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# Design of E-commerce Information System on Web-based Online Shopping

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**Abstract.** This paper involves designing an E-commerce Information system on one of Web-based online shopping. This business classified as a very new stand and join the world of e-commerce. Web-based e-commerce becomes the choice of other media to promote the business, which is expected to be able to expand the media and promotion get a bigger profit from that expected. The method used in this journal was development of prototype system and system approach structured with flow map tools, context diagrams and data flow diagram, data dictionary, table relation. E-commerce information system on one of the online shop in this design will facilitate the admin in data processing, bookkeeping, and media campaigns and facilitate consumers in choosing products from Echartalia shop. With the existence of this system improve the efficiency of time both for consumer and party of Echartalia shop.

## 1. Introduction

Bigne et al. said that with online advertising media will affect consumer intention in purchasing in the future about the product offered. [1] Even so with Colicev et al. explained that social media plays a role to increase public awareness of the brand from business products, and buying intentions. [2] Hsu et al. Finds that in the face of intense competition in the online shopping business, the online shopping environment must be made safe and friendly for consumers. [3] Chakraborty and Bhat explained that with social media consumers get various knowledge about the brand of a product. [4] Zhang et al. explains that social media networks are an important tool in corporate marketing in attracting customers. [5] Järvinen and Karjaluoto explained that companies can leverage Web analytics to demonstrate digital marketing activities that benefit their business. [6]

Researches regarding websites conducted by Akalamkam and Partners [9] Limbu and Jensen [7], Mohapatra and Sahu [8], and Aggarawal and Rahul [10], found that before consumers choose to shop online, consumers first seek information both online and offline to ensure that online shopping is safe to use and the level of customer satisfaction with any of the online selling sites depends on the security of the site. While attitudes toward websites are related to buying intentions, buying intent, and positive word of mouth. The things that affect the visitor's desire to transact and choose to be loyal customers of a particular e-commerce website are visitor experience, user interface experience, post-purchase experience, smooth payment processing, advertising and promotion, and m-commerce, and the level of customer satisfaction with any of the online selling sites depends on the security of the site.

Research conducted by Maind et al. against Ordering System Room found that to overcome the error in ordering food, and improve the efficiency and accuracy of restaurants in saving time for services and

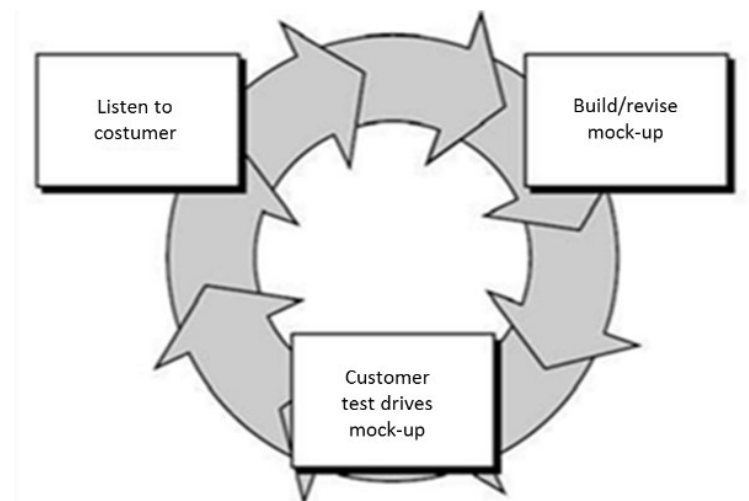


reservations can use a technology-based ordering system through smartphones and tablets. [9] While research conducted by Pan et al. explains that for faster delivery systems it takes a pick-and-pass system as the emergence of e-commerce and e-business in the global supply chain. [10]

From some understandings and the results of previous research that can be seen the importance of widening marketing through e-commerce is a serious thing in designing the system. So, this study was conducted with the aim to design a sales information system on one web-based online shop. By using prototype system development method and structured system approach with flowmap tool, context diagram and data flow diagram, data dictionary, table relation, so help business entrepreneur's online shop to expand media campaign and get bigger profit than expected.

