



# Visual Analytics And Recommendation System For Digital Marketers

## TEAM ONE AND ZERO

### INTRODUCTION:

Visual analytics is an emerging research discipline aiming to make the best possible use of huge information loads in a wide variety of applications by appropriately combining the strengths of intelligent automatic data analysis with the visual perception and analysis capabilities of the human user. The integration of these disciplines into visual analytics will result in a set of well-established and agreed upon concepts and theories, allowing any scientific breakthrough in a single discipline to have a potential impact on the whole visual analytics field. In return, combining and upgrading these multiple technologies onto a new general level will have a great impact on a large number of application domains.

Implementation of Machine learning algorithms to assist consumers in discovering new products and services is the new form of digital marketing on an e-commerce website. When you shop online, a recommendation system directs you to the product that is most likely to be purchased. Users are often frustrated by options and need assistance discovering what they're looking for, so recommender systems are an important element of our digital environment. Customers will be happier, and profits will increase as a result. Recommender systems are similar to salespeople who know what you want based on your history and interests. Recommender systems are really critical in some industries as they can generate a huge amount of income when they are efficient or also be a way to stand out significantly from competitors.

The purpose of the project is to help marketers to identify which platform is good for placing the ads to generate good quality of leads and get higher conversional rate. enhance sales and average order value. helps them deliver customized and relevant content. It helps to deliver consistent brand experience by simply drawing data from various channels. Helps to drive a website traffic.

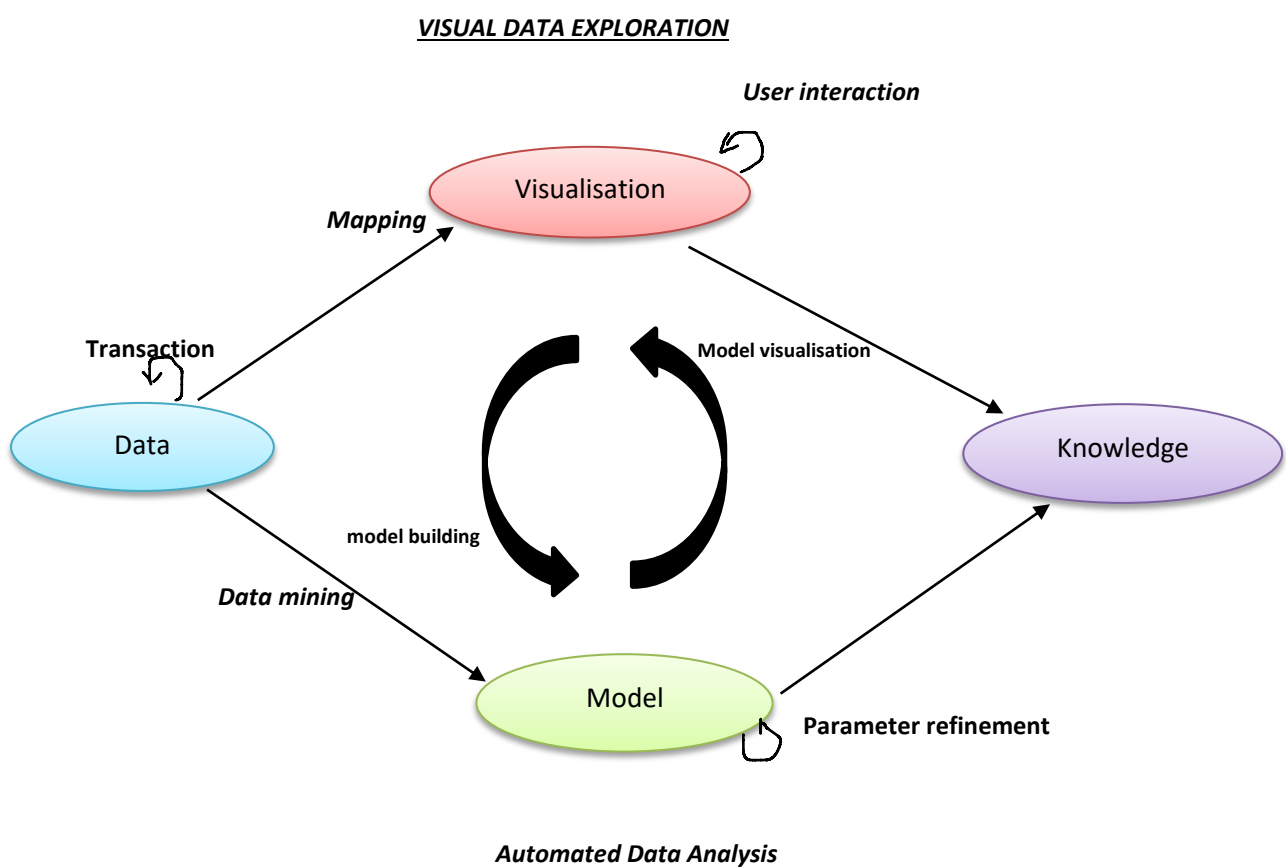
### LITERATURE SURVEY:

There exist two major categories of method to solve the problem: collaborative filtering methods and content-based methods. Collaborative methods for recommender systems are based solely on the past interactions recorded between users and items to produce new recommendations. The main advantage of collaborative approaches is that they require no information about users or items and, so, they can be used in many situations. The more customer interacts with products the more recommendation gets perfect. Content-based methods suffer far less from the cold start problem

than collaborative approaches: new users or items can be described by their characteristics (content) and so relevant suggestions can be done for these new entities. Only new users or items with previously unseen features will logically suffer from this drawback, but this has little to no chance to happen once the system is old enough.

Our project is built on content based recommendation system. The proposed works on small scale data where based on the category the digital marketer chooses and also based on his budget of cosy per view and cost per click it recommends the suitable platform to place advertisement.

## THEORITICAL ANALYSIS:



**Diagrammatic overview**

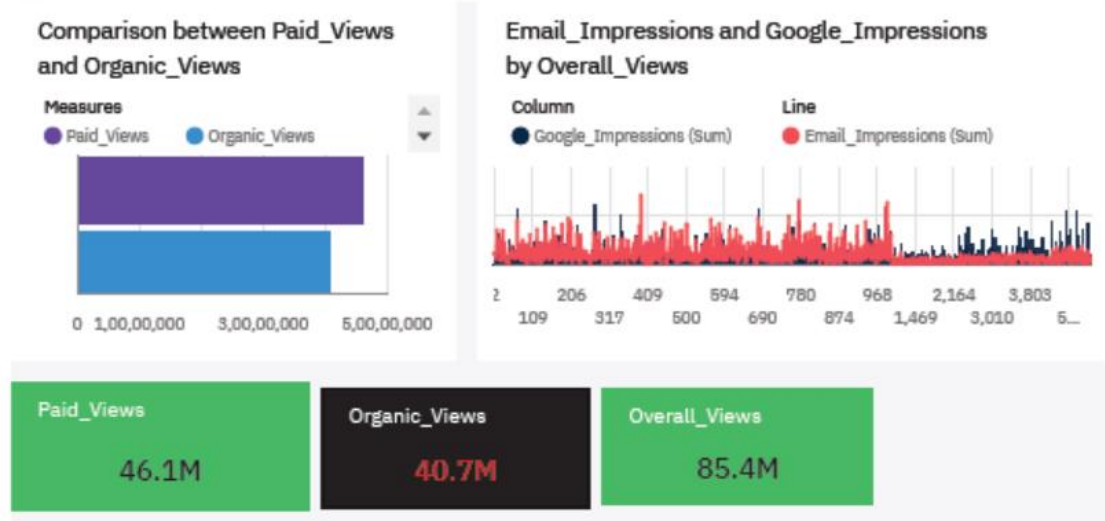
## Hardware and Software Requirements:

Python  
IBM cognos  
MI

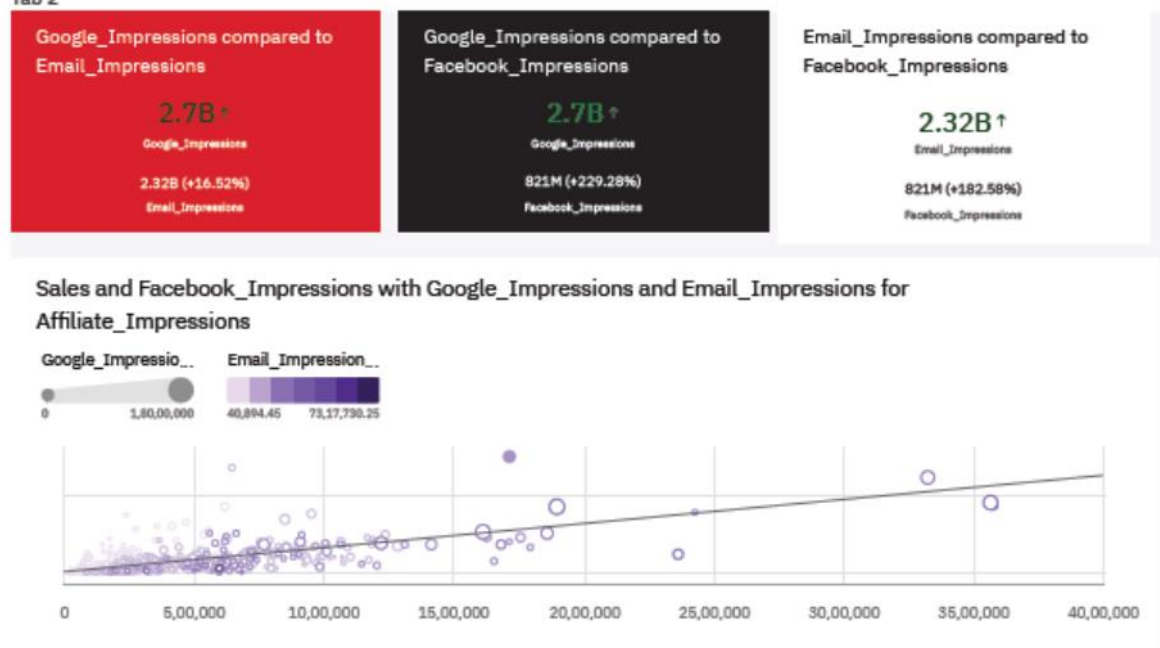
## EXPERIMENTAL INVESTIGATIONS:

- Analysis Done Through Dashboard.

