PROJECT ON-

**Price Drop Notification (PDN) APP**

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Towards the partial fulfilment for the Award of the Degree of

**BACHELORS OF TECHNOLOGY**

In Computers Science and Engineering

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1. ABSTRACT

This project aims to notify you about the drop in price of the product which you wanted to buy online from any site (E.g. Amazon, Flipkart, …etc).

To enable the function, the user requires to input the product link and select the name of the site on which the product is being sell.

Along with that, the user needs to input the desired price for the product with their email address and in case, the product price falls to the desired price or bellow, an email will be sent to the user’s email address.

1. INTRODUCTION-

Today, the world is witnessing a surge in online shopping since it brings to you the comfort of placing orders from the home itself and provides a lot of options too.

In order to make online-shopping more budget-friendly, this project is solely aims to notify the user if the desired project falls in his budget.

The buyer just needs to provide the product link along with the site name.

The script runs and returns the product details including its price and if not in budget, it waits until it falls to the desired price that the user entered.

Therefore, a mail is sent to the user to notify that the price has fallen.

1. LITERATURE REVIEW-

Although websites themselves have a means to show when the price of a product drops if added to cart, there is no app that considers websites and notifies when the price drops in any of these.

My project is a Python script which I would run on a functional and user-friendly APP made using MIT App Inventor in the near future.

Nevertheless, to overcome this disadvantage, an additional feature is added to my script which notifies the user through a mail if the prices fall and fit into the budget mentioned.

1. **PROBLEM STATEMENT-**

* The desired product is out of your budget.
* No notification received in case the prices fall to fit into your budget.
* Wasteful expenses (bought the product at a much higher price)
* The hassle of going out to shop, bargaining with the shop-keepers and ending up compromising on both time and comfort.

1. OBJECTIVE-

* To make online-shopping budget-friendly.
* To reduce wasteful expenses.
* To provide products at its lowest price.
* A hassle-free solution where the user needs to provide only the product link and he’d receive-

1. The product details and the price.
2. A notification through a mail in case the product is at the desired price of the user.
3. A scheduled notification update in the price via mail.
4. PROPOSE SOLUTION-

* The world is too busy that nobody has got time to go out and shop, so a lot of people rely on e-commerce websites like Amazon, Flipkart, eBay, etc.
* With a variety and assured quality, the only thing that bothers a user is the price if it doesn’t fit well in the budget.
* That is where my project comes out to be handy.
* With just giving the product link, you receive all the necessary details.
* The script is by default set to return at an interval of 1 hour but user can input time according to his mood which ensure it minutely tracks the price of the selected product.
* In case it fits in the budget i.e. price drops below or to the desired price, the user gets notified via mail
* All of this makes the project fit to solve the problem of budget-concern through a basic utility.

1. METHODOLOGY-

* The project runs on a Python Script which uses the following libraries.
* **DATA COLLECTION-**

1. **Beautiful Soup-** used to pull out data from HTML and XML files. Here, the product details. Basically, it does web scraping.
2. **SMTPLIB-** Python provides smtplib module which is used to communicate to servers to send a mail.
3. **TIME**- It is a Python module which enables to work with any time-related functions.

* As the user provides the product link, a request is sent to fetch the required product details from the HTML file.
* With the help of **“Beautiful Soup”** library, an object called “soup” is created.

**FEATURE-SELECTION-**

* There are two functions created to serve their respective purposes-

1. **check\_price()** : It checks if the price of the product is below or equal to the budget price mentioned by the user.
2. **send\_mail()** : It is a function that creates a server and sends a mail to the email-id provided by the user in case the price fits to his budget.

* There is a loop given which runs at an interval of one hour to make sure it remains updated with the current price and renders the best deal but it can be changed by user also.
* Classification- The project is a part of Web Development.

**ACTIVITY DIAGRAM-**

1. RESULT ANALYSIS-

* As far as the project is made, it’s able to solve the problem to return the user the best price of the desired product in his budget.
* The present work is in the form of a Python Script which runs in the terminal itself and sends notifications via mails.

1. IMPROVED RESULTS-

* The Python script will run on an app made by using MIT app inventor in Python.
* The project will not only scrape data from Amazon but also other e-commerce websites like Flipkart, eBay, Myntra etc. and return best offer.

1. CONCLUSION-

* This project is all about ensuring the comfort of the users by increasing the product affordability over online-shopping of products.
* The projects provide a hassle-free interface wherein the user has to provide the desired product-link and his budget-price.
* As a result, he/she will be displayed the current price.
* In case the price falls to or below the budget-price, he/she will receive a notification of the same via mail.
* The app makes sure to keep updating and keeping the user aware of the best deal.

1. FUTURE WORK-

* Creating a user-friendly and an attractive app to ensure the usability of the project, for which I will be learning about App Development.
* Making a fully functional Python app.

1. TIMELINE-