## 2. Method

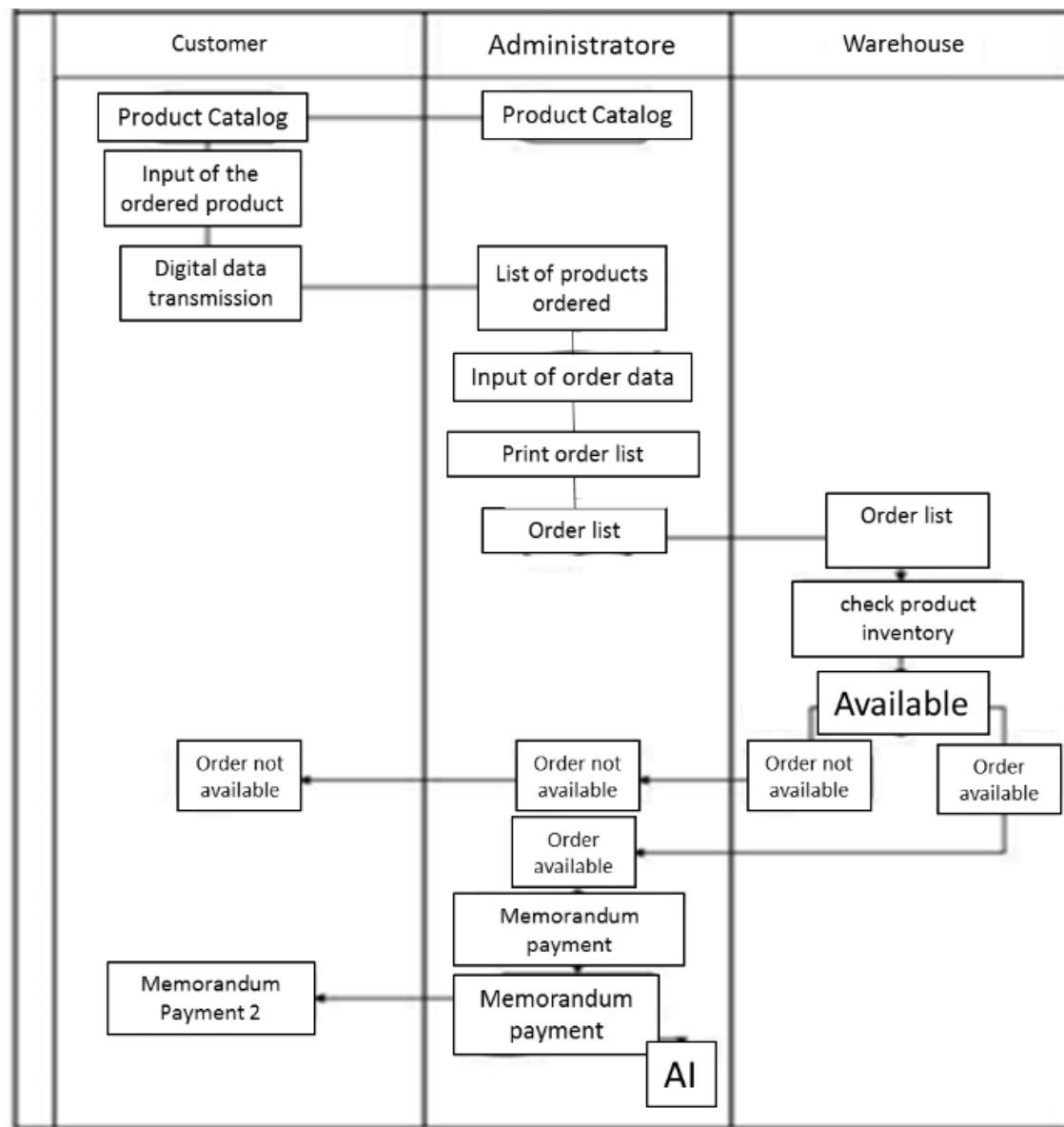
This study used data collection methods using primary data through observation and interviews to parties working in one of the online and secondary business stores through previous journals or research that are still related to the object of research. The system approach designed by the author using structured system development method, with system development method used is Prototype development method, because prototype development method has advantages that is easy to evaluate, and done gradually (See Figure 1).