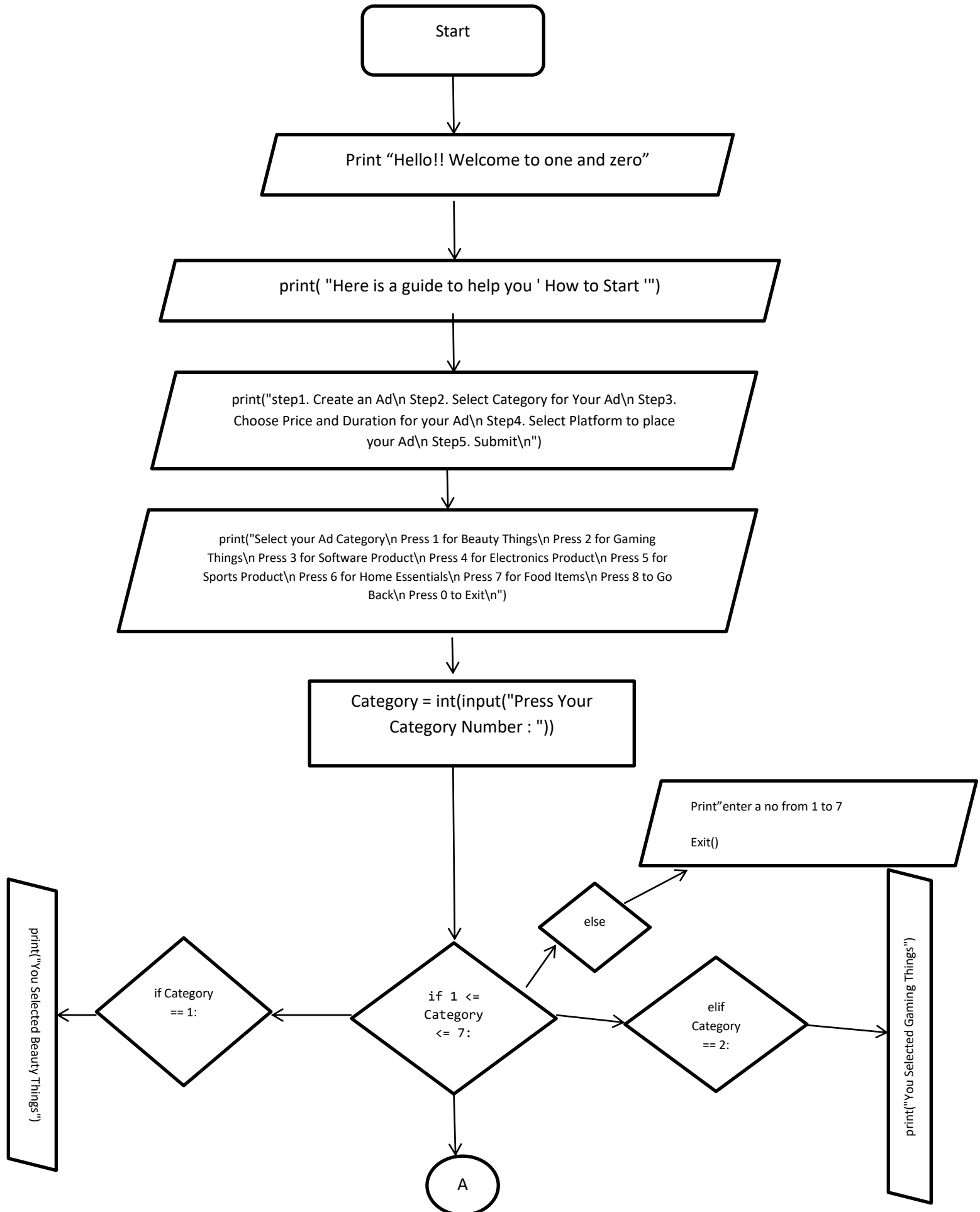
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