SYSTEM MODELING

Example-01[Conveyor Line System Software]

SYSTEM MODELING

Every computer-based system can be modeled as an information transform using an input-processing-output template.Using a representation of input, processing, output, user interface processing, and self-test processing, a system engineer can create a model of system components that sets a foundation for later steps in each of the engineering disciplines.

System model template

To develop the system model, a system model template is used. The system engineer allocates system elements to each of five processing regions within the template:

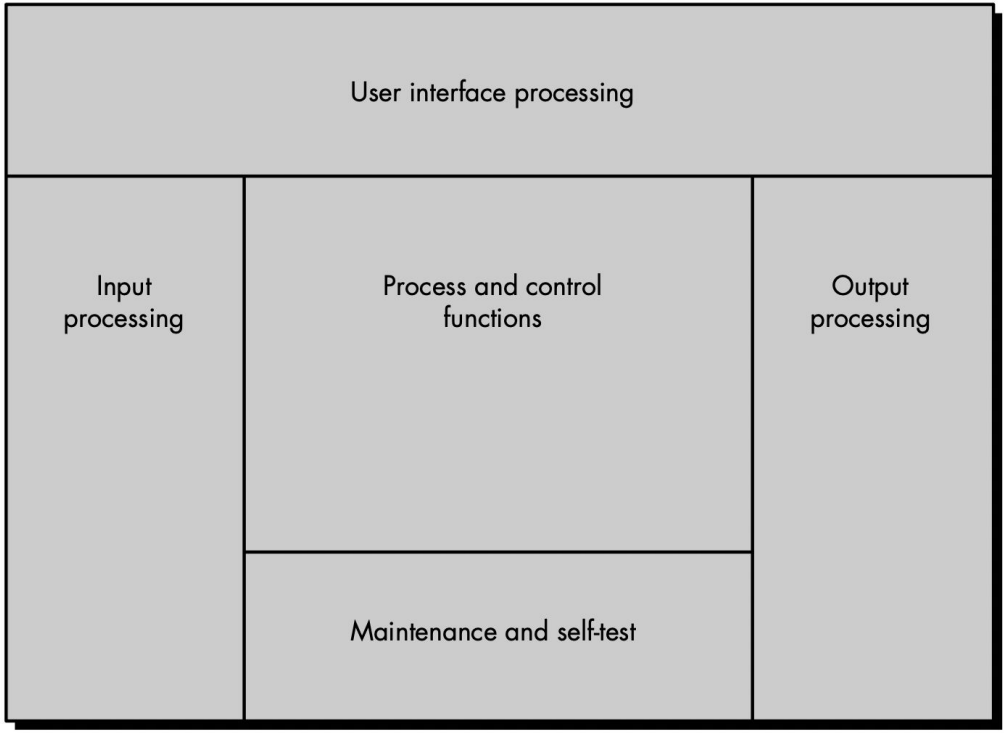
(1) user interface.

(2) input.

(3) system function and control.

(4) output.

(5) maintenance and self-test.



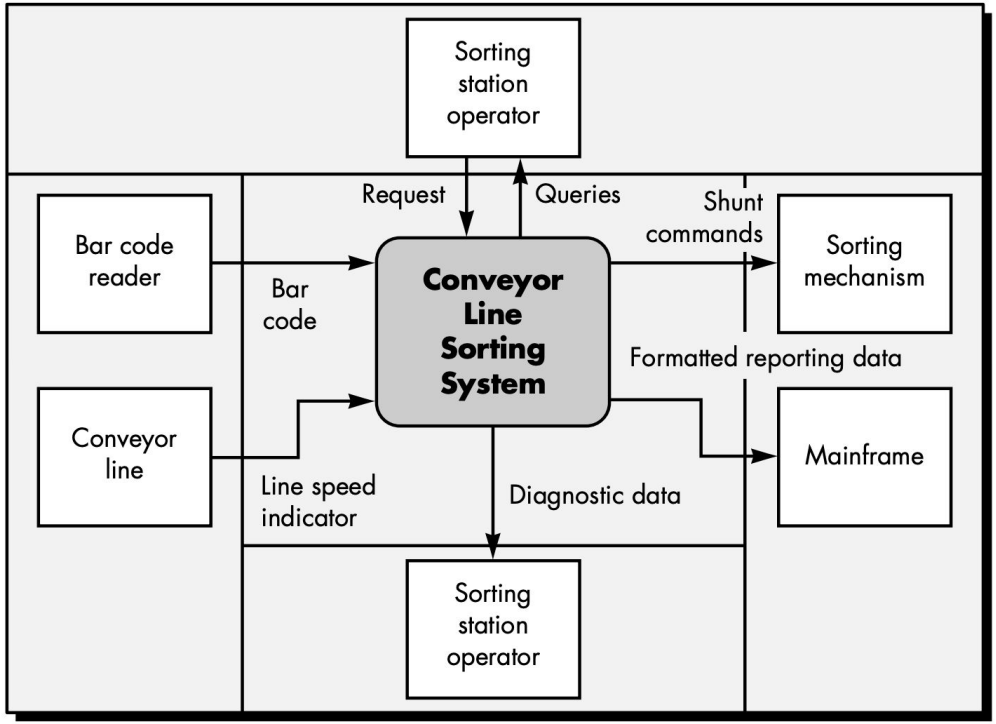
System model template

The system engineer is presented with the following statement of objectives for CLSS:

CLSS must be developed such that boxes moving along a conveyor line will be identified and sorted into one of six bins at the end of the line. The boxes will pass by a sorting station where they will be identified. Based on an identification number printed on the side of the box (an equivalent bar code is provided), the boxes will be shunted into the appropriate bins. Boxes pass in random order and are evenly spaced. The line is moving slowly.

System context diagram for CLSS

