PUSHING LISTINGS FROM AMAZON TO ETSY

15I620- INTERNSHIP AND INNOVATIVE PRACTICES

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(Autonomous Institution), Affiliated to Anna University

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Bonafide record of work done by

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examination held on

_____   _____

(Internal Examiner)   **(External Examiner)**

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SYNOPSIS

The main advantage of pushing listings from Amazon to Etsy that it simplifies the manual work of human from typing the same contents of product details in multiple E-commerce websites. This is a web application that enables the seller to select the product details and its description from Amazon to Etsy just by one click. Multi-channel listing software automates product listings, so you can set up product data and descriptions in one place (through your listing software) and then push that data to your marketplaces.The time required to do this is very less when compared to manually typing each and every websites about the product details.We use database to store the amazon standard in amazon id(ASIN ID) of each and every products,from there we directly push the details of product to other E-commerce websites.An API will be embedded in Etsy so that we can transfer the product details from Amazon.In this case a separate site title is not necessary since it is stored on the site and is not accepted in listing submission calls.

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CHAPTER I

INTRODUCTION

1.1-Multichannel Listing:

Multichannel listing is simply the process of listing products and services on various digital properties. Traditional means of multichannel listing included promoting products and services in catalogs and in brick-and-mortar stores. E-commerce companies can now list their products on a wide variety of digital platforms and channels.Online store owners can list their products on multiple channels to reach new audiences and increase sales.Multichannel product listing are set up through an ecommerce platform provider. Online retail host sites typically integrate with other marketplaces or digital channels, which makes it easy for a business owner to list his or her products on various channels at once.

1.2- Problems in Multichannel Listing:

Inventory Management:

Big challenge that most e-commerce business owners face when they start selling products on more channels is keeping up with inventory.When you're presenting your products to new audiences on new channels, you have to ensure that you're creating the same first impression that people are getting when they visit your website and buy products through your own online store.The important thing to remember when it comes to adding more

channels and marketplaces into your selling strategy is this: you only have one opportunity to make the right first impression.

Cross-Channel Messaging & Branding:

Another biggest marketing challenges most e-commerce business owners face when it comes to multi-channel is keeping branding and messaging consistent across different channels. When you're only selling your products on one channel—usually your own website—it's much easier to control and keep track of the messages and branding you're using to compel people to buy. But when you start investing in multi-channel, you're forced to manage messaging and branding consistent across a number of channels (Amazon, Ebay, Etsy, Jet, etc.) that all have different requirements, nuances, and best practices.

Manual Management:

Manually managing and fulfilling inventory might have been easier when you were only selling from your own store and website, but it quickly becomes very ineffective once you start adding additional channels into the mix. To succeed and scale, you can no longer rely on offline spreadsheets and documents when tracking and managing inventory. You have to put tools in place that allow you to become more efficient.

1.3- Solution to these problems:

Pushing Listings across multiple e-commerce sites allows us to easily list the same product across multiple sites with less manual work and in minimal time.Selling on every online platform requires many efforts and a tip-top

working strategy.We should use automation tools that support seller to ensure that every customer is getting the same level of interaction from our company when they reach out.We should know what our fulfillment options are and we need to find the best shipping partner for our needs.Save the product description in google sheet, DropBox folder and on your server storage.To avoid shipping issues, hire the best shipping partner or channel shipment services as FBA on Amazon.

Fig 1.1

CHAPTER 2

LITERATURE WORK

2.1 NEED OF MULTICHANNEL LISTING:

Listing your products on multiple channels can be a major boost to your sales - companies who list on multiple channels typically earn more than those who limit selling to just one platform. Multichannel listing can help your business in two main ways-(i)E-commerce companies that list in multiple channels engage with more customers on a regular basis and (ii)Consumers who interact with a company through more than one channel buy more than single-channel shoppers Multichannel listing will help your company tap into larger audiences and win customers who normally wouldn't find out about your products.

2.2 RELATED WORKS

Integromat:

Fig 2.1

Integromat is the most advances online automation platform. Integromat will automate process that you currently handle manually.It is not only capable of connecting apps but can also transfer and transform data.

Importify:

Fig 2.2

Importify allows you to easily import dropshipping products to your Shopify store. Compatible with the biggest wholesalers and eCommerce platforms.Importify is an official Shopify app that is user-friendly and extremely easy to use.

Oberlo:

Fig 2.3

Oberlo allows you to easily import products from suppliers directly into your Shopify store and ship directly to your customers – in only a few clicks.

Sellbrite:

Fig 2.4

Sellbrite enables e-commerce brands & retailers to list and sell products effortlessly across multiple online sales channels and gain centralized control over inventory and order fulfillment.