**Figure 1.** Model Prototyping

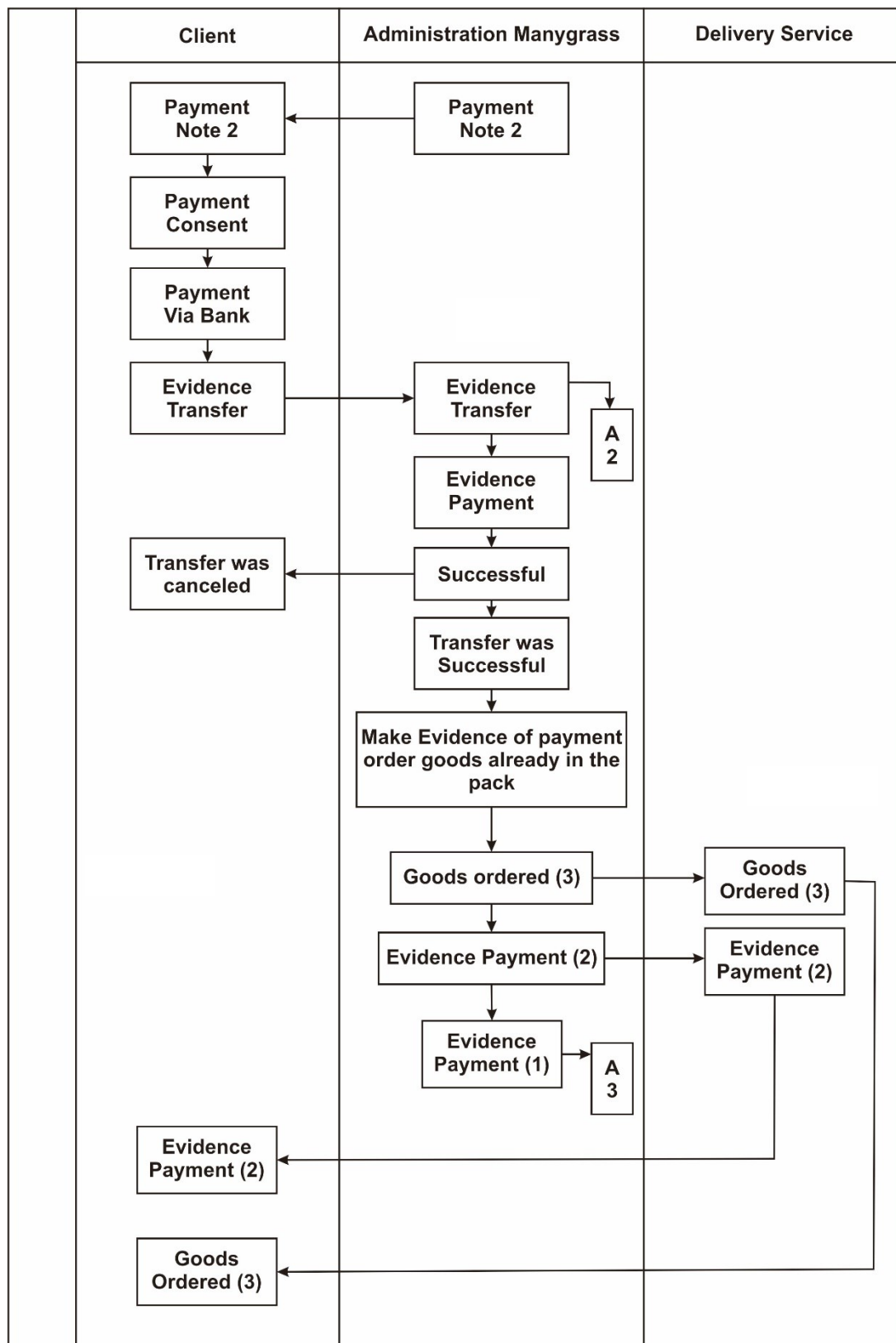
## 3. Results and Discussion

The initial stage of system design is to create flowmap ordering, in order starting from admin Echitalia shop to upload products to the website, then consumers choose products to be purchased including size and color, admin make a list of reservations and given to the warehouse, and the warehouse checks the goods if the goods are available, then the Echitalia shop admin makes 2 duplicate notes, 1 is given to the consumer and 1 again to the archive (See Figure 2).



