A Project Report on

"Price Comparison Website"

Submitted in partial fulfillment of the requirement for Degree in Bachelor of

Engineering (Information Technology)

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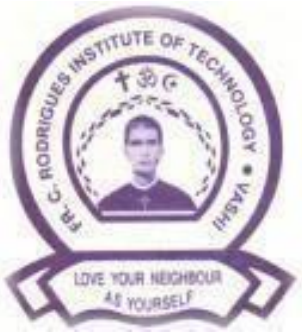

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CERTIFICATE

This is to certify that the project entitled

"Price Comparison Website"

Submitted By

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In partial fulfillment of degree of **B.E**. in **Information Technology** for term work of the project is approved.

External Examiner | **Internal Examiner**

_____ | _____

Head of the Department | **Internal Guide**

_____ | _____

Date: - | **Principal**

_____

College Seal

Declaration

I declare that this written submission represents my ideas in my own words and where others' ideas or words have been included, I have cited and referenced the original sources. I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in my submission. I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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ABSTRACT

Nowadays, Most of the user’s prefer to buy online products as they feel it’s affordable and easy to buy . Many user's just go on the website , search for the product and just buy it. But user don’t check the other websites prizes for the products . If it is high prize compare to other website as well as it will low prizes comparing the websites . It is more time consuming to go to the first website check the prices , reviews and then go to the another website and check. So the price analysis of ecommerce website make it in a easier way to find the particular product price and details with multiple websites .

Online purchasers get confused for considering which e-commerce site is best for prizing and to buy a product.price analysis of ecommerce website will display the price of the product of different websites like Amazon, filpkart, etc. So the buyers can make the decision that from which platform provides the affordable prices for the particular product. There are many e-commerce websites that provide fake prices and the fake reviews . In this , we suggest a method by which every customer gets an option of comparison between different websites and it will shows the prices of that product .

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Introduction

1. Background of study :

A price comparison website acts as a platform or medium between the consumers and the sellers. It allows consumers to see different lists of prices for the product chosen by user and it helps consumers to make an informed decision about which to choose in order to save money. It also act as a tool to help consumers increase their price consciousness so that they will not feel cheated by the advertisement from the retailers that claimed they are offering the cheapest price but the reality happened to be otherwise.

A price comparison website is a platform that allows users to compare prices and features of products across multiple retailers in order to find the best deals.This can help users save time and money by presenting them with the most competitive prices for a particular product or service.This system uses web scraping technique to extract data from ecommerce websites.

2. Problem Statement :

Compared to other countries, in Malaysia there is only few price comparison website that is accessible until now. Most of them is comparing price for hotel's rate, holiday's package, mobile phone and others. It is important for a web comparison website to return results with the low prices as what the customers want but accurate results also important so that customers can get what they really want. It also depends on how regular the database is being updated otherwise customers will be confused when they compared it from other site.

3. Objectives :

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

- . To provide customers with a list of price comparison and highlight the cheapest price specifically in home groceries products.
- To increase price consciousness among consumers.
- To ensure that the price database is updated regularly so that customers will be able to get accurate results.
- To provide service for users to find the product's price.
- To provide platform for retailers to promote their products and promotion for free.

4. Scope :

This Website can be very essential tool for Companies to check their competition. This website is a useful website as it contains info from all mostly used websites and can be a timesaver for users.

The scope of a price comparison system can vary widely depending on the type of products or services being compared, the geographical coverage, and the level of detail provided in the comparison.

2. Literature Survey

To study the system being built will require us to study and analyze current systems, in order identify the problems and difficulties with existing system. Included major steps involved in this stage to identify needs users and a study current system to verify the problem. Study of current systems are also benefit to know expected performance by the new system in order meet user requirements. Also analysis this information that has been collected and evaluated to help us in build our project.

SR NO	Name & year	Author	Features	Limitations
[1]	Pick through pic (2019)	1. Tom edison 2. Rohan paul	This system is aimed at viewing different online product's thorugh object recognition	1. Poor user interface. 2. Compares products from two different websites only
[2]	Price4you- price comparison website for online shopping (2021)	1. S. Rajendar 2. K. Manikanta 3. M. Mahendar	This system uses web scrapping and web crawling to fetch the infromation from three different websites .	1. Compares the Products from three different websites only.
[3]	Co-mart - a daily necessity price comparison application (2022)	1. Ayush asawa 2. Swapnil dabre 3. Shravani rahise	This paper focuses on an web application called co-mart, where one can compare prices of various products on different e-commerce websites and thus save one's time, efforts and money.	1. Poor user interface

[4]	E-Commerce Price Comparison With Review Sentimental Analysis (2022)	1. Sanket Bezalwar1 2. Vikas Bhandekar2 3. Sagar Kumbhare3	This websites scrapes data from two websites and generate a link to directly access that websites.	1. This websites scrapes data from flipkart , snapdeal . 2. This websites scrapes data from only 2 websites.
[5]	Web and android application for comparison of e-commerce products (2019)	1. Ambre, A 2. Gaikwad, P Pawar, K	It is web as well as android application . Ongoing deals are displayed with notification.	1. If product is not available then it shows 0 price rather than showing product is not available.