SellerActive:

Fig 2.5

SellerActive is one of the more established multi-channel inventory management solutions. Unlike most competitors, SellerActive focuses on direct sales, with repricing tools built in alongside marketplace inventory synchronization and order management for fulfillment.

2.3 How our web app different from other multichannel listing software

There are more number of sellers across the globe for selling their products across multiple e-commerce sites.From Amazon to Etsy,online marketplaces are not only great platforms for additional revenue,but can also serve as one's primary source of income.In Integromat,it is not possible to add images,but it can list data.Similary,in Oberlo it is a paid system for listing the products,and in Importify-it is not available for listing products from Amazon to Etsy.But our web app will overcome all this problems.

2.4) Pro's

The multichannel listing across multiple sites helps sellers in many ways.They are:

> More channels = more potential customers = better brand exposition = more sales

➢ The multichannel approach means that the **company is flexible**, improves customer satisfaction, and consequently strengthens **customer loyalty.**

➢ In the long term, a multichannel strategy should increase a company's sales.

➢ After all, being present on as many channels as possible can prevent potential customers from migrating to the competition if you aren't present on their preferred channel.

2.5) Con's:

Below are some of the challenges faced

- ➢ Communication, advertising, distribution, and sales over several channels instead of just one requires more complex logistics and a greater control effort.
- ➢ Another disadvantage of a multichannel strategy is that the individual sales channels merely exist side by side, but are not connected in terms of organization and technology.
- ➢ Selling on other websites comes with a price.So using multichannel listing software results in increased cost.Sometimes it's a flat fee for displaying your product monthly or a percentage from every sale.
- ➢ When selling on other platforms, you'll need to maintain the same level of quality in both your products and the customer experience that you offer on your main website.

CHAPTER 3

SYSTEM REQUIREMENTS

All computer software to be used efficiently needs certain hardware components or other software resources to be present on a computer. These requirements are known as system requirements and are often used as a guideline as opposed to an absolute rule. With increasing demand for high processing power and resources in newer versions of software, system requirements tend to increase over time.

3.1 SOFTWARE USED

Operating system: Windows 10

Software used: Pycharm,Scrapy,MongoDB Compass,Flask

3.2 PYCHARM

PyCharm is the most common Python editor, next to Spyder. PyCharm is a dedicated Python Integrated Development Environment (IDE) providing a wide range of essential tools for Python developers, tightly integrated together to create a convenient environment for productive Python, web, and data science development. Pycharm makes navigating complex code easy.Using Pycharm, we can customize it with themes and plugins.
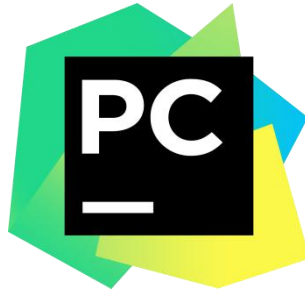
Fig 3.1

3.3) SCRAPY FRAMEWORK

Fig 3.2

Scrapy is an application framework for crawling web sites and extracting structured data which can be used for a wide range of useful applications, like data mining, information processing or historical archival.Even though Scrapy was originally designed for web scraping, it can also be used to extract data using APIs (such as Amazon Associates Web Services) or as a general purpose web crawler.

3.4 MONGODB COMPASS:

MongoDB Compass is the easiest way to explore and manipulate our MongoDB data.It modifies our data with a powerful visual editing tool.MongoDB compass analyzes our document and displays rich structures within our collections through an intuitive GUI.It allows us to quickly visualize and explore our schema to understand the frequency,types and range of fields in our data set.

Fig 3.3

3.5 FLASK:

Flask is a lightweight WSGI web application framework. It is designed to make getting started quick and easy, with the ability to scale up to complex applications. It gives the developer varieties of choice when developing web applications, it provides you with tools, libraries, and mechanics that allow you to build a web application but it will not enforce any dependencies or tell you how the project should look like.

Fig 3.4

CHAPTER 4

PROJECT DESCRIPTION

4.1) PROJECT BACKGROUND:

Due to large E-commerce platforms,it is necessary to list our products in various sites for increasing in profit and customer satisfactions.Most e-commerce platforms are of paid versions so that sellers felt difficulties in selling their product across multiple sites.As our company sellers need to sell their product across multiple e-commerce sites,with less in time instead of manual typing and listing product across multiple sites.They need us to create an web app so that they will list their products only on one e-commerce site which is Amazon and we need to push the listings directly to Etsy using Etsy API.

4.2) PROJECT AIM:

- ➢ To reduce and simplifies manual work.
- ➢ To save time.
- ➢ To help expansion to list over multiple e-commerce sites.
- ➢ To provide 24*7 customer support.
- ➢ To provide ease of listing the products across multiple sites.
- ➢ To reduce inventory management and investment.
- ➢ To provide consistent product information and prices across multiple channels.
- ➢ To automate re-stocking and re-listing products.