**Figure 2.** Ordering Flowmap

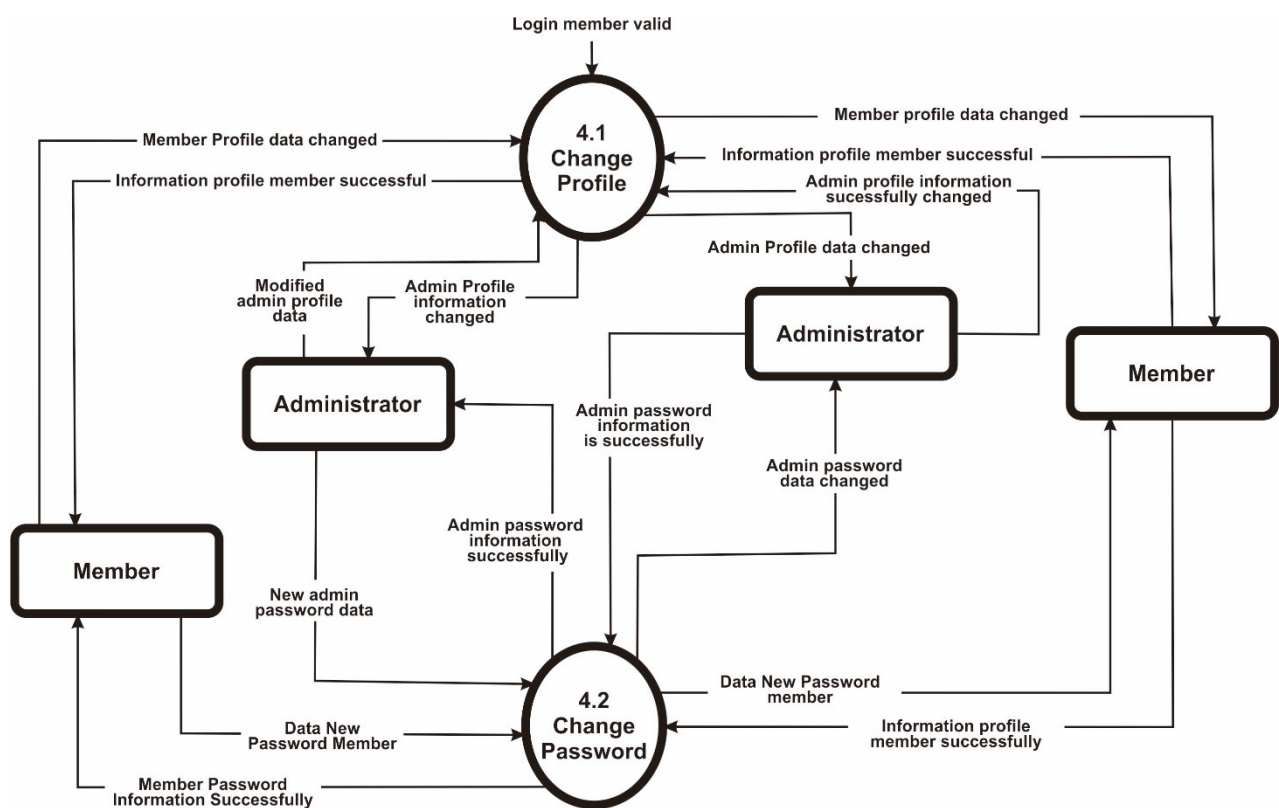
After making the next order flowmap is making flowmap payment or flowmap transactions in the online business. Flowmap payment begins with stages admin Echitalia shop provides a memorandum of payment to the consumer, the customer performs a service through Echitalia shop bank account and sends proof of payment, and ends with the stages admin online shop checks proof of payment in case of error admin online shop will tell the consumer that happened error, if true admin online shop make archives and do delivery of goods (See Figure 3).



