Experiment No. 4

<u>Aim</u>: Structured Data Flow Analysis of E-commerce website

<u>Problem Statement</u>: To prepare Data Flow Diagram (DFD) for E-commerce shopping website

<u>Theory</u>:
Analysts use various tools to understand and describe the information system. One of the ways is using structured analysis.

What is Structured Analysis?

Structured Analysis is a development method that allows the analyst to understand the system and its activities in a logical way.
It is a systematic approach, which uses graphical tools that analyse and refine the objectives of an existing system and develop a new system specification which can be easily understandable by user.
It has following attributes −
- It is graphic which specifies the presentation of application.
- It divides the processes so that it gives a clear picture of system flow.
- It is logical rather than physical i.e., the elements of system do not depend on vendor or hardware.
- It is an approach that works from high-level overviews to lower-level details.

Data Flow Diagrams (DFD) or Bubble Chart

It is a technique developed by Larry Constantine to express the requirements of system in a graphical form.
- It shows the flow of data between various functions of system and specifies how the current system is implemented.
- It is an initial stage of design phase that functionally divides the requirement specifications down to the lowest level of detail.
- Its graphical nature makes it a good communication tool between user and analyst or analyst and system designer.
- It gives an overview of what data a system processes, what transformations are performed, what data are stored, what results are produced and where they flow.
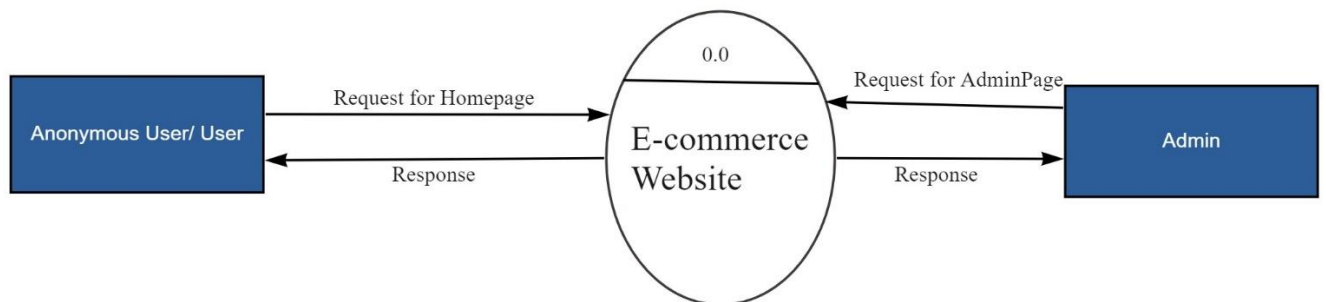
Basic Elements of DFD

DFD is easy to understand and quite effective when the required design is not clear and the user wants a notational language for communication. However, it requires a large number of iterations for obtaining the most accurate and complete solution.
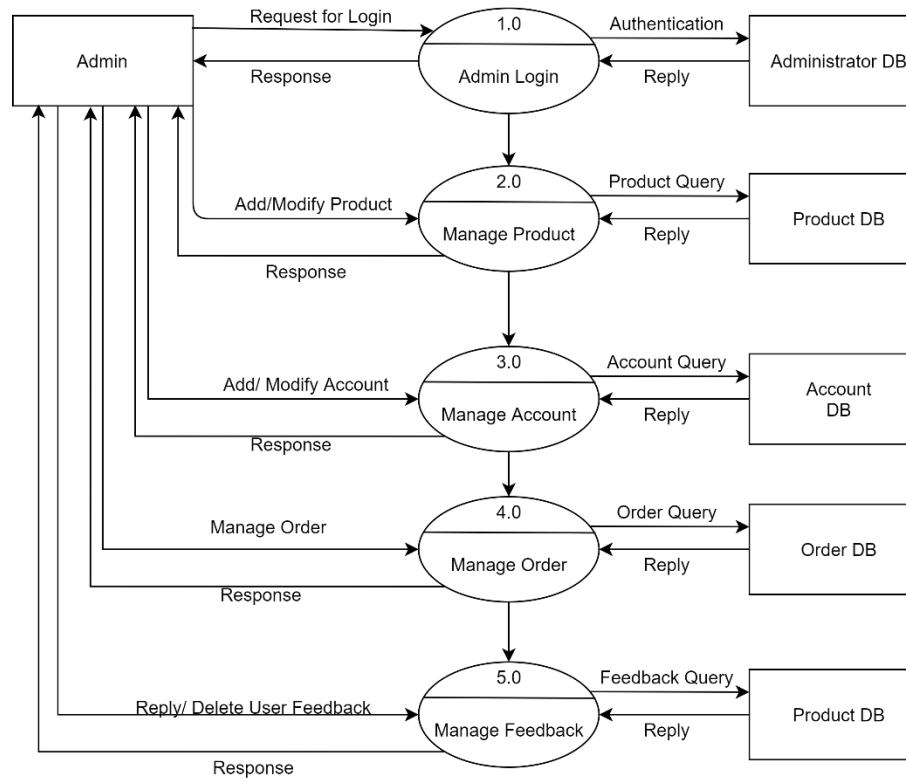
The following table shows the symbols used in designing a DFD and their significance –