Exiting Systems

There are multiple systems available in the market , but mainly there are price and compareraja.

1. **Price :**

   It’s a online website which shows the user the price of its desired product across few websites.

2. **CompareRaja :**

   it’s a website with the most tough user interface and as its name it compares.

These are the major systems available on this topic , there are many small websites available which are not as optimised and good like money hatke, shopify ,etc

Proposed System

- In price comparison website , there it has a home page and in this it is the services of this websites like web scrapping , price comparison , and link which we will provide for the users.

- It has search product button , in this user can search any product that he/she wants and after press the search button it will shows the particular product with different websites.

- It shows the lowest price of particular product that user search and with this price user can compare the product and he/she can go to the main website by clicking the book now button and there it will show the entire information of the particular product.

- We made this website with 5 different websites like Amazon , Flipkart , Shopsy , Reliance , Gadgets now . with this websites buyer's can make decision of which website sell lowest product as compare to other websites .

- This software is fully automated in python language which is aimed to improve user's quality and experience shopping experience. The project is based on the concept of web scraping, in which we extract data from websites.

- When two or more competing websites are running a sale on the same product or position the offerings at a price and this system will detect and return the list of available products in the system.

- This price comparison website for products will help to compare the price from various e-commerce websites, This Price comparison site is extremely helpful for frequent online shoppers to check prices on different online stores in one place.

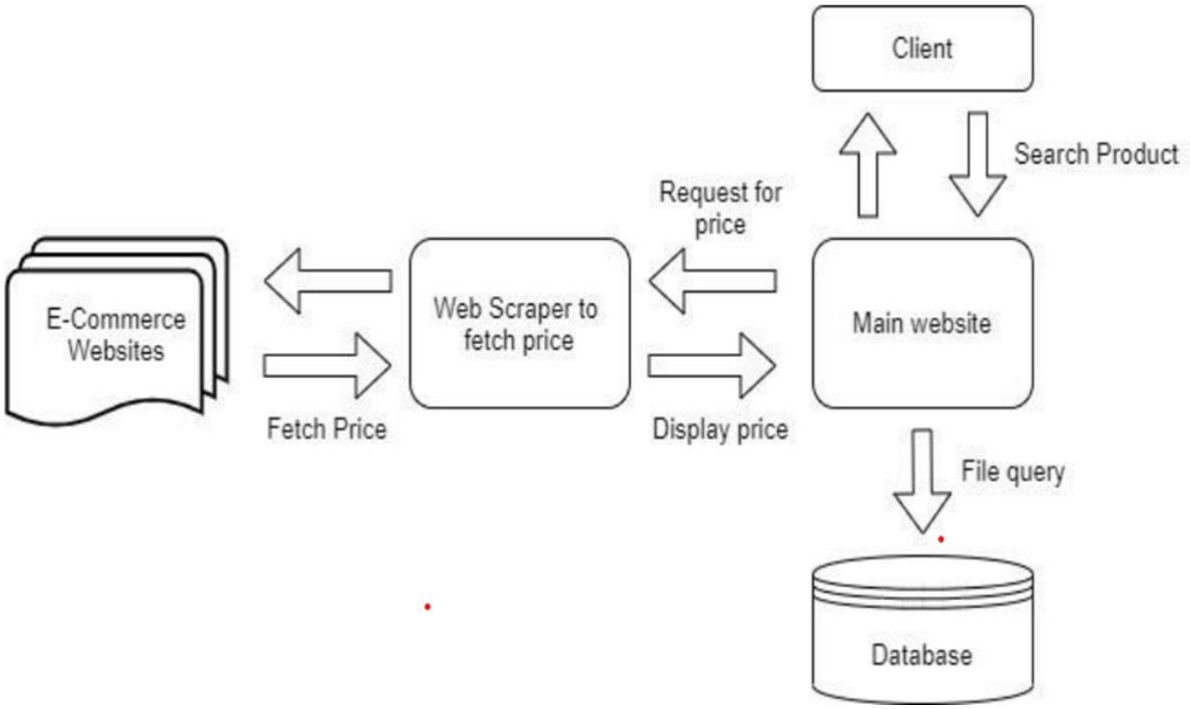
- This system will show you the product prices from different retailers to show you where to buy the product at affordable price

- We made this website with 5 different websites like Amazon , Flipkart , Shopsy , Reliance , Gadgets now . with this websites buyer's can make decision of which website sell lowest product as compare to other websites .