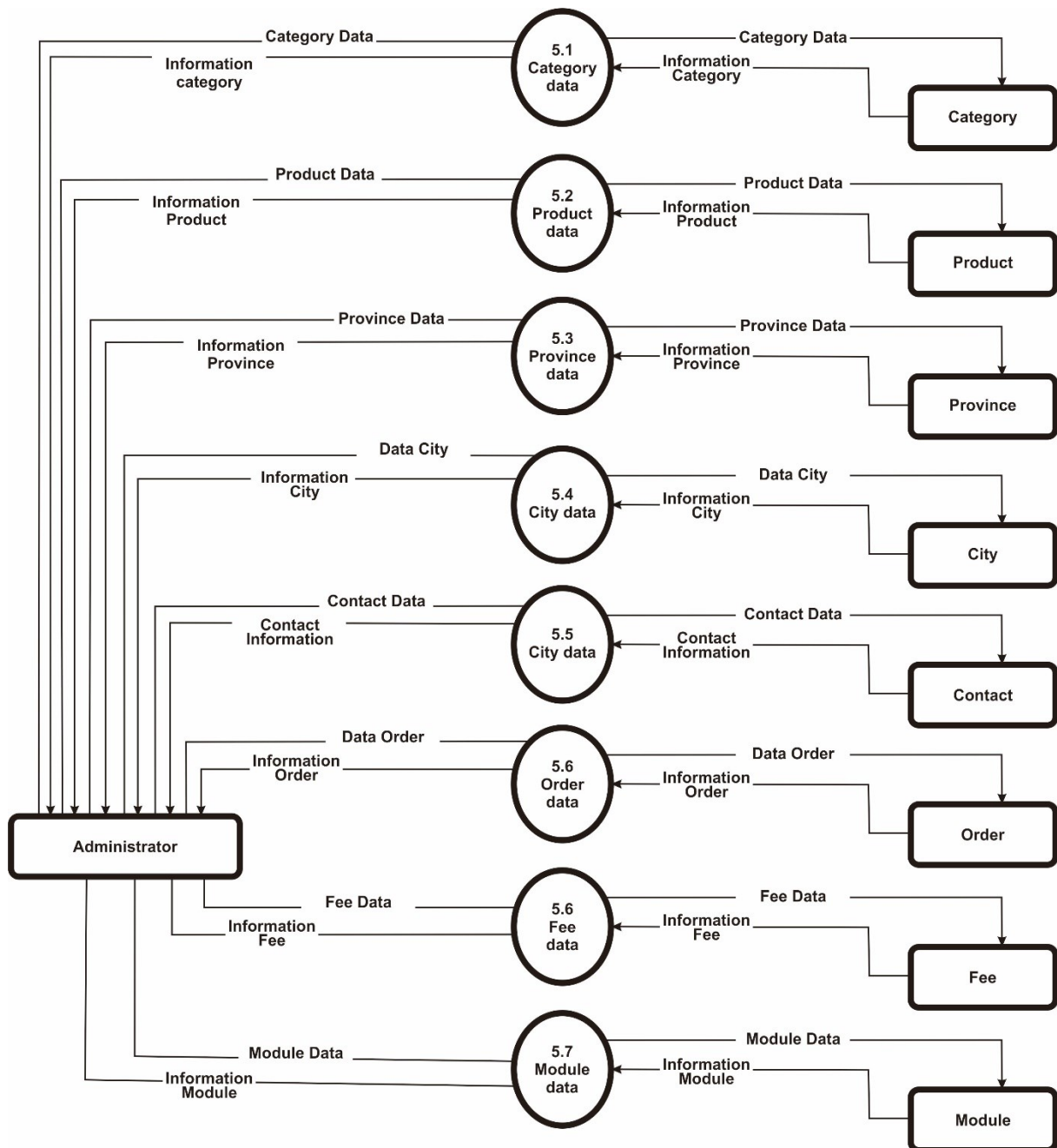
**Figure 3. Payment Flowmap**

Data Flow Diagram is the notation or symbol of data flow on the scope of the system in the thorough at this stage consists of several figures that become stages in making data flow diagram on the system information e-commerce in one of the online business data flow diagram level 1.0 , data flow diagram Level 2 process 4.0, data flow diagram Level 2 Process 5.0, data flow diagram level 2 Process 6.0, data flow diagram Level 3 Process 5.1, data flow diagram Level 3 Process 5.2, and last Data Flow diagram Level 3 Process 5.3 (See the Figures 4-9).

After making the data flow diagram the last step is to create a data dictionary of the designed information system. The data dictionary is a collection of facts data that is used for system design based on data flowing from flowchart and data flow diagram. Then create a table relation. Relation table is the relationship between the tables in the data dictionary, each table is connected based on primary key and foreign key (See Figure 10).