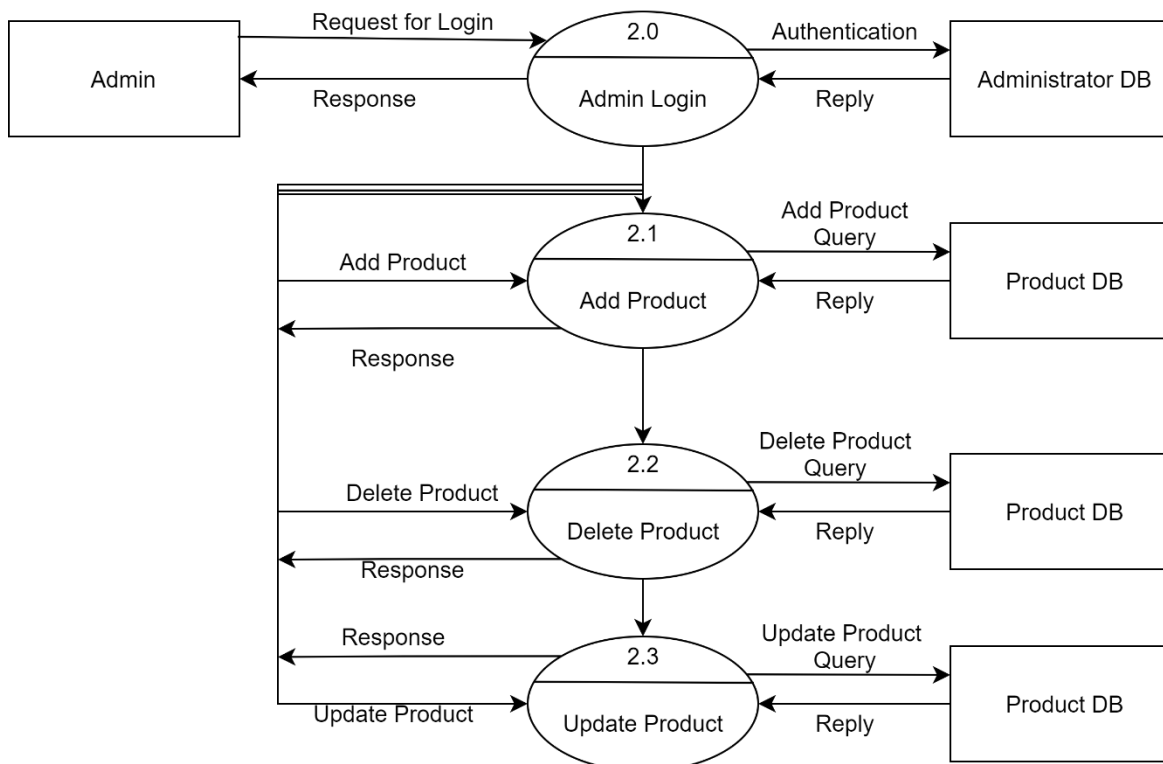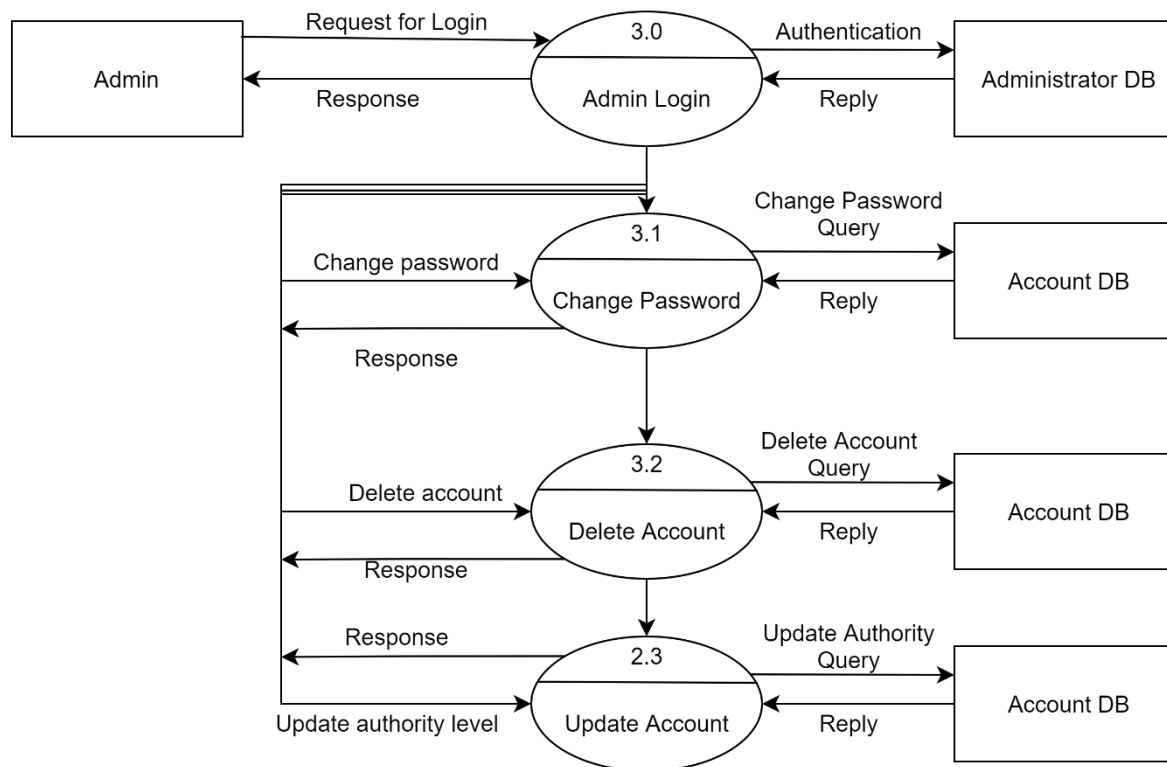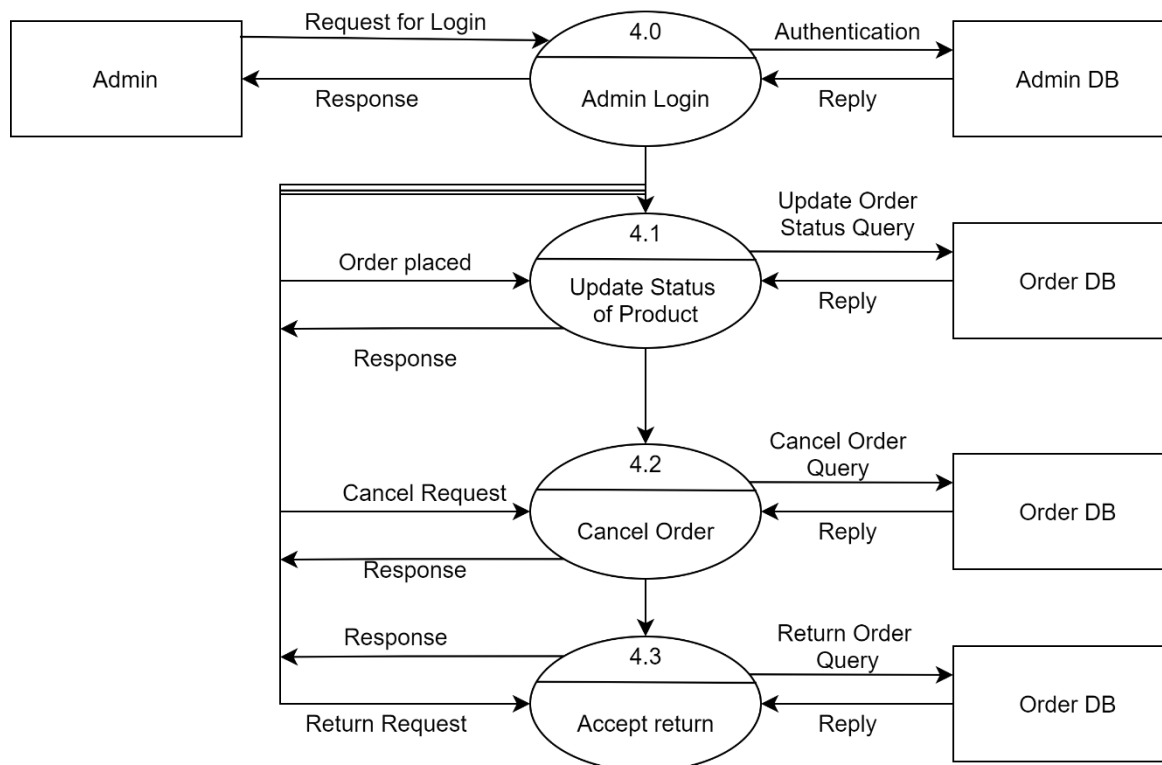| Symbol Name	Symbol	Meaning
Square		Source or Destination of Data
Arrow		Data flow
Circle		Process transforming data flow
Open Rectangle		Data Store