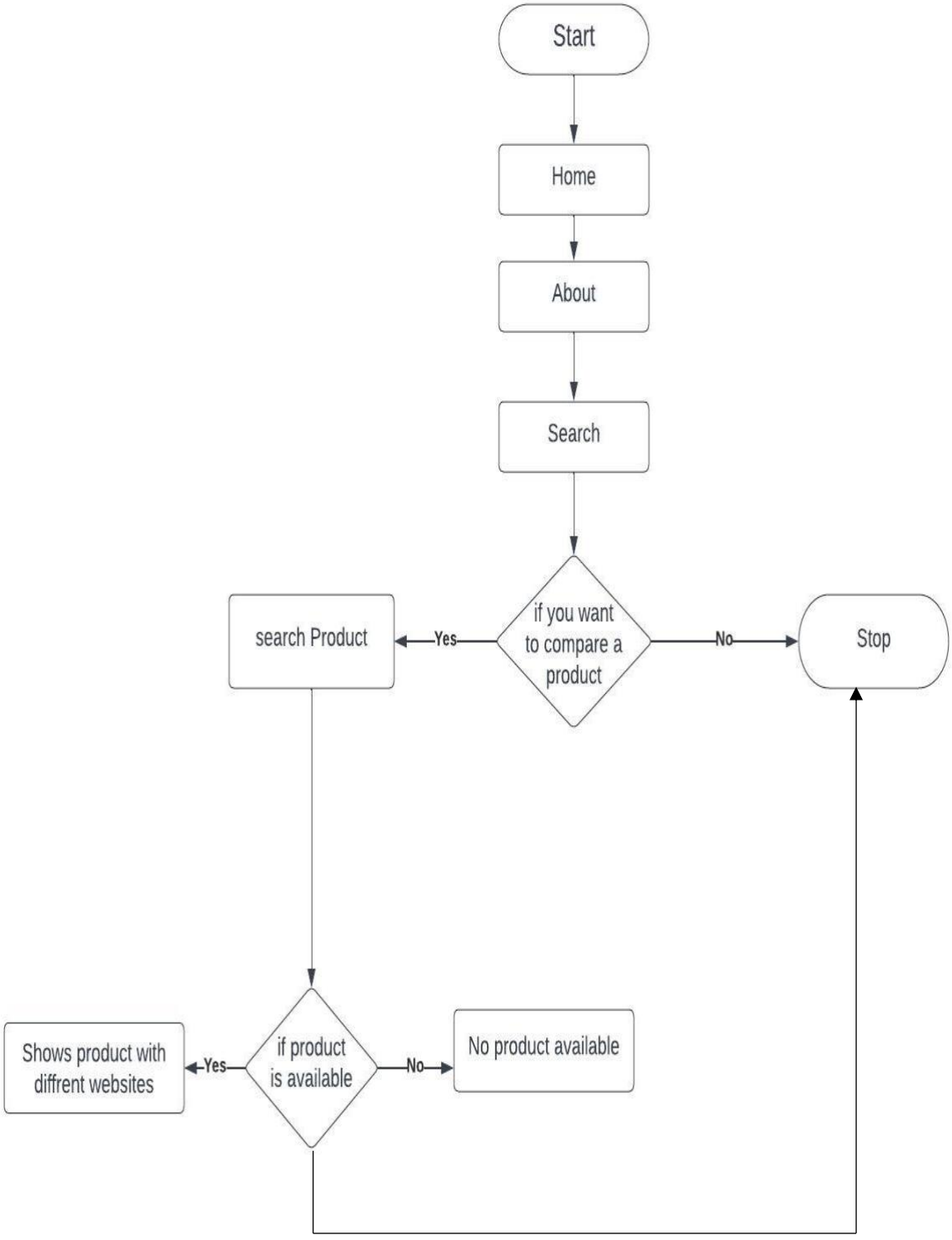
Advantages

- It saves time.
- Users pay least price for same product

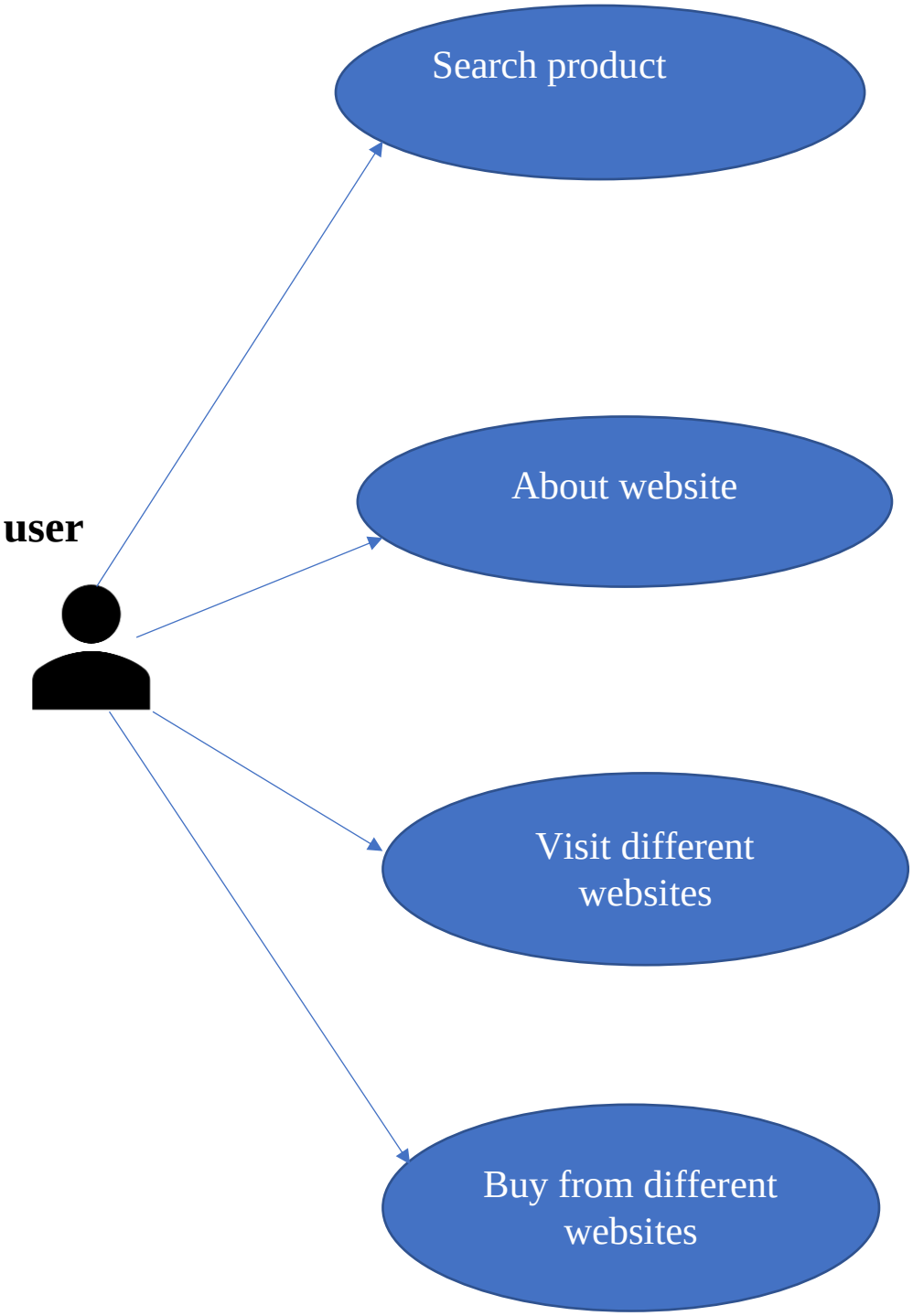
System Architecture



Flowchart :


Start
Home
About
Search
if you want to compare a product
Yes
No
search Product
Stop
if product is available
Yes
No
Shows product with diffrent websites
No product available

Use case diagram :