**Figure 4.** Data flow diagram Level 2 proses 4.0



**Figure 5.** Data flow diagram Level 2 Proses 5.0



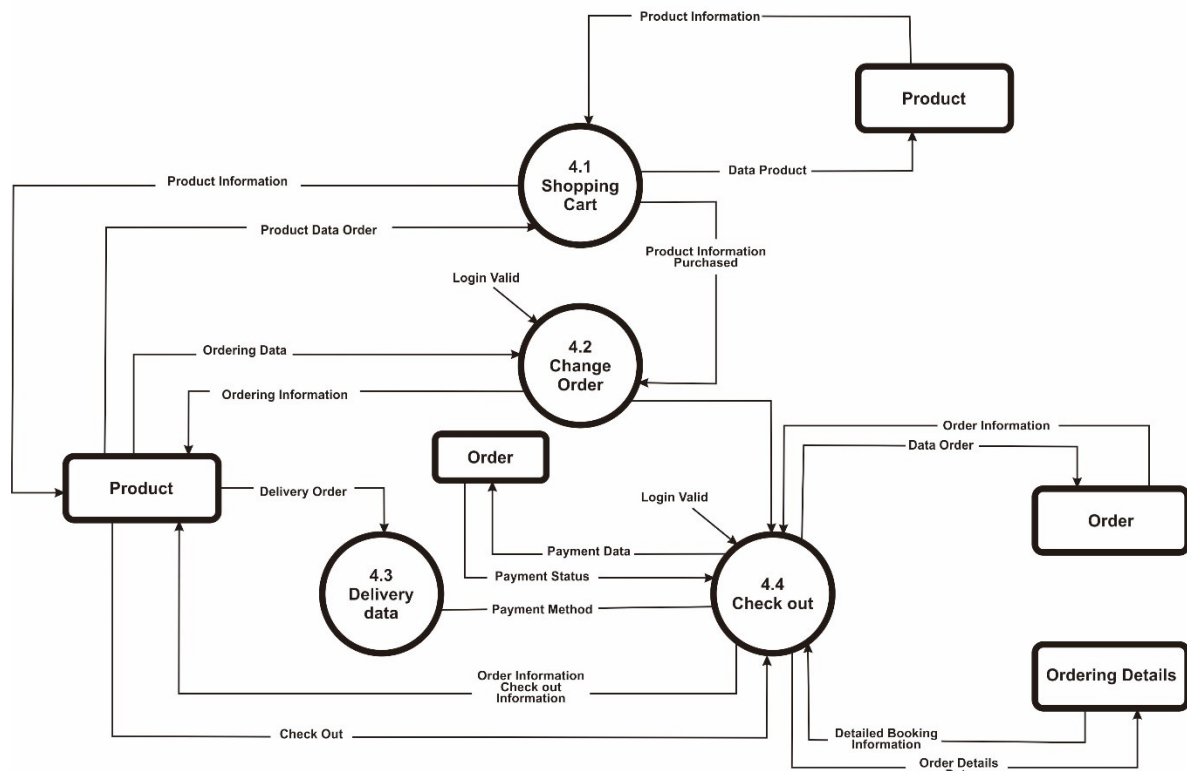