4.3) PROJECT DESCRIPTION:

There are three different tasks associated with pushing listings across multiple e-commerce sites:

- ➢ Scrapping the product details from Amazon.
- ➢ Storing it in database
- ➢ Listing the product details on Etsy.

Fig 4.1

SCRAPPING THE PRODUCT DETAILS FROM AMAZON:

This is the first step for listing product details from amazon to Etsy.For listing product details on Etsy,we need the same product details from Amazon.

STORING IT IN DATABASE:

We need the details of the product to list it in Etsy.

- ➢ So that we need to scrap the details of product from Amazon using **ASIN ID**,which is unique for each and every product.
- ➢ After scrapping the details of certain product using asin id we need to store it in some database,so that we can retrieve it later.

LISTING THE PRODUCT DETAILS ON ETSY:

After storing it in database,we need to list the product details on Etsy, first we need to finish OAuth authentication process then we can list the product details using Etsy API.

CHAPTER 5

DESIGN AND IMPLEMENTATION

5.1) DATA FLOW

```
┌─────────────┐      ┌─────────────┐      ┌─────────────┐
│   AMAZON    │ ──▶  │   SCRAPY    │ ──▶  │   MONGODB   │
└─────────────┘      └─────────────┘      └─────────────┘

┌─────────────┐      ┌─────────────┐      ┌─────────────┐
│ Getting     │      │ Scraping    │      │ Storing the │
│ ASIN ID of  │      │ the details │      │ details of  │
│ the product │      │ of product  │      │ the product │
│ from amazon │      │ from amazon │      │ in MongoDB  │
│             │      │ using ASIN  │      │ database    │
│             │      │ ID          │      │             │
└─────────────┘      └─────────────┘      └─────────────┘


┌─────────────┐      ┌─────────────┐      ┌─────────────┐
│  FIREBASE   │ ◀──  │    FLASK    │ ◀──  │    ETSY     │
└─────────────┘      └─────────────┘      └─────────────┘

┌─────────────┐      ┌─────────────┐      ┌─────────────┐
│ Storing     │      │ Entering    │      │ Completing  │
│ ASIN ID of  │      │ the ASIN ID │      │ OAUTH       │
│ the listed  │      │ of the      │      │ authenti-   │
│ products    │      │ product and │      │ cation      │
│ and connect │      │ connect it  │      │ process and │
│ it to       │      │ to Firebase │      │ listing of  │
│ scrapy.     │      │ DB.         │      │ product     │
│             │      │             │      │ using ETSY  │
│             │      │             │      │ API         │
└─────────────┘      └─────────────┘      └─────────────┘
```

Fig 5.1

➢ First we will take the ASIN ID of the product that we are going to listing.

➢ Using the ASIN ID we scrap the details of the product using Scrapy spider.

➢ Then we will store the details of the scrapped products in a database.In this case we use MongoDB.

➢ For listing in Etsy,we must complete OAuth Authentication process.

- Using Etsy API,we will get some temporary credentials and a verifier token.
- After passing these to the Etsy website,they authenticate our credentials and they will give access to Etsy website.
- Using those credentials we can directly login to Etsy seller website.
- After getting all the credentials verified by Etsy,then we can list the product details on Etsy website using Etsy API.

METHODOLOGY:

Requirement analysis for scrapping Amazon and Etsy API

Web Scrapping from Amazon

Storing the scrapped details of the product into database.