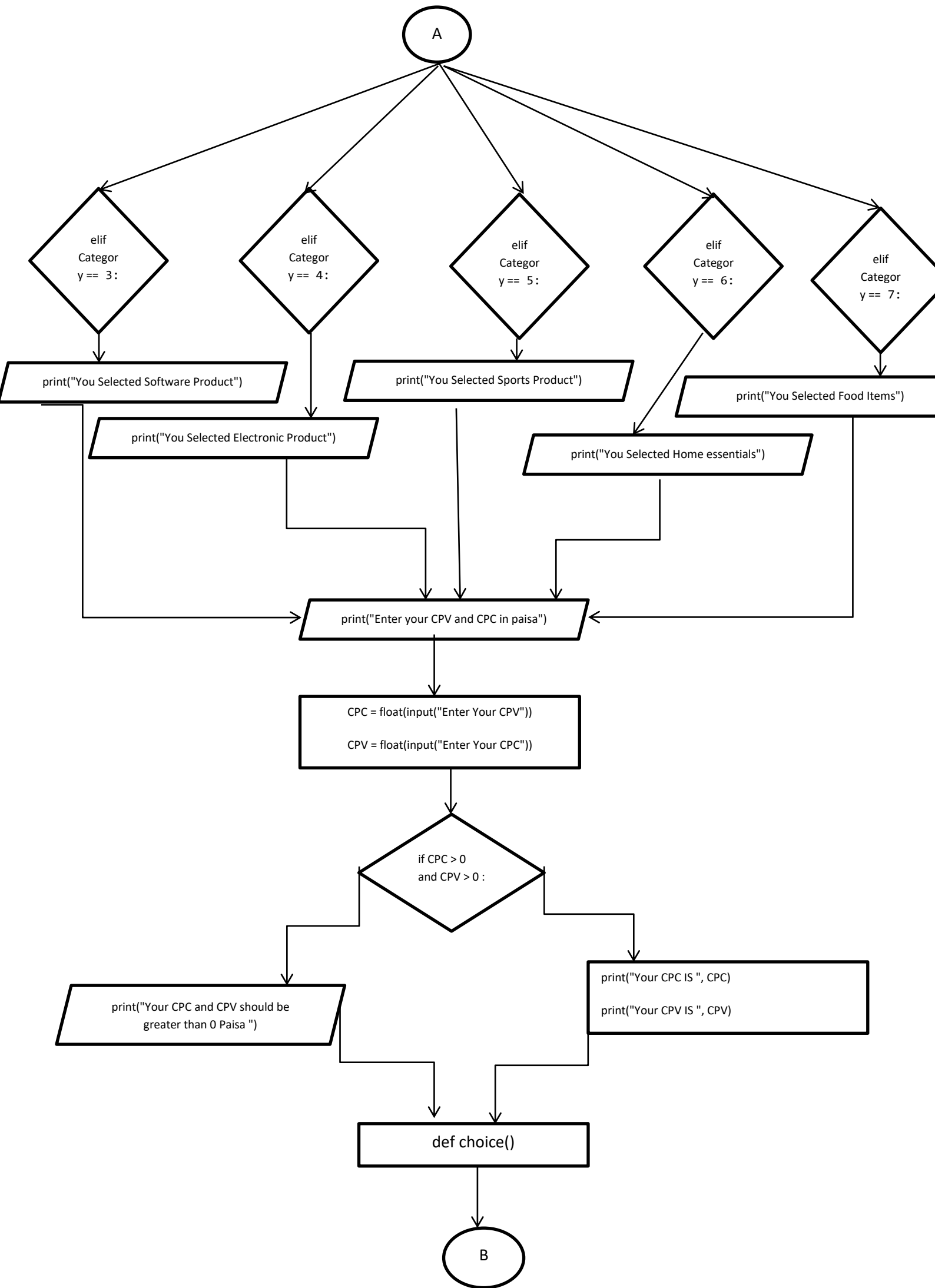