Figure 6. Data flow diagram level 2 Proses 6.0

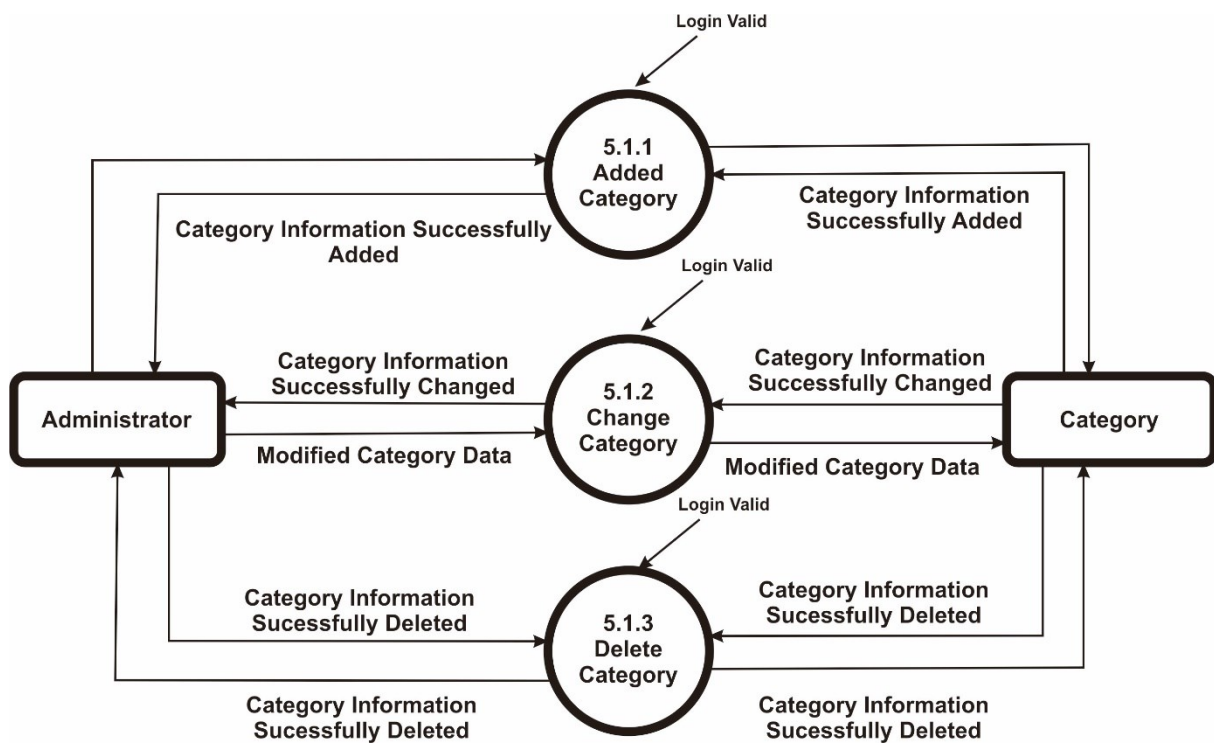
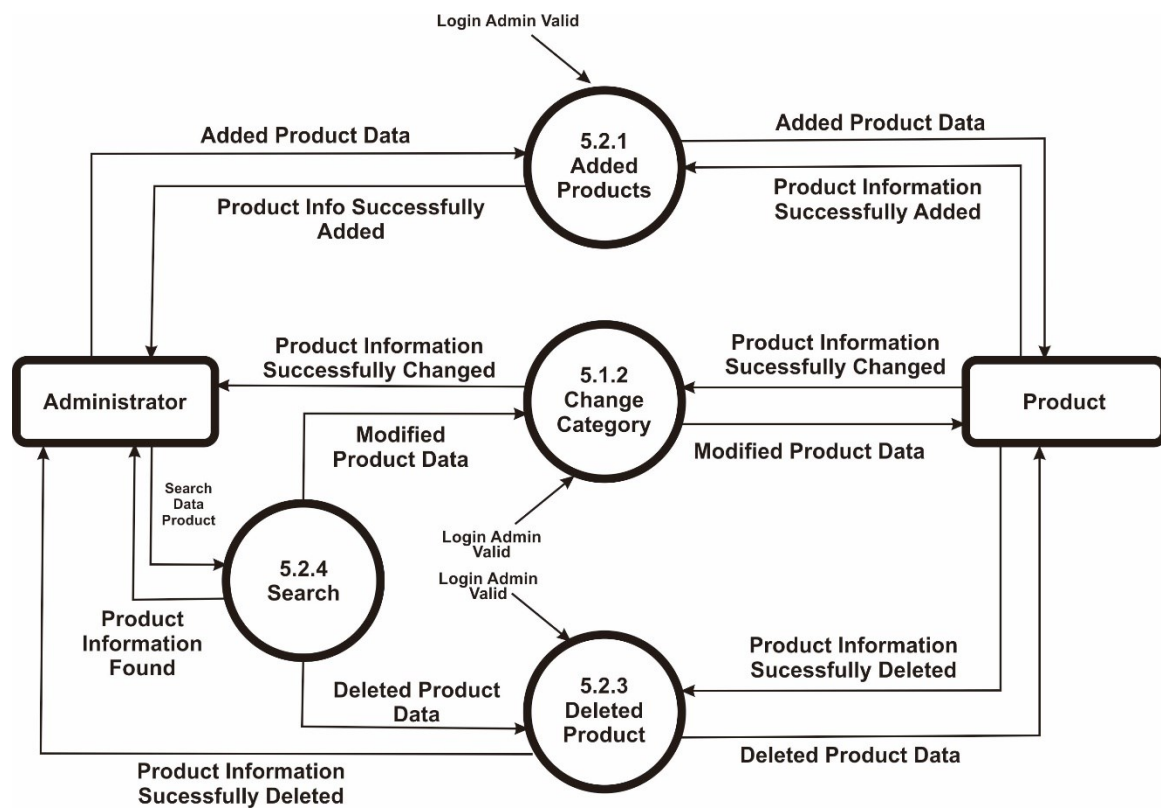
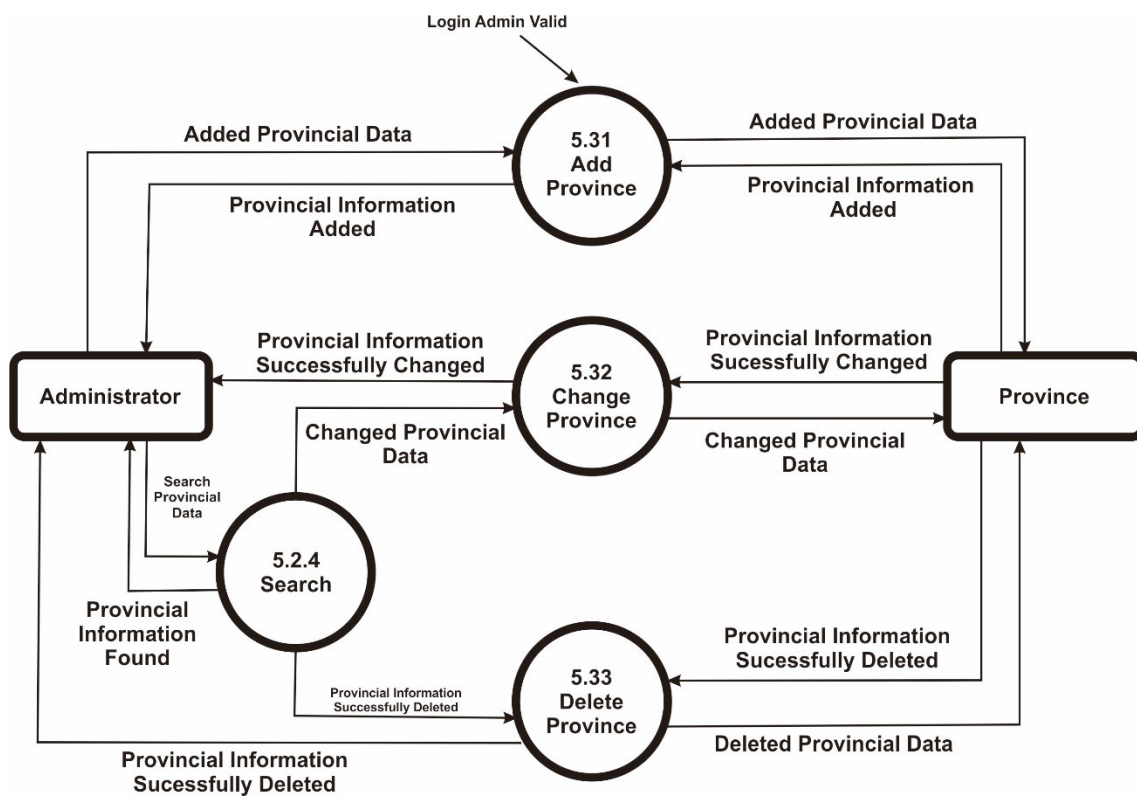