Etsy API and OAuth Authentication

Listing in Etsy

Testing and Maintenance
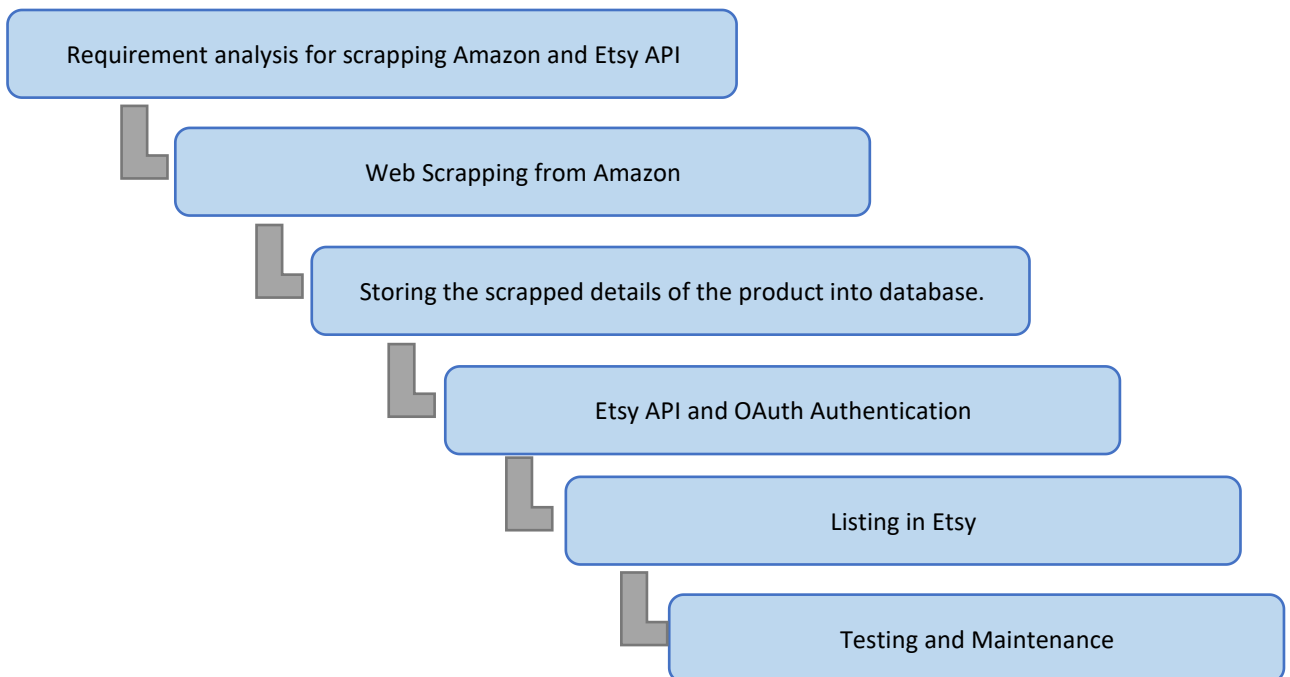
We used **Waterfall model** in this scenario.Since each and every step need to be done one after the other.Sequence of steps must take place in order to reach the goal.After scrapping the details of the product from Amazon only we can list it in Etsy.So only we go for waterfall model here.

5.2) IMPLEMENTATION
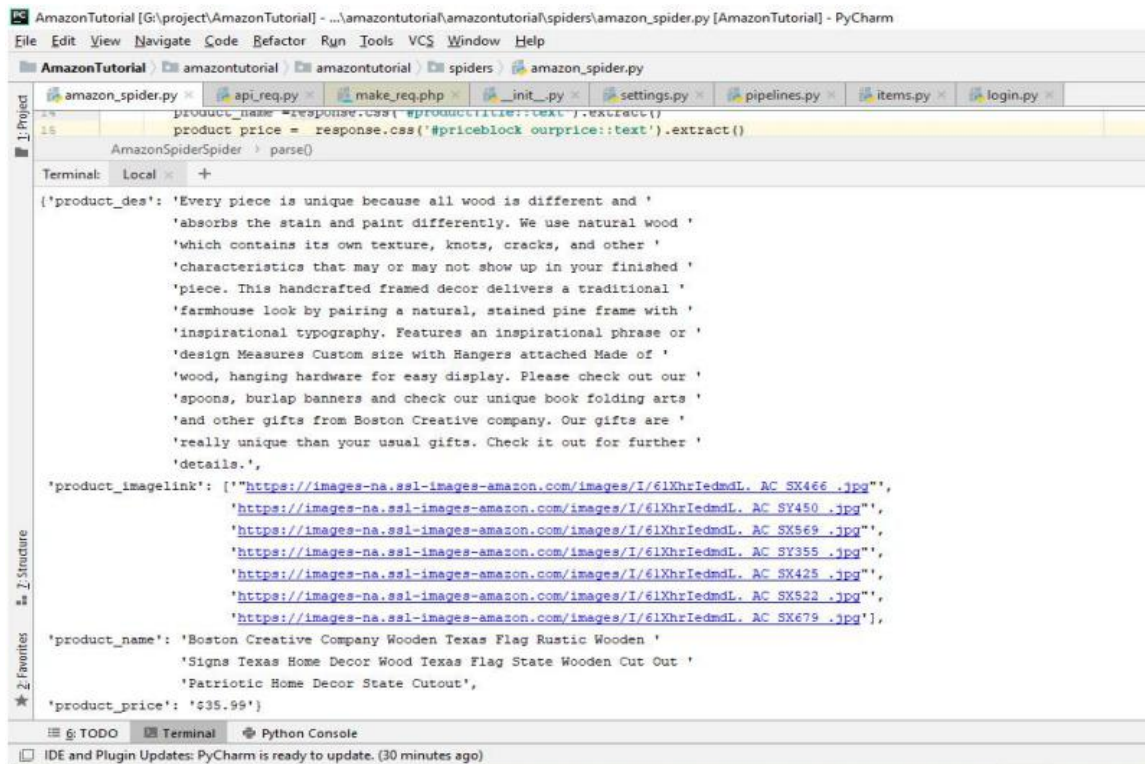
SCRAPPING FROM AMAZON:

Fig 5.2

For listing the same product details on Etsy,first we need to scrap the same details from Amazon using Scrapy.We will scrap the details of the Amazon product using ASIN ID(Amazon Standard **Identification** Number) which is unique for all the products.Using this asin id we will scrap the details of the product by specifying CSS selectors and XPath selectors.