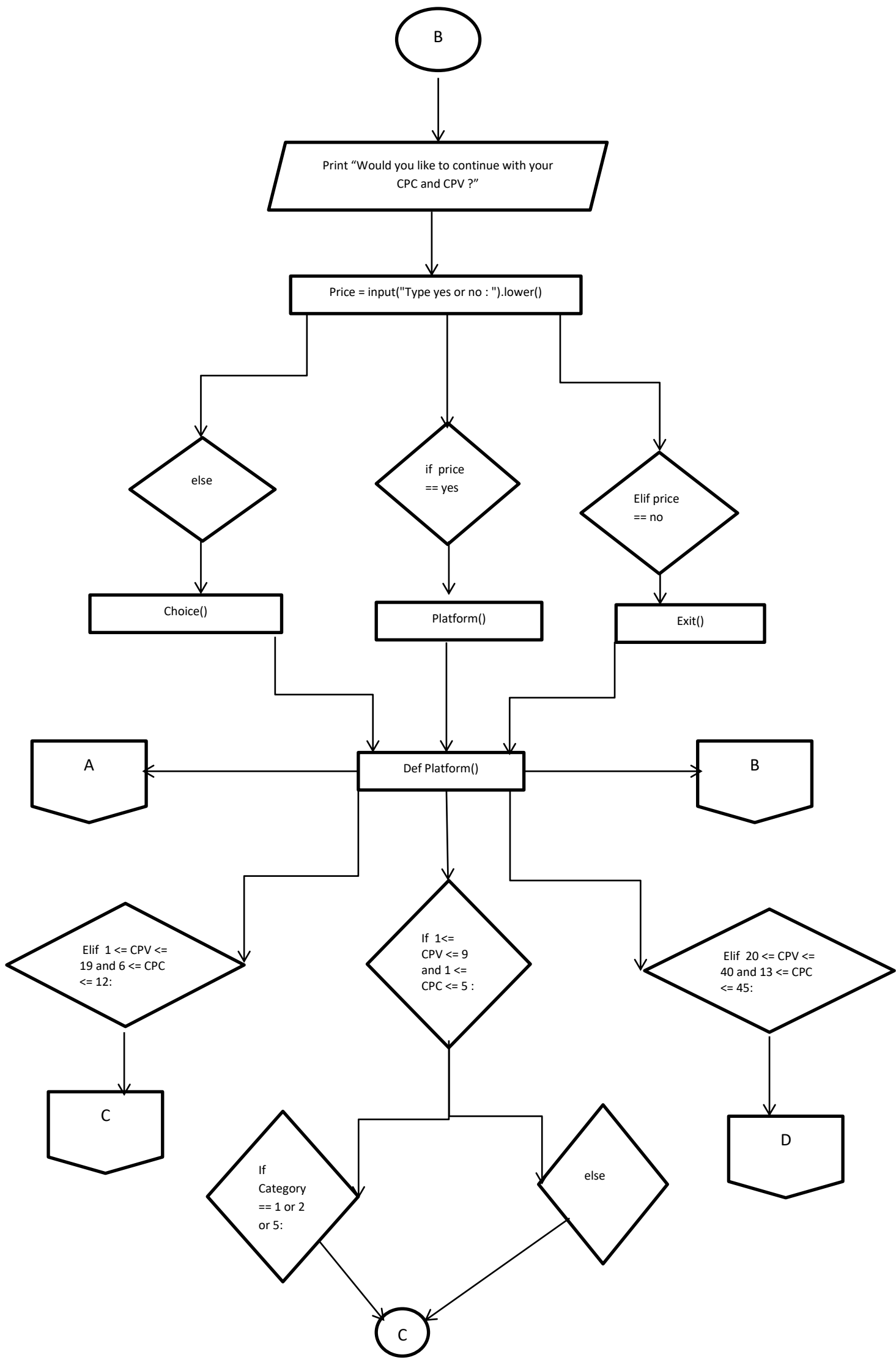
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