Figure 7. Data flow diagram Level 3 Process 5.1

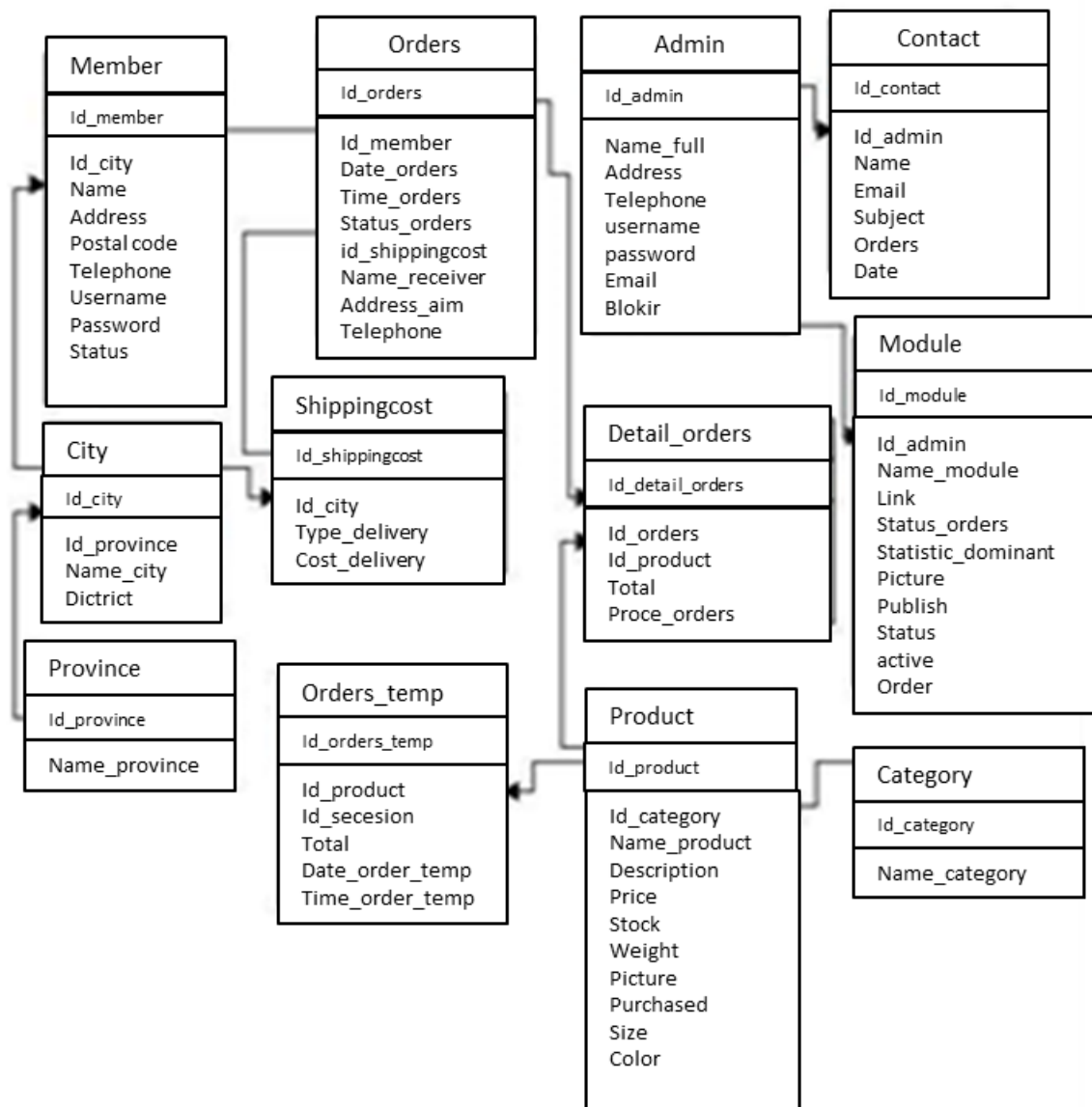




**Figure 8.** Data flow diagram Level 3 Process 5.2



**Figure 9.** Data Flow diagram Level 3 Process 5.3



**Figure 10.** Relation

#### 4. Conclusion

E-commerce information system on one of the online shop in this design will facilitate the admin in data processing, bookkeeping, and media campaigns and facilitate consumers in choosing products from Echitalia shop. With the existence of this system improve the efficiency of time both for consumer and party of Echitalia shop.

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