OUTPUT OF SCRAPY SPIDER:

Fig 5.3

This is the output of the scrapped data of the particular product.All the details of the product are scrapped by specifying correct CSS selectors and XPATH we scrapped details of the product and links of the images.If we specify certain particular asin id of the product,and we execute the code.We will get the output of the specified product.Then we need to store it in any of the database.In this case we choose MongoDB database.After an item has been scraped by a spider, it is sent to the Item Pipeline which processes it through several components that are executed sequentially.

STORING IN MONGODB DATABASE:
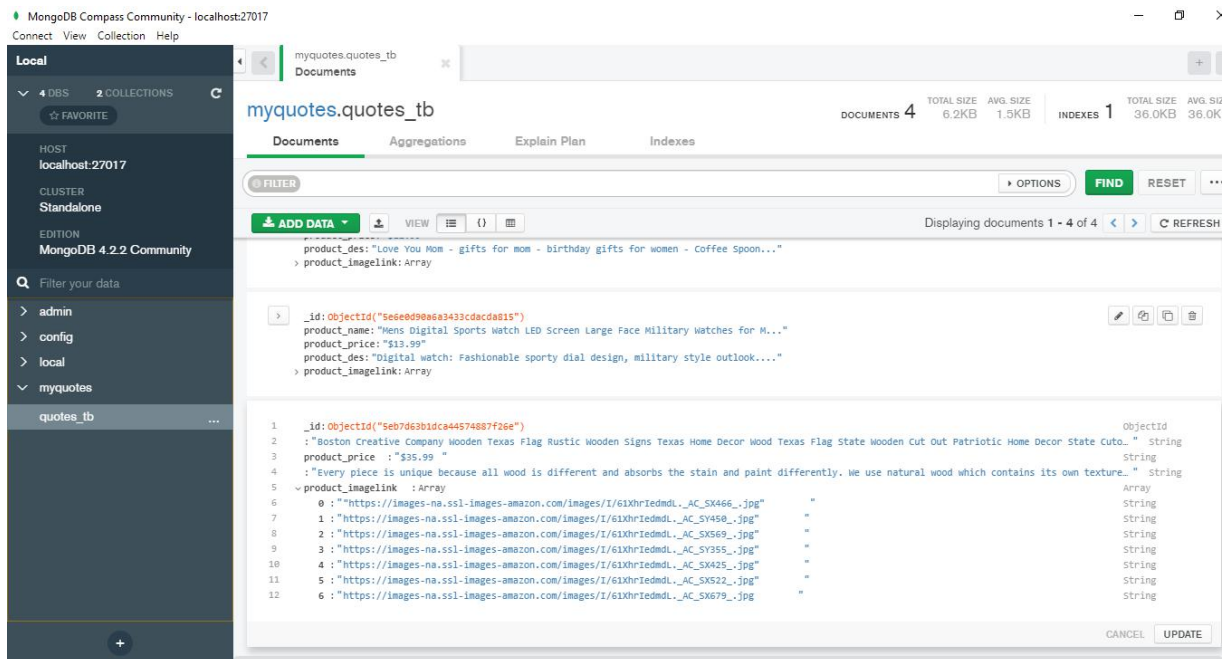
Fig 5.4

Each item pipeline component (sometimes referred as just "Item Pipeline") is
a Python class that implements a simple method. They receive an item and
perform an action over it, also deciding if the item should continue through the
pipeline or be dropped and no longer processed.Here you can see the saved data
of the product we scrapped in a MongoDB database.Why we go for MongoDB
is that because it enables them to build applications faster, handle highly
diverse data types, and manage applications more efficiently at scale.

ETSY API -OAUTH AUTHENTICATION:

The Etsy API lets developers tap into the Etsy community, building their own Etsy-powered applications for the web, desktop and mobile devices.
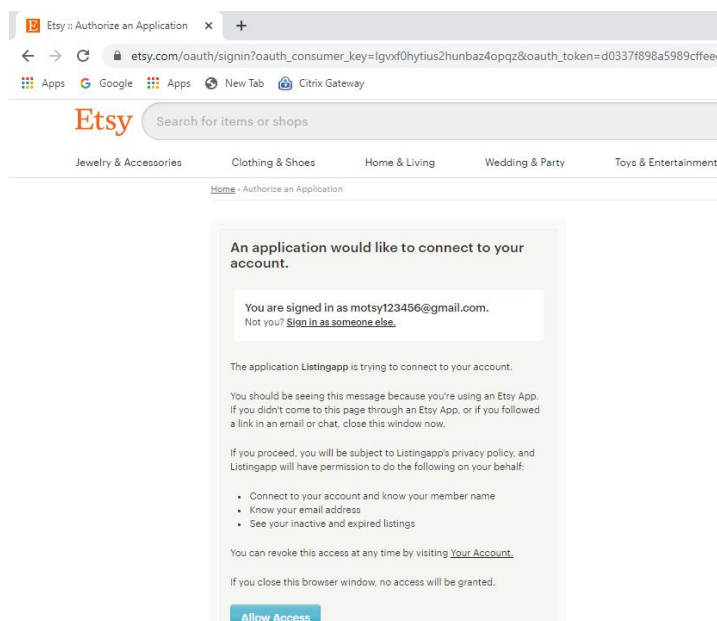
OBTAINING TEMPORARY CREDENTIALS:

The Etsy API uses Oauth to give developer access to an Etsy member's private account data.They will give us temporary credentials(known as "request token")

AUTHORIZING THE REQUEST:

The app directs the member to a page on Etsy,where temporary credentials are approved and linked to the members account.

OBTAINING TOKEN CREDENTIALS:

Once the member clicks on "Allow Access", she or he is presented with a verifier token.They will need to return to our application and enter verifier token.
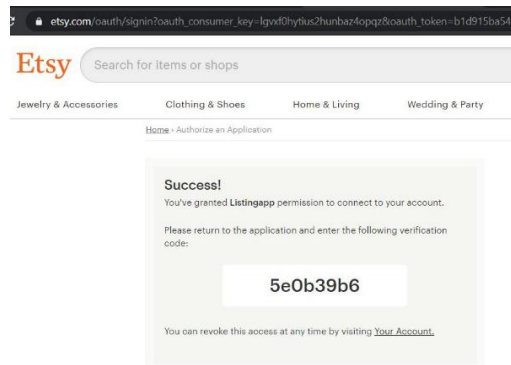
LOGIN USING TOKEN CREDENTIALS:

We will sign the request with the OAuth token and secret from the temporary credentials,and the OAuth verifier.The temporary credentials and verifier will be returned as GET params in callback URL.We will store secret somewhere in database.
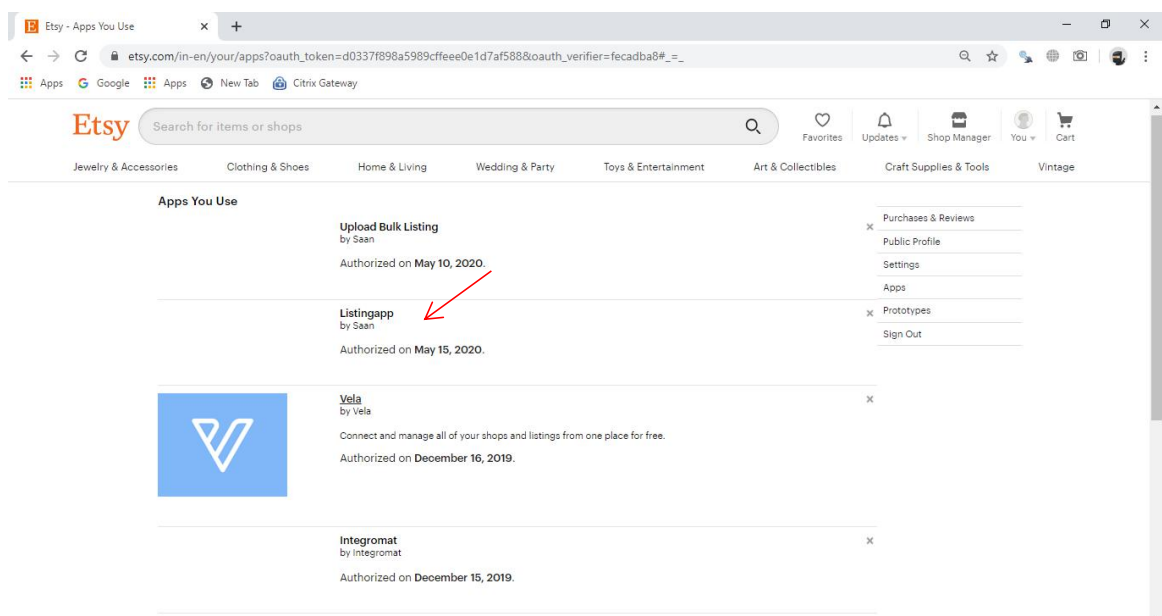

Fig 5.5

LISTING THE PRODUCT ON ETSY:

Listings on Etsy are items for sale. Each Listing is associated with a User, and with a Shop (Users own Shops.) Etsy Listings have a creation date, and are valid for approximately four months. Listings have a price and a quantity, and when they're sold out, the User must renew them before they can be sold again.
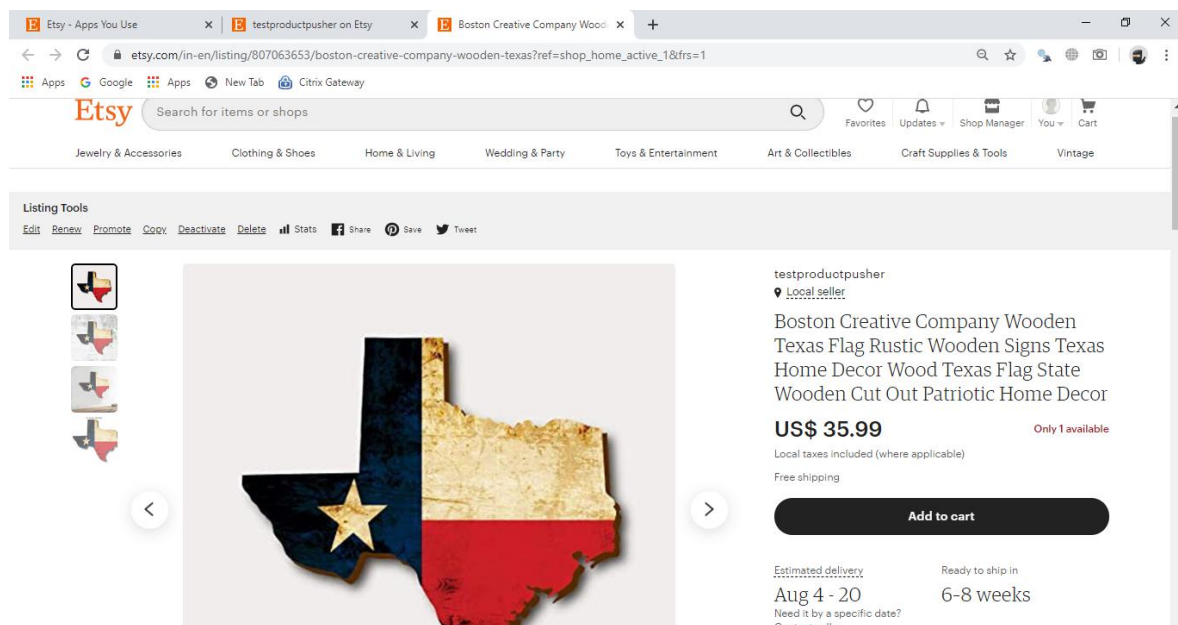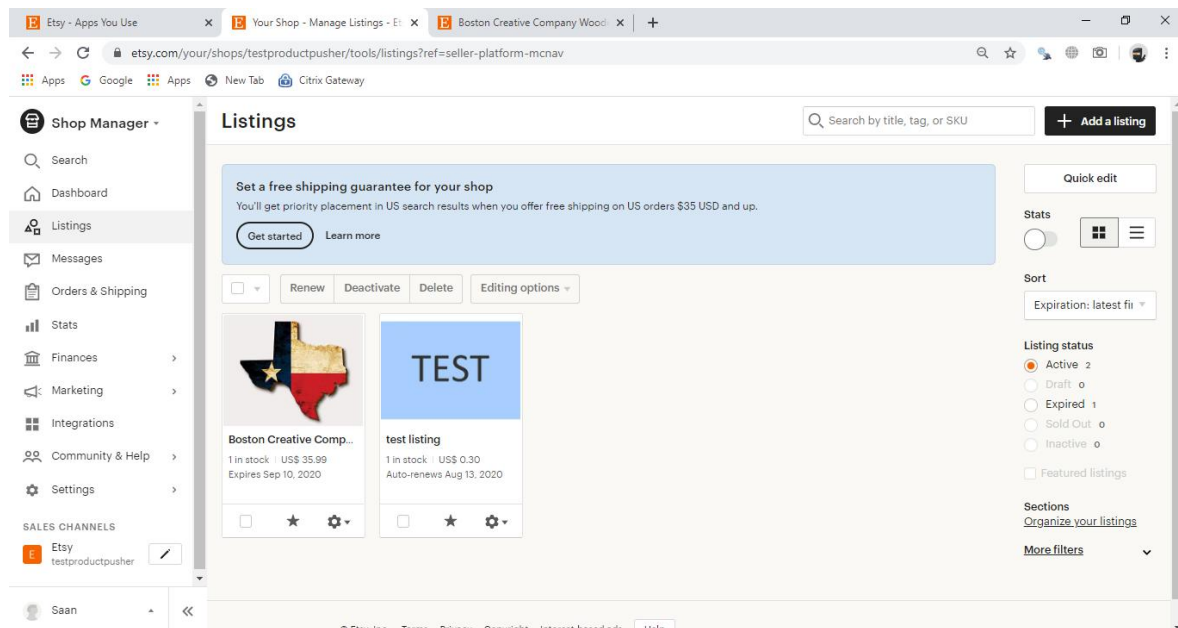