E-Commerce DFD:

Level 0:

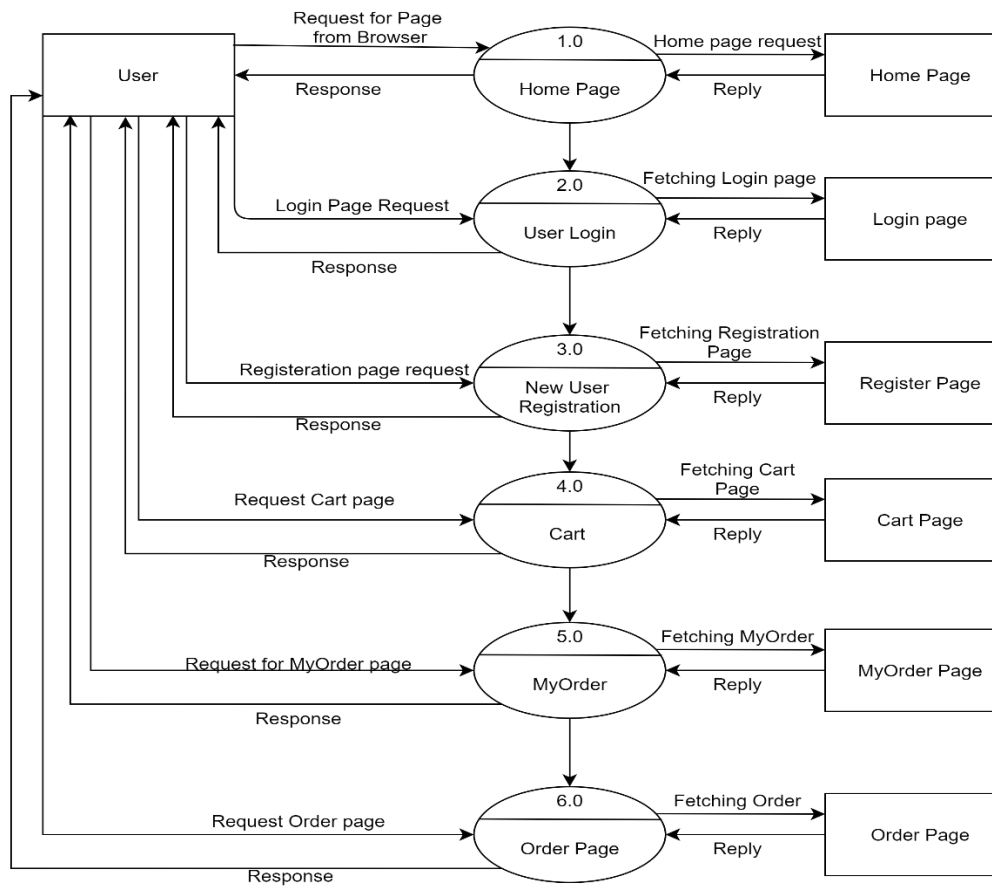