrella project for a range of tools and libraries aimed at supporting browser automation. It provides a playback tool for authoring functional tests across most modern web browsers, without the need to learn a test scripting language. **Scrapy** is a very popular open-source web crawling framework that is written in Python. It is ideal for web scraping as well as extracting data using APIs.

Beautiful soup is another Python library that is highly suitable for Web Scraping. It creates a parse tree that can be used to extract data from HTML on a website. Beautiful soup also has multiple features for navigation, searching, and modifying these parse trees.

PROCEDURE : -

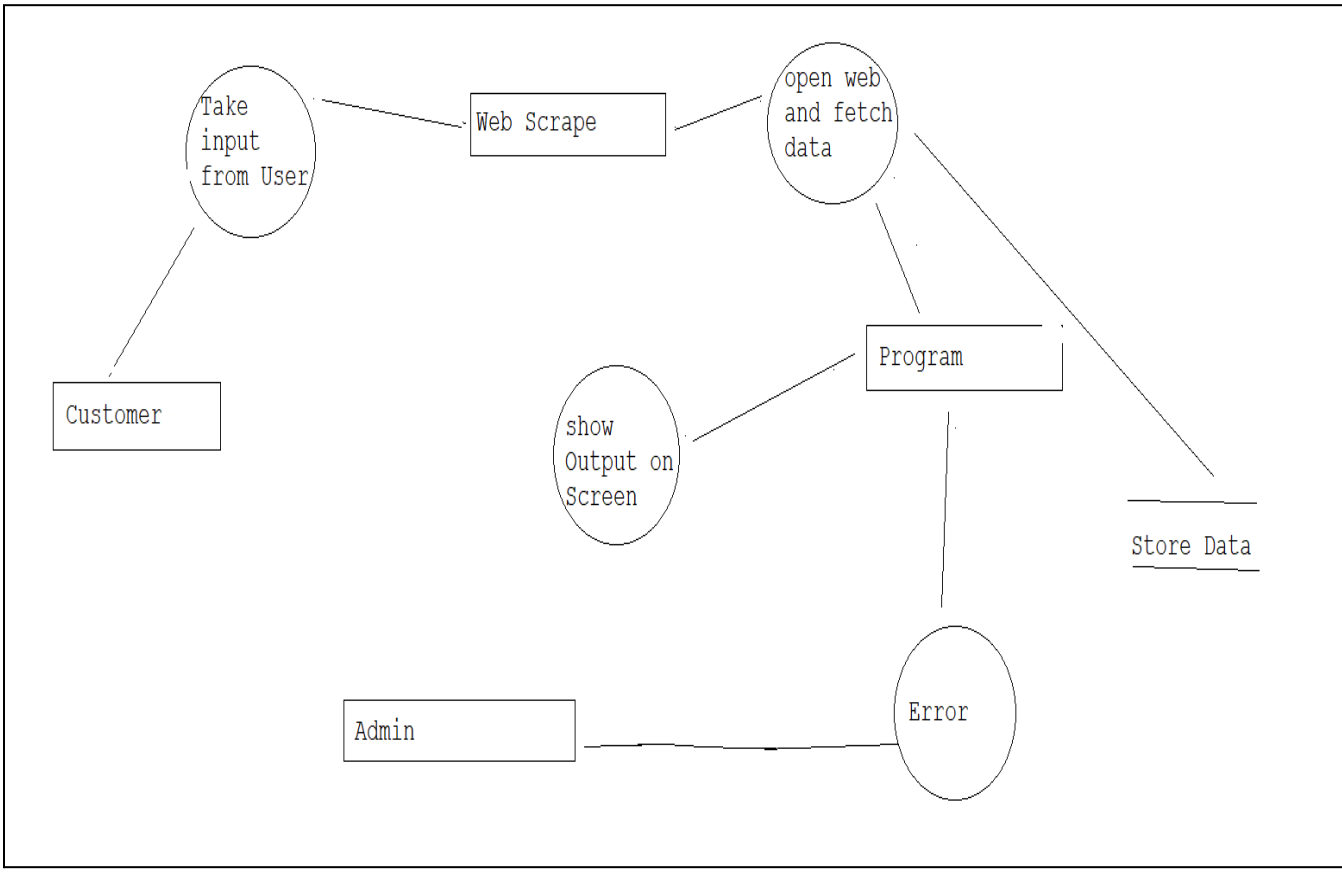
Steps : -

1) First of all we require one IDE .
2) We used Python Language .
3) In python we are using the Selenium module which is used for many purposes but for now we will use this for Web Scraping.
4) We need a Web Driver for accessing the websites that we want to scrape from.
5) We also used the Tkinter toolkit to design our windows / interface.
6) We created two windows for the interface.
7) One for starting the process and getting the websites that the user is going to provide us .
8) And another for getting the prices from the specified websites simultaneously and showing the prices on the new second window at the same time which will help the user to watch the prices and help him/her to compare the prices.
9) Then we take the two inputs as the source 1 and source 2 from the first window interface - the links of websites from which we scrap the price of that particular crypto currencies and compare them.
10) After giving the inputs of two websites to our program , our program starts fetching the data from those websites / prices of that crypto currencies.
11) After fetching the prices of the crypto currencies our program compares those prices and shows the best price for the investors to invest.
12) Our program is continuously going to update the prices of that crypto currencies also as we will continuously press the next button to get the updated price of the respective Crypto.