Fig 5.6

The Etsy API allows developers to create apps that create and manage listings in a member's shop, analyze sales history and feedback, and control shop appearance.
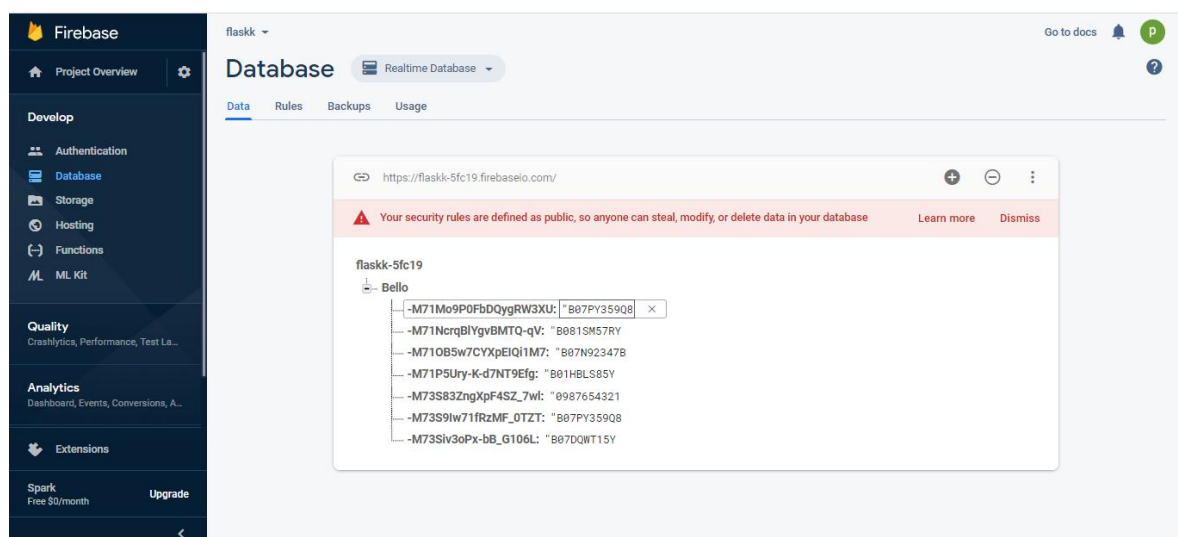
OUTPUT OF CREATED LISTING:

Here you can see the product that is listed which is scrapped from Amazon.Hence we can list the products from Amazon to Etsy.

STORING ASIN ID IN FIREBASE USING FLASK:

The response from flask is obtained.After clicking submit button,the ASIN ID entered will store it in a firebase database.From there we directly connect to the scrapy file,and from there we can get any product details as possible.

CONCLUSION:

The use of multichannel listing is still evolving,and most of the software are paid versions,so pushing listings across multiple e-commerce sites allows us to easily list the same product across multiple sites with less manual work and in minimal time.Selling on every online platform requires many efforts and a tip-top working strategy.We should use automation tools that support seller to ensure that every customer is getting the same level of interaction from our company when they reach out.We should know what our fulfillment options are and we need to find the best shipping partner for our needs.

FUTURE WORK:

➢ Linking multiple e-commerce sites at a single place

➢ Complete automation that doesn't need any human intervention

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   https://docs.scrapy.org/en/latest/intro/tutorial.html

2) Getting Etsy API

   https://www.etsy.com/developers/documentation

3) Etsy API - Working with inventory and merchandising seller tools

   https://groups.google.com/forum/?utm_medium=email&utm_source=footer#!msg/etsy-api-v2/bpYqbbl2ruI/

4) Getting started with Flask and Firebase

   https://flask.palletsprojects.com/en/1.1.x/

   https://firebase.google.com/docs/web/setup

5) Getting access using OAuth Authentication

https://www.etsy.com/oauth/signin?oauth_consumer_key=lgvxf0hytius2hunbaz4opqz&oauth_token=1e17c769ce3d7e0816cc12cae82805&service=v2_prod?oauth_consumer_key=lgvxf0hytius2hunbaz4opqz&oauth_token=1e17c769ce3d7e0816cc12cae82805

6) Getting verifier token using Etsy API

https://www.etsy.com/in-en/your/apps?oauth_token=1e17c769ce3d7e0816cc12cae82805&oauth_verifier=aa78fd3f#_=_

7) Listed product details in Etsy

https://www.etsy.com/in-en/listing/807063653/boston-creative-company-wooden-texas?ref=shop_home_active_1&frs=1