**Notify Me**

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**1. INTRODUCTION**

Ecommerce is one of the fastest growing industry in India since past five years. We have a huge userbase that uses internet on daily basis and this keeps on increasing. Out of these, about 6 million new users keep on adding to India’s ecommerce giants which includes Amazon, Flipkart, Myntra, Paytm on monthly basis. But why these ecommerce industries increasing rapidly? This question can have many answer but major factor affecting this answer is their deals and price. In festive season, this platform gives huge discounted offers and good budgeted price. The price of the products available on this ecommerce platform is dynamic. Sometimes it’s higher than our budget and sometimes lower. If we want to buy some products of our need from this online platform at our budget, so who will help us? Here, NotifyMe comes into picture. It gives you a email notification of your desired product when it’s deal go handy at your budget price.

**2. Literature Survey**

Methodology:-

After analysis of the problem domain we gathered all the requirements and system specification needed for our project. It includes study of all the available solutions and the gap which were removed through our project.

Once the objectives and the features were known, break each element into deliverable and lay down a strategy to go ahead with. Work on designing part (UI/UX) and prepare a design that delivers the best user experience. Test it on different devices.

While working on designing, Start implementing back-end Processes. Deploy each functionality one by one and keep testing it. Firstly, the basic visual layout of the application will be developed on Visual Studio Code. Later the application will be linked to server.

Test the functionalities and make necessary changes. Ask dummy users to use the application and make necessary changes according to their inputs

Technology and tools: -

* HTML: HTML is used in making web pages for our web application.
* CSS: CSS is used in aligning textual data and keeping GUI clean.
* Django: It is a python based full stack web development framework which is used in developing our web application.
* Postgre: Postgre is an open source object-relational database that contains product’s whose price drop alert need to be checked in tabular form.
* Editor/IDE used: Visual Studio Code.

To develop our web application we researched various websites and ecommerce email notifier, very few are working in this field right now. The resources which we used as a starting point for our project with their advantages and drawbacks are as follows:

* **Camelcamelcamel.com** provides price drop alert for products available on amazon. It is also showcases wide range of popular products with dropped price.

Advantages: - Clean GUI based website with extension for browser integration.

Drawbacks: - Works only for amazon product where price of product is in dollar. Hence, not available for Indian users.

* **Keepa.com** provides price drop alert for products available on amazon.

Advantages: - Provides chart representation of history of price drop of product.

Drawbacks: - To unlock its full feature like chart representation you need to buy premium membership. Just like camelcamelcamel.com it also works in US region, hence not applicable in India.

Through python official documentation[1] and book “Adventures in Python” by Craig Richardson[5], we have gained information to use various module needed to make our project. Using this documentation, we get to know deeply about various python modules like Date & Time, OS modules, System module, Django, Selenium which we are used in our project.

Through Django official documentation[2] we learnt how to use Django framework and create web based application.

Through selenium official documentation[3] we learnt how to use selenium module for web scrapping. It allowed us to fetch price of product from different ecommerce websites and compare it with the user’s listed budget price.

Through Postgresql official documentation[4] we learnt how to use postgre as our database management tool. We are able to manage tabular data which is submitted by user’s product listing

Stackoverflow[7]: It was a go through website for debugging and error handling.

**3. PROBLEM DOMAIN**

Popular ecommerce websites & applications have dynamic pricing for their products. This means that once in a month or year price of a product is lowest. If an user wishes to buy a product at his/her budget price then he/she needs to keep checking price regularly. There is no available notification system which notifies us that your product is available at your budget price. This ecommerce platform notification system keeps you reminding other offers, deals etc. Even when you add product in cart they don’t notify us about product’s current price which you need to check again and again. Our project focuses on creating a Django based website that helps you to get rid of this problem.

**Objectives: -**

1. Our project help user so that user does not need to check product price regularly
2. Provide email notification on daily basis if price drops by budget of the user
3. Can check price drop for multiple products
4. Multiple ecommerce website available for notification like Amazon, Flipkart, Snapdeal.
5. User can check number of products added for price drop alert.
6. Make an easy and interactive web application.

**4. SOLUTION DOMAIN**

Our proposed solution plan consists of making a web application that is made using Django framework. It has following functionalities: -

* Register: New user can register themselves on web application.
* Login: Registered user can login themselves.
* Home: Showcase use of website.
* Add new product: Authenticated user can add new product for price check alert.
* List of products: List out all products details that is on price check alert.
* Contact us: Here user can give feedback.

Technology stack used in our web application:-

* HTML: HTML is used in making web pages for our web application.
* CSS: CSS is used in aligning textual data and keeping GUI clean.
* Django: It is a python based full stack web development framework which is used in developing our web application.
* Posgre: Postgre is an open source object-relational database that contains product’s whose price drop alert need to be checked in tabular form.

Modules used in our web application:-

* Django: Django module is imported in our web application. It is used in interacting with database and it also creates an overall structure of web application. Django creates various python files which are views.py, urls.py, models.py. These files is used in providing response to request by client, maintaining urls of various html pages involved and migrating data from web application to database respectively.
* Selenium: Selenium module is imported in our web application. It is used in web scrapping of product details from various ecommerce websites. It also used in browser integration.
* Date and time: Date and time module is imported in our web application which is used in maintaining timestamp and notification alert delay.

**5. SYSTEM DOMAIN**

Our project is website that is scripted with python as backend programming language and its Django framework. The minimum system requirements for our project are mentioned below:-

**Minimum Software Requirements:**

* Operating system:- Windows 7 or later, open source linux distribution like ubuntu
* Python 3.x installed on system.
* Python Interpreter
* PyCharm, Visual Studio Code or any other python IDE.

**Minimum Hardware Requirements:**

* Processor – Intel Atom® processor or Intel® Core™ i3 processordual or i3 processor.
* Disk space – 3 GB
* Memory – 1 GB RAM

**6. APPLICATION DOMAIN**

Users spend a significant amount of time surfing the ecommerce websites for their desired product’s deal under the budget constraints. They keep looking product price until it becomes feasible for them to buy. If they forget to check, they might even lose the best deal. “Notify Me’’ helps them to never loose the best deal for their desired product. If price of product comes under user’s budget, ‘Notify Me’ gives an email alert regarding product description and pricing. So, user just need to click and forget.

Further, our web application may be extended to support SMS alert in future.

**7. EXPECTED OUTCOME**

A web application that gives email alert when registered user adds product url along with budget price. It notifies user with an email containing product description along with url.

**References:-**

[1] Official documentation of Python: – <https://docs.python.org/3/>

[2] Official documentation of Django: – <https://docs.djangoproject.com/en/3.0/>

[3] [Official documentation of Postgresql:– https://www.postgresql.org/docs/](file:///C:\Users\MAYANK%20SINGH%20PARMAR\Desktop\Official%20documentation%20of%20Postgresql:–%20https:\www.postgresql.org\docs\)

[4] Official documentation of Selenium: - <https://selenium.dev/documentation/en/>

[5] Online tutorial website: - <http://www.telusko.com/>

[6] Craig Richardson, “Adventures in Python” Wiley Publication

[7] <https://stackoverflow.com/>