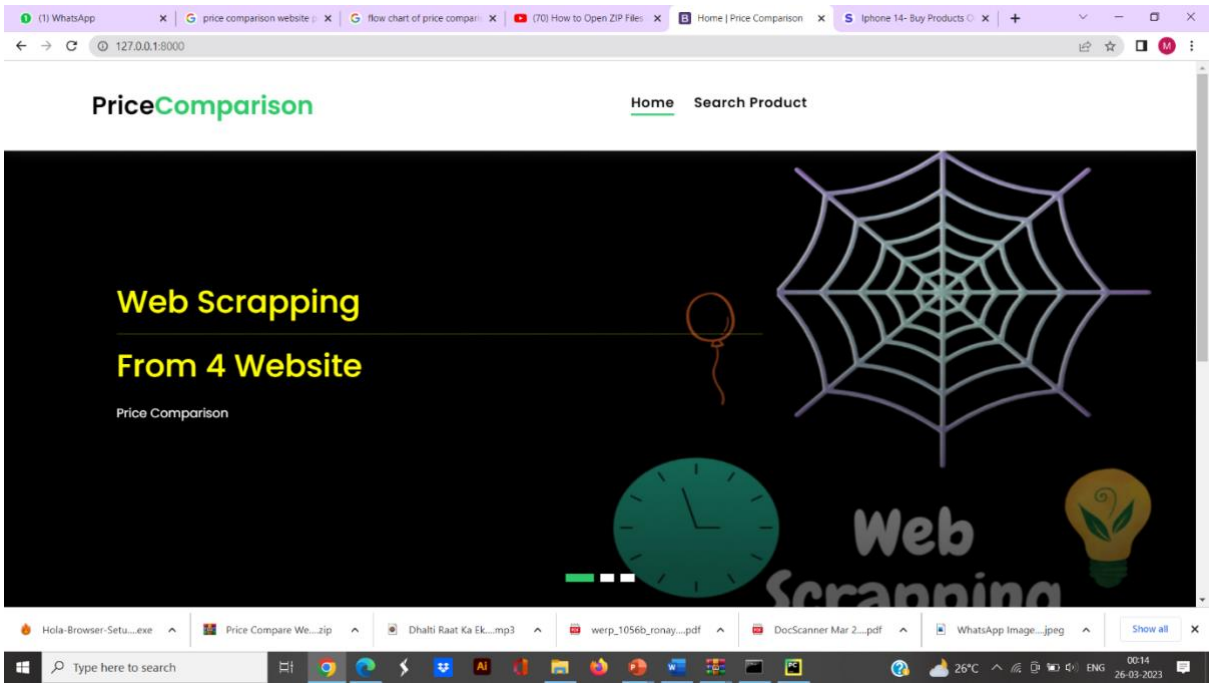
Software Requirement

- Python
- Visual studio code
- Windows operating system

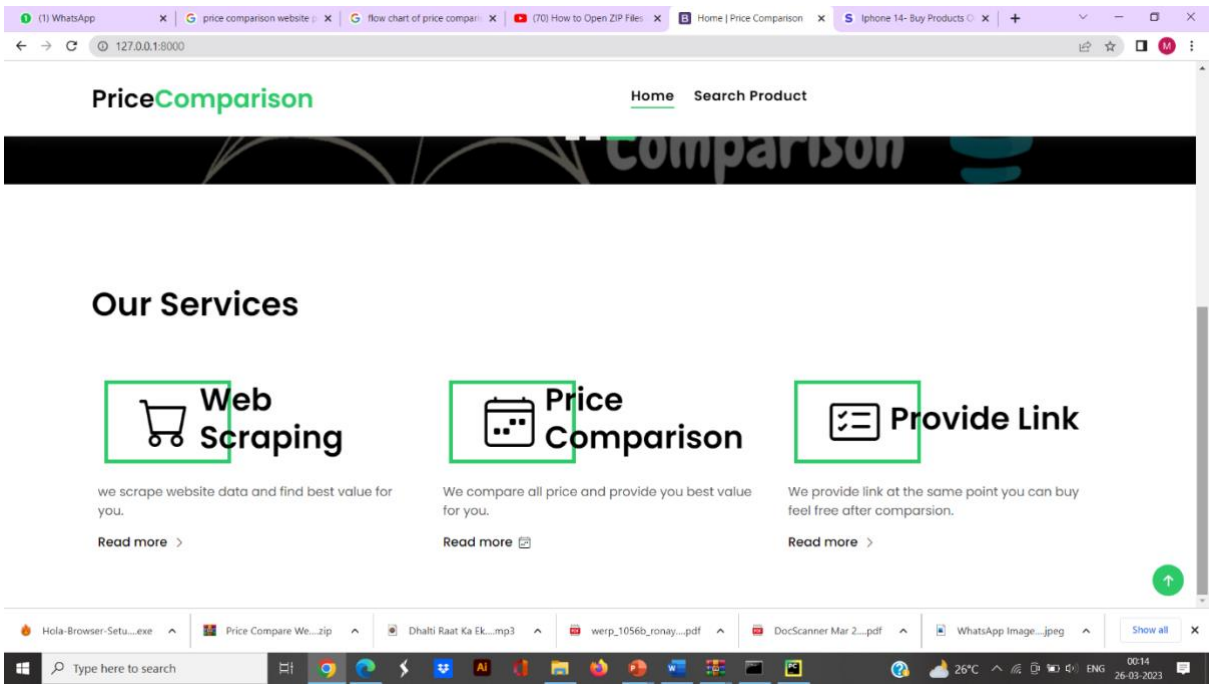
Hardware Required :