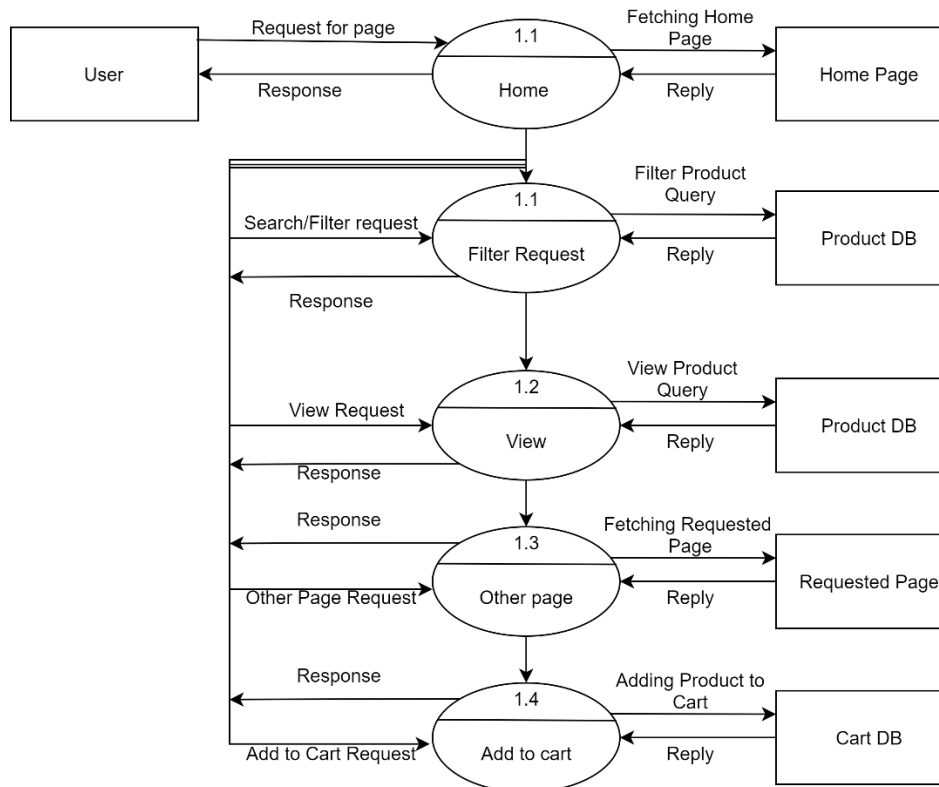Admin 1st level DFD:
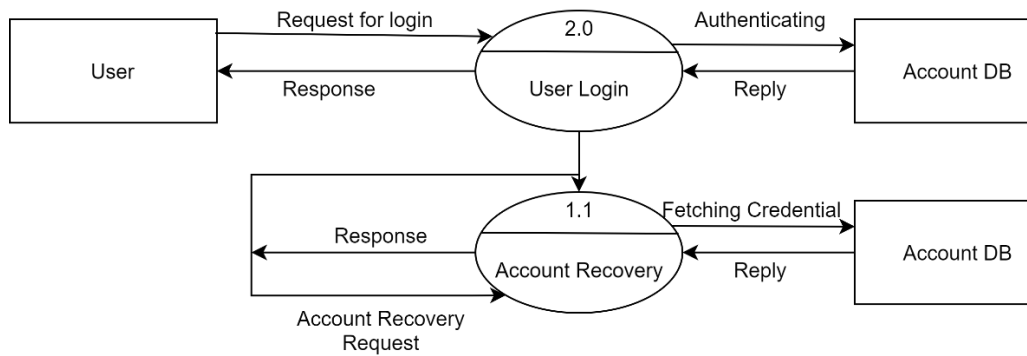