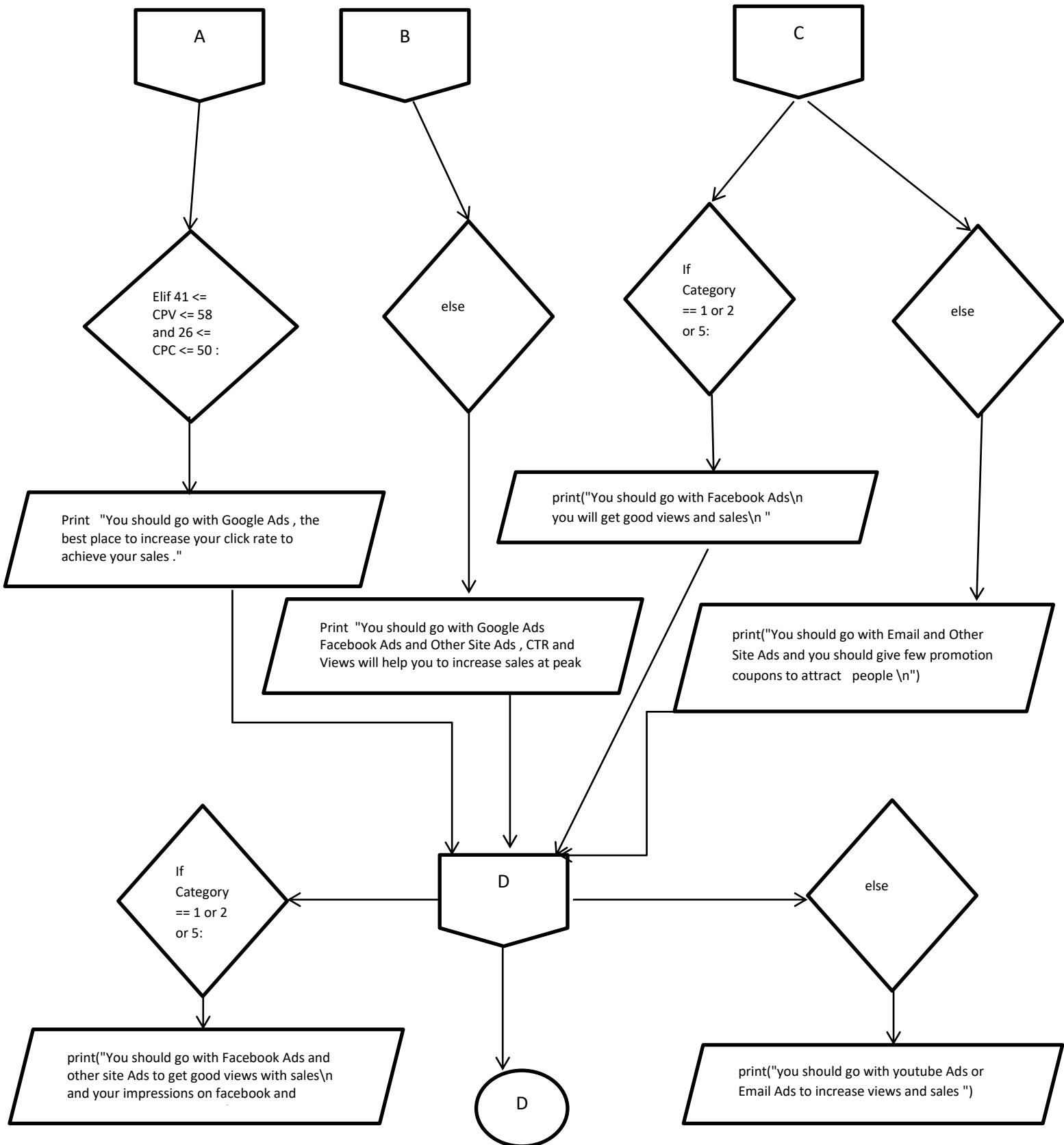
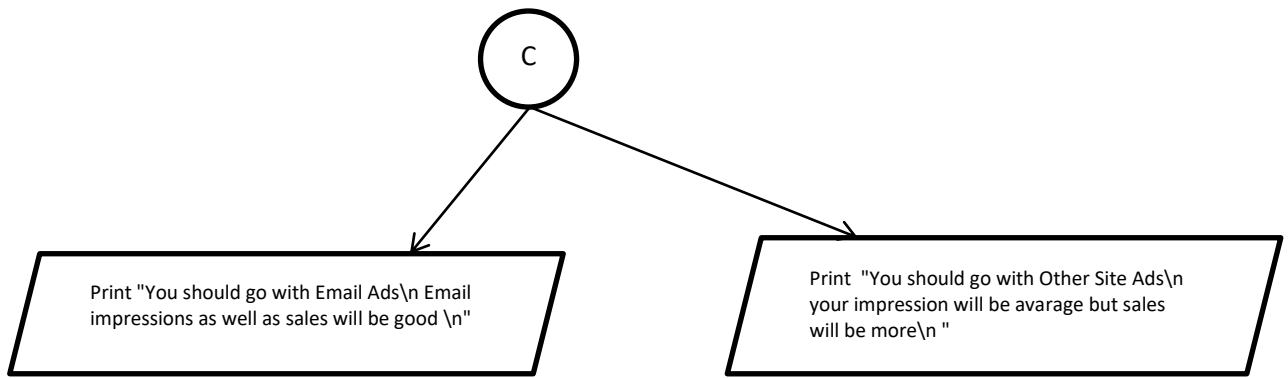