- Processor-intel
- 64 bit operating system
- Memory 8gb ram

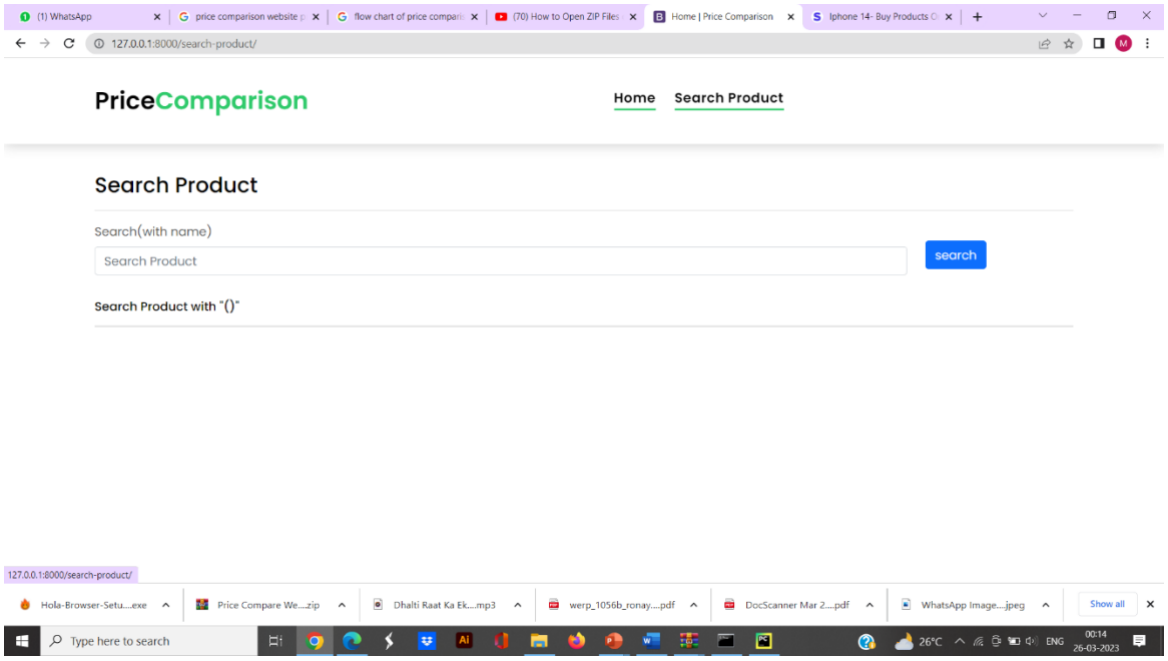
Implementation Result



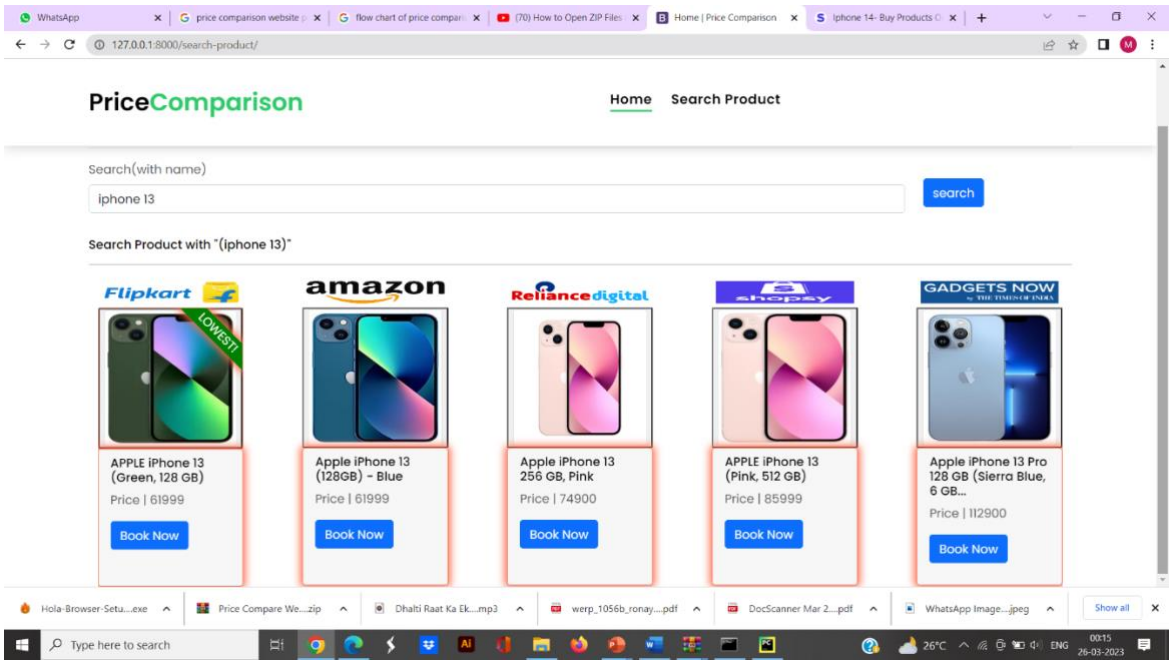
This is home page of price comparison website .



Here is the services of this websites like web scrapping , price comparison , and link which we will provide for the users.



This is the search product option , here user can search any product that he/she wants and after press the search button it will shows the particular product with different websites.



Here , it will shows the product in different websites .it shows the lowest price of particular product that user search and with this price user can compare the product and he/she can go to the main website by clicking the book now button there it will show the entire information of the particular product.

Conclusion And Future Scope

Conclusion

Thus we conclude from this presentation that we have initiated for developing a Application using Python. Also we have created a roadmap for this project and we are trying to implement maximum features whichever possible to us accordingly for making price comparison easy for customers and convenient.Full scope of the Application is just on its initial stage and we shall try our best to implement it on the final project.

Future scope

We plan to extend the application and add more e-commerce website to gather data from and display and also being able to scrape product details aswell.
Wishlist option will be provided to track the price of different products.

References :

[1] Pick through Pic Price Comparison Website using Object Recognition(GRDJE / CONFERENCE / ERTE’19 / 031)

[2]Shamirpet Rajendar,Kusuma Manikanta,Manne Mahendar,Mrs Madhavi Karumudi, "PRICE COMPARISON WEBSITE FOR ONLINE SHOPPING", International Journal of Creative Research Thoughts (IJCRT), ISSN:2320-2882, Volume.9, Issue 6, pp.d848-d852, June 2021

[3]Asawa, Ayush, et al. "Co-Mart-A Daily Necessity Price Comparison Application." 2022 International Conference on Applied Artificial Intelligence and Computing (ICAAIC). IEEE, 2022.

[4] Bezalwar, S., Bhandekar, V., Kumbhare, S., Rebhankar, R., & Singam, P. (2022). E-COMMERCE PRICE COMPARISON WITH REVIEW SENTIMENTAL ANALYSIS.

[5] Ambre, A., Gaikwad, P., Pawar, K., & Patil, V. (2019). Web and android application for comparison of e-commerce products. no, 4, 266-268.