CHAPTER 3: RESULTS AND DISCUSSION

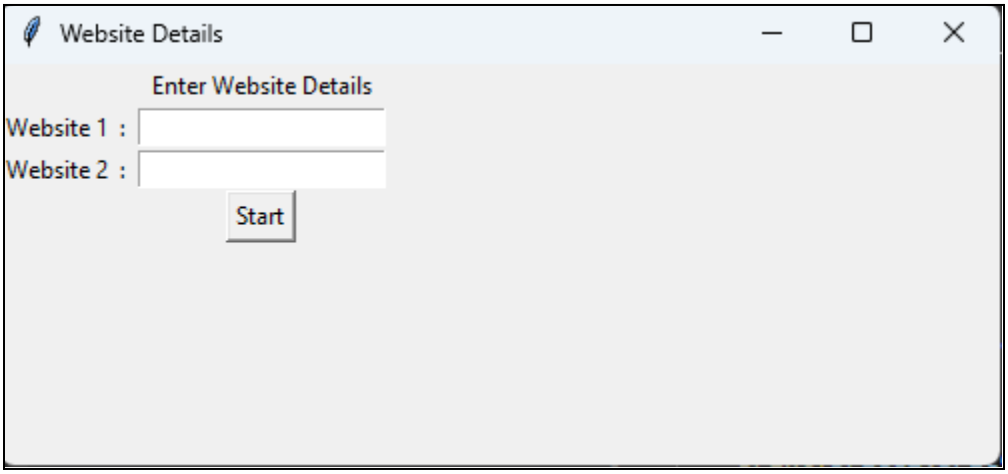
3.1 System design

3.1.1 Data Flow Diagram

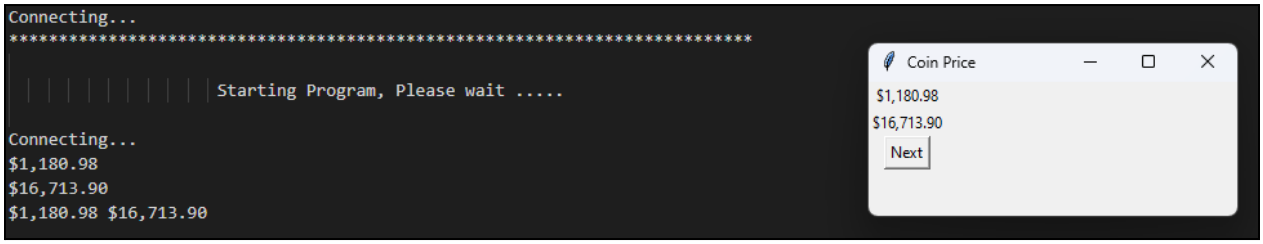


3.1 Fig DFD Of Price Comparison

3.2 Interface Design:-



3.2 Interface Design 1



3.3 Interface Design 2

CHAPTER 4: CONCLUSION

4.1 Advantages

Web Scraping has multiple applications across various industries. Let's check out some of these now!

1. Price Monitoring

Web Scraping can be used by companies to scrap the product data for their products and competing products as well to see how it impacts their pricing strategies. Companies can use this data to fix the optimal pricing for their products so that they can obtain maximum revenue.

2. Market Research

Web scraping can be used for market research by companies. High-quality web scraped data obtained in large volumes can be very helpful for companies in analyzing consumer trends and understanding which direction the company should move in the future.

3. News Monitoring

Web scraping news sites can provide detailed reports on the current news to a company. This is even more essential for companies that are frequently in the news or that depend on daily news for their day-to-day functioning. After all, news reports can make or break a company in a single day!

4. Sentiment Analysis

If companies want to understand the general sentiment for their products among their consumers, then Sentiment Analysis is a must. Companies can use web scraping to collect data from social media websites such as Facebook and Twitter as to what the general sentiment about their products is. This will help them in creating products that people desire and moving ahead of their competition.

5. Email Marketing

Companies can also use Web scraping for email marketing. They can collect Email IDs from various sites using web scraping and then send bulk promotional and marketing Emails to all the people owning these Email IDs.

4.2 Conclusion:-

Nowadays we can see that the interests of people in investing in the various crypto currencies is increasing day by day . The cryptographic market is becoming the fastest growing market. Traffic and customer load is also increasing in this market. Sometimes it results in many problems and it is uncomfortable for the investors to look for the proper thing .

So, it is very essential to make innovations or create many new facilities in this industry / market. This is very important to enhance the users experience and for making them very comfortable.

As we all know that the values or prices of each crypto currency changes inconsistently ; there is no way that we can predict the exact prices of these crypto currencies ; we have to consistently monitor them . And for that many people use an expensive system with many monitors attached to it. But it is not possible for every investor to have that kind of system every time.

That's why in this project we have tried to provide one facility for the investors ; with that an investor can monitor two or more than two crypto currencies real time prices concurrently on only one screen very conveniently.

To provide such a facility in our project we are using Scraping Technique for fast fetching of the prices of more than one Crypto coin at the same time. Also providing the windows for giving the inputs of required crypto coins and for displaying the real time prices of them.

This facility can be very useful for beginners as well as experienced investors for reducing time and also the cost of heavy systems.

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