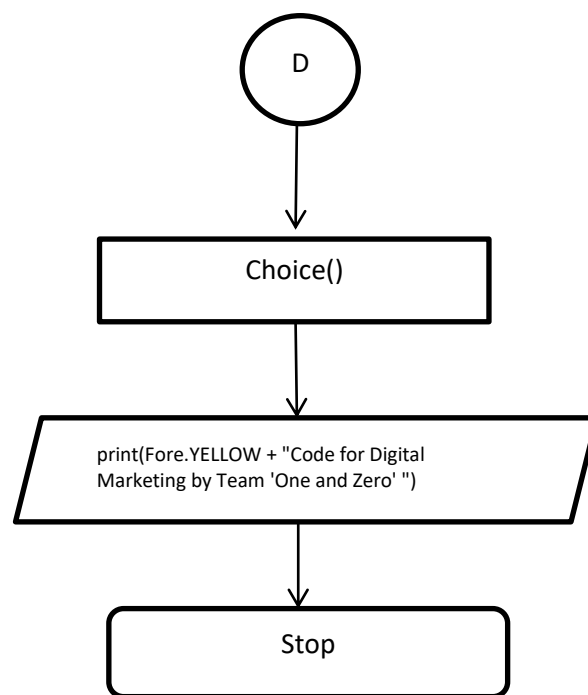
## FLOWCHART











## RESULT

```
Hello!! Welcome to One and Zero
Here is a guide to help you ' How to Start '
step1. Create an Ad
  Step2. Select Category for Your Ad
  Step3. Choose Price and Duration for your Ad
  Step4. Select Platform to place your Ad
  Step5. Submit

Select your Ad Category
  Press 1 for Beauty Things
  Press 2 for Gaming Things
  Press 3 for Software Product
  Press 4 for Electronics Product
  Press 5 for Sports Product
  Press 6 for Home Essentials
  Press 7 for Food Items
  Press 8 to Go Back
  Press 0 to Exit

Press Your Category Number : 2
You Selected Gaming Things
Enter Your CPV and CPC in Paisa
Enter Your CPV 7
Enter Your CPC 3
Your CPC IS 7.0
Your CPV IS 3.0
Would you like to continue with your CPC and CPV ?
Type yes or no : Yes
You should go with Facebook Ads
  you will get good views and sales

Code for Digital Marketing by Team 'One and Zero'
```



## **ADVANTAGES & DISADVANTAGES**

### **Advantages:**

- Product recommendation engines are an excellent way to deliver customers with an improved user experience. Leveraging advanced algorithms such as machine learning and AI, a recommendation system can help bring customers the relevant products they want or need.
- This proposed system.
- Engage Customers.
- Number of Items per Order.
- Lower Work and Overhead.
- Provide Reports.
- Providing guides is an integral part of a personalization system. Providing the client precise and up to the minute reporting permits him to make solid choices.

### **Disadvantages:**

- Significant investments required
- The complex onboarding process

## **APPLICATIONS**

- The proposed solution can be used as small scale prediction for the digital marketers to present their advertisements in respective platform suggested as the recommendation system of this proposed solution would categorise the add and based on the price and sales analysis from the data set it would give the suitable recommendation
- Sales Data Visualization
- Everything needs to be tracked in sales and the performance and targets achieved hugely depend on data, so the business keeps growing and the right decisions are made.
- Data Visualization in Accounting
- Accounting can use data visualizations to quickly compare different metrics, identify patterns and stay on record with events. It can also identify trends to come and forecast new patterns through historical data.
- SEO Performance Data Visualization
- Good visualizations can tell a great story when it comes to reporting on SEO and marketing campaigns. If you work with in-house SEO specialists or an external agency, team leaders need to know how the website performs in organic search. But that's not an easy task as most SEO data comes from multiple sources – Google Analytics, Google Search Console, and rank trackers.

## CONCLUSION

Data visualizations are a great tool to help decipher large amounts of data and improve business growth, sales, and productivity. Visualizations can help the marketing teams advertise the right products to the right regions and they can help the sales team gather data on past customers.

## FUTURE SCOPE

- Phil Simon, in his new book, The Visual Organization: Data Visualization, Big Data, and the Quest for Better Decisions, says, “The Visual Organization is fundamentally about how progressive organizations today are using a wide array of data visualization (DataViz) tools to ask better questions of their data – and make a better business decision.”
- According to the American Management Association statistics reports, data visualization saves time by reducing business meetings by 24%.
- Leaders can make decisions more independently without having to rely on their IT department.
- Dashboards and reports developed using software are more comprehensive, and help leaders make real-time, accurate, and informed business decisions.
- Analytics will play an important role in data security. Analytics are already transforming differential privacy, intrusion detection, digital watermarking and malware countermeasures.
- The Internet of Things (IOT) will continue to grow rapidly. Analytics tools and methods for dealing with large amounts of structured and unstructured data generated by IOT will continue to gain importance.
- Companies would become over-critical and cautious about Data Accuracy.

## BIBLIOGRAPHY

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[https://marutitech.com/recommendation-engine-benefits/#Advantages\\_Of\\_Recommendation\\_Systems](https://marutitech.com/recommendation-engine-benefits/#Advantages_Of_Recommendation_Systems)

## APPENDIX

<https://drive.google.com/drive/folders/1-viXn8QCxpvXF1HgvYkcUHiTBqAfi-aj>

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