Admin DFD 2.0:

Admin level 3.0:

Admin level 4.0:
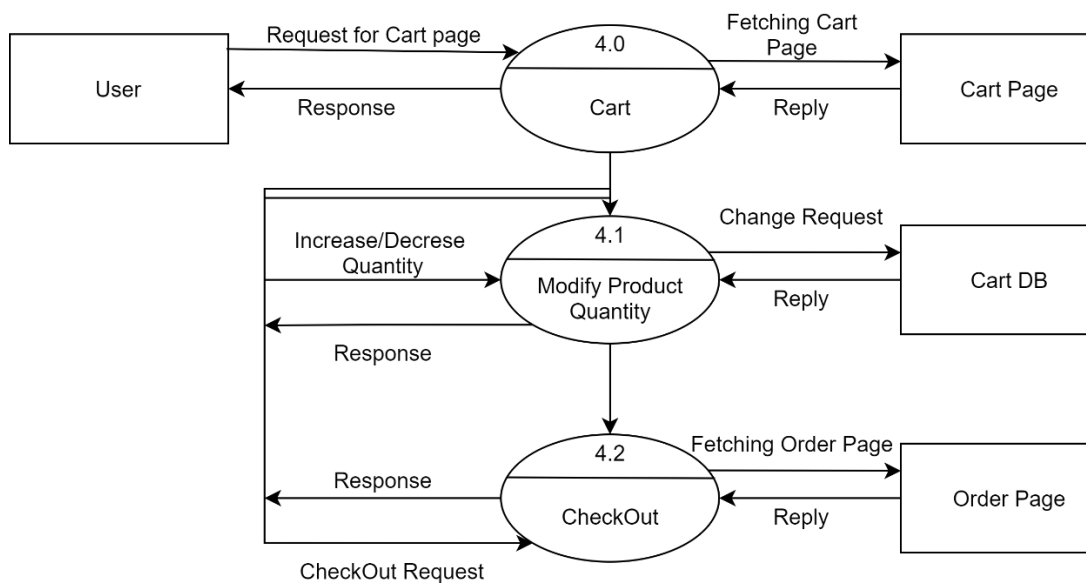
User 1ˢᵗ level DFD:
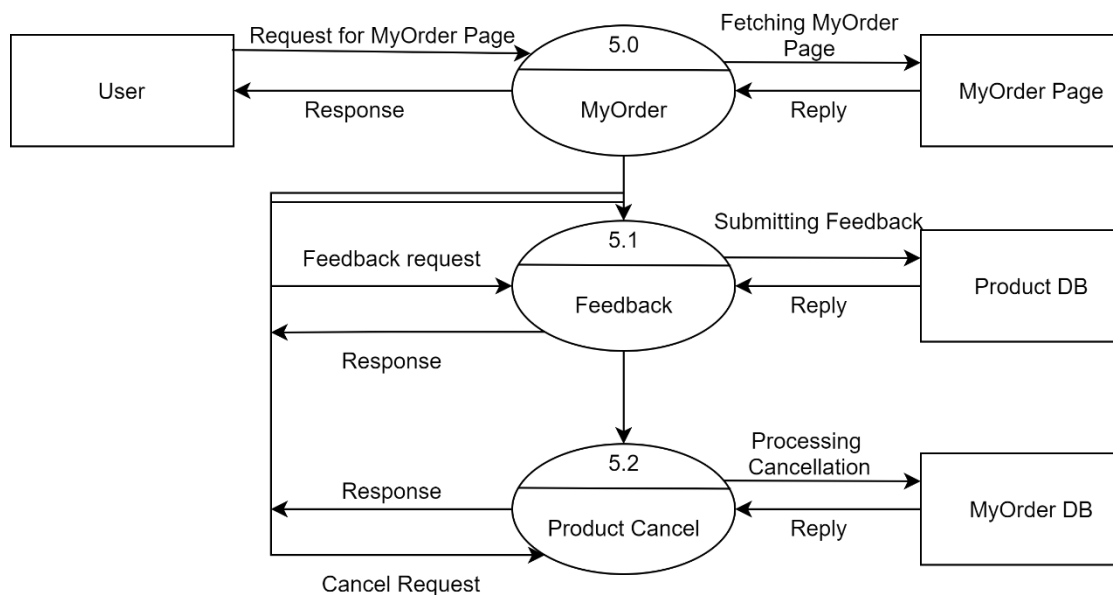