Appendix A: Code Sample

```
from bs4 import BeautifulSoup
import requests
from selenium import webdriver
from selenium.webdriver.common.keys import Keys
import time
from pathlib import Path
from selenium.webdriver.common.by import By
from selenium.webdriver.support.ui import WebDriverWait
from selenium.webdriver.support import expected_conditions as EC
from django.conf import settings

headers = {
   'User-Agent': 'Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/94.0.4606.61 Safari/537.36'}


def flipkart(name):
   try:
      global flipkart
      name1 = name.replace(" ", "+")
      flipkart                                                                    =
f'https://www.flipkart.com/search?q={name1}&otracker=search&otracker1=search&marketplace=FLIPKART&as-show=off&as=off'
      flipkart_link = flipkart
      res = requests.get(

f'https://www.flipkart.com/search?q={name1}&otracker=search&otracker1=search&marketplace=FLIPKART&as-show=off&as=off',
         headers=headers)

      print("\nSearching in flipkart....")
      soup = BeautifulSoup(res.text, 'html.parser')
```

```
    if (soup.select('._4rR01T')):
        flipkart_name = soup.select('._4rR01T')[0].getText().strip().upper()
        if name.upper() in flipkart_name:
            flipkart_price = soup.select('._30jeq3._1_WHN1')[0].getText().strip()
            flipkart_name = soup.select('._4rR01T')[0].getText().strip()
            flipkart_image = soup.select('._396cs4')[0]
            print(flipkart_image['src'])
            flipkart_image = flipkart_image['src']
            print("Flipkart:")
            print(flipkart_name)
            print(flipkart_price)
            print("---------------------------------")

    elif (soup.select('._4ddWXP')):
            #flipkart_name = soup.select('._3Djpdu')[0].getText().strip().upper()
            #if name.upper() in flipkart_name:
                flipkart_price = soup.select('._30jeq3')[0].getText().strip()
                flipkart_name = soup.select('.s1Q9rs')[0].getText().strip()
                flipkart_image = soup.select('._396cs4')[0]
                print(flipkart_image['src'])
                flipkart_image = flipkart_image['src']
                print("Flipkart:")
                print(flipkart_name)
                print(flipkart_price)
                print("---------------------------------")
    else:
         flipkart_price = '0'

    return flipkart_price, flipkart_name[0:50], flipkart_image, flipkart_link
except:
    print("Flipkart: No product found!")
    print("---------------------------------")
    flipkart_price = '0'
    flipkart_image = '0'
    flipkart_name = '0'
    flipkart_link = '0'
return flipkart_price, flipkart_name[0:50], flipkart_image, flipkart_link
```

```
def amazon(name):
    try:
        global amazon
        name1 = name.replace(" ", "-")
        name2 = name.replace(" ", "+")
        amazon = f'https://www.amazon.in/{name1}/s?k={name2}'
        amazon_link = amazon
        res = requests.get(f'https://www.amazon.in/{name1}/s?k={name2}',
headers=headers)
        print("\nSearching in amazon...")
        soup = BeautifulSoup(res.text, 'html.parser')
        amazon_page = soup.select('.a-size-medium.a-color-base.a-text-normal')
        amazon_page_length = int(len(amazon_page))
        for i in range(0, amazon_page_length):
            name = name.upper()
            amazon_name = soup.select('.a-size-medium.a-color-base.a-text-
normal')[i].getText().strip().upper()
            if name in amazon_name:
                amazon_name = soup.select('.a-size-medium.a-color-base.a-text-
normal')[i].getText().strip()
                amazon_images = soup.select('.a-section.aok-relative.s-image-fixed-
height')
                amazon_image = amazon_images[0].find_all('img', class_='s-
image')[0]
                amazon_image = amazon_image['src']
                amazon_price = soup.select('.a-price-
whole')[i].getText().strip().upper()
                print("Amazon:")
                print(amazon_name)
                print("₹" + amazon_price)
                print("--------------------------------")
                break
            else:
                i += 1
                i = int(i)
                if i == amazon_page_length:
                    amazon_price = '0'
```

```
                print("amazon : No product found!")
                print("----------------------------")
                break

        return amazon_price, amazon_name[0:50], amazon_image, amazon_link
    except:
        print("Amazon: No product found!")
        print("--------------------------------")
        amazon_price = '0'
        amazon_name = '0'
        amazon_link = '0'
        amazon_image = '0'
    return amazon_price, amazon_name[0:50], amazon_image, amazon_link


def gadgetsnow(name):
    try:
        global gadgetsnow
        name1 = name.replace(" ", "-")
        name2 = name.replace(" ", "+")
        gadgetsnow                                                    =
f'https://shop.gadgetsnow.com/mtkeywordsearch?SEARCH_STRING={name2}
'
        gadgetsnow_link = gadgetsnow
        res                                                           =
requests.get(f'https://shop.gadgetsnow.com/mtkeywordsearch?SEARCH_STRI
NG={name2}', headers=headers)
        print("\nSearching in gadgetsnow...")
        soup = BeautifulSoup(res.text, 'html.parser')
        gadgetsnow_page = soup.select('.product-name')
        gadgetsnow_page_length = int(len(gadgetsnow_page))

        for i in range(0, gadgetsnow_page_length):
            name = name.upper()
            gadgetsnow_name                =                soup.select('.product-
name')[i].getText().strip().upper()
            if name in gadgetsnow_name:
                gadgetsnow_name = soup.select('.product-name')[i].getText().strip()
```

```
            images = soup.select('.product-img-align')[i]
            image = images.select('.lazy')[0]
            gadgetsnow_image = image['data-original']
            gadgetsnow_price =
soup.select('.offerprice')[i].getText().strip().upper()
            gadgetsnow_price = "".join(gadgetsnow_price)
            gadgetsnow_price = gadgetsnow_price[1:]
            print("GadgetSnow:")
            print(gadgetsnow_name)
            gadgetsnow_price = "₹" + gadgetsnow_price
            print("---------------------------------")
            break
        else:
            i += 1
            i = int(i)
            if i == gadgetsnow_page_length:
                gadgetsnow_price = '0'
                print("GadgetSnow : No product found!")
                print("-----------------------------")
                break

    return gadgetsnow_price, gadgetsnow_name[0:50], gadgetsnow_image,
gadgetsnow_link
  except:
    print("GadgetSnow: No product found!")
    print("---------------------------------")
    gadgetsnow_price = '0'
    gadgetsnow_name = '0'
    gadgetsnow_image = '0'
    gadgetsnow_link = '0'
  return gadgetsnow_price, gadgetsnow_name[0:50], gadgetsnow_image,
gadgetsnow_link


def croma(name):
  try:
    global flipkart
    name1 = name.replace(" ", "+")
```

```
        flipkart                                                    =
f'https://www.shopsy.in/search?q={name1}&sid=tyy%2C4io&as=on&as-
show=on&pageUID=1678557787075'
        croma_link=flipkart
        res = requests.get(

f'https://www.shopsy.in/search?q={name1}&sid=tyy%2C4io&as=on&as-
show=on&pageUID=1678557787075',
            headers=headers)

        print("\nSearching in Shopsy....")
        soup = BeautifulSoup(res.text, 'html.parser')

        if      (soup.select('.css-1dbjc4n.r-13awgt0.r-18u37iz.r-1w6e6rj.r-1f12yv3.r-
kzbkwu.r-ttdzmv')):
            # flipkart_name = soup.select('._3Djpdu')[0].getText().strip().upper()
            # if name.upper() in flipkart_name:
            croma_price   =   soup.select('.css-901oao.r-cqee49.r-1vgyyaa.r-ubezar.r-
1rsjblm')[0].getText().strip()
            croma_name = soup.select('._1PnKMA')[0].getText().strip()
            print("Shopsy:")
            print(croma_name)
            print(croma_price)
            print("---------------------------------")
            croma_images = soup.find_all('img')[0]
            croma_image = croma_images['src']

        return croma_price, croma_name[0:50], croma_image, croma_link
    except:
        print("Shopsy: No product found!")
        print("---------------------------------")
        croma_price = '0'
        croma_name = '0'
        croma_image = '0'
        croma_link = '0'
    return croma_price, croma_name[0:50], croma_image, croma_link
```

```
def reliance(name):
    try:
        global reliance
        name1 = name.replace(" ", "-")
        name2 = name.replace(" ", "+")
        reliance = f'https://www.reliancedigital.in/search?q={name2}:relevance'
        reliance_link = reliance
        res = requests.get(f'https://www.reliancedigital.in/search?q={name2}:relevance', headers=headers)
        print("\nSearching in reliance...")
        soup = BeautifulSoup(res.text, 'html.parser')
        reliance_page = soup.select('.sp__name')
        article_block = soup.find_all('div', class_='slider-text')
        reliance_data = article_block[0].getText().strip()[article_block[0].getText().strip().index('₹') + 1:]
        reliance_price = ""
        for i in reliance_data:
            if i.isnumeric() or i == ',':
                reliance_price += i
            else:
                break
        images = soup.find_all('img', class_='img-responsive')
        reliance_image = "https://www.reliancedigital.in/" + images[0]['data-srcset']
        reliance_page_length = int(len(reliance_page))
        for i in range(0, reliance_page_length):
            name = name.upper()
            reliance_name = soup.select('.sp__name')[i].getText().strip().upper()
            if name in reliance_name:
                reliance_name = soup.select('.sp__name')[i].getText().strip()
                print("Reliance:", reliance_price)
                print(reliance_name)
                print(reliance_image)
                print("₹" + reliance_price)
                print("--------------------------------")
                break
            else:
```

```
            i += 1
            i = int(i)
            if i == reliance_page_length:
                reliance_price = '0'
                print("reliance : No product found!")
                print("----------------------------")
                break

        return reliance_price, reliance_name[0:50], reliance_image, reliance_link
    except:
        print("Reliance: No product found!")
        print("--------------------------------")
        reliance_price = '0'
        reliance_image = '0'
        reliance_name = '0'
        reliance_link = '0'
    return reliance_price, reliance_name[0:50], reliance_image, reliance_link


def convert(a):
    b = a.replace(" ", '')
    c = b.replace("INR", '')
    d = c.replace(",", '')
    d = d.replace("`", '')
    f = d.replace("₹", '')
    g = int(float(f))
    return g
```

Acknowledgements

We would like to express our gratitude towards Prof. Supriya Joshi for guiding us throughout the project, their motivation and help contributed tremendously to the successful completion ofthe project. We also feel thankful and express our kind gratitude for allowing us to select this amazing project: Price Comparison Website
The mentioned project was done under the supervision of Prof. Supriya Joshi