User level 1.0:
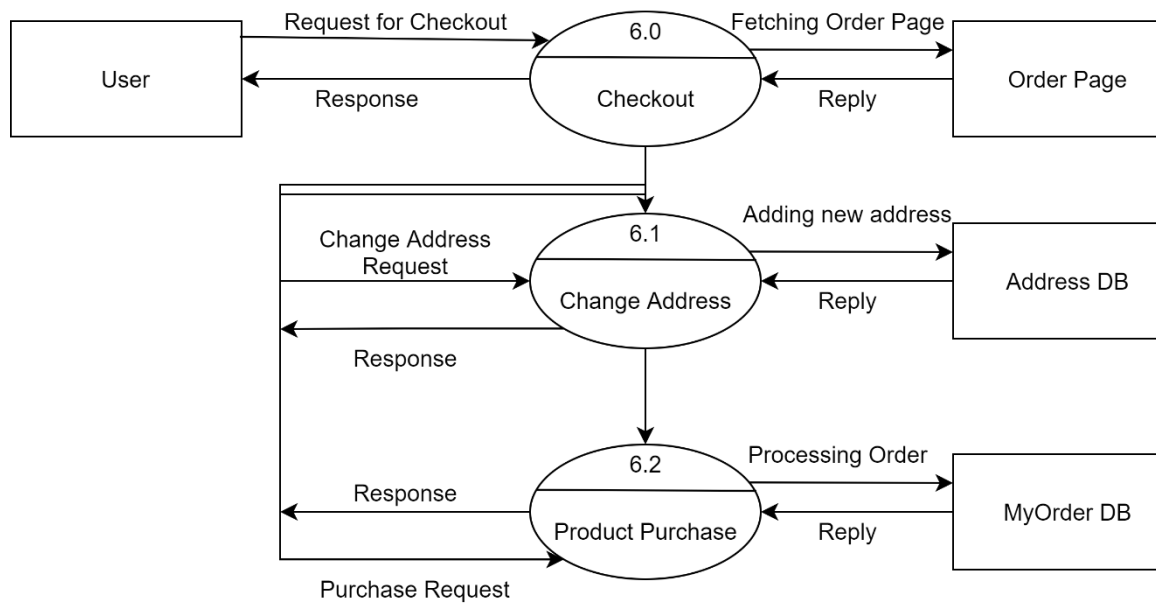
User level 2.0:

User level 4.0:

User level 5.0:

User level 6.0:

Conclusion: We have successfully learnt the concept of Structure Data Flow Analysis and how to implement it using Data Flow Diagram on E-commerce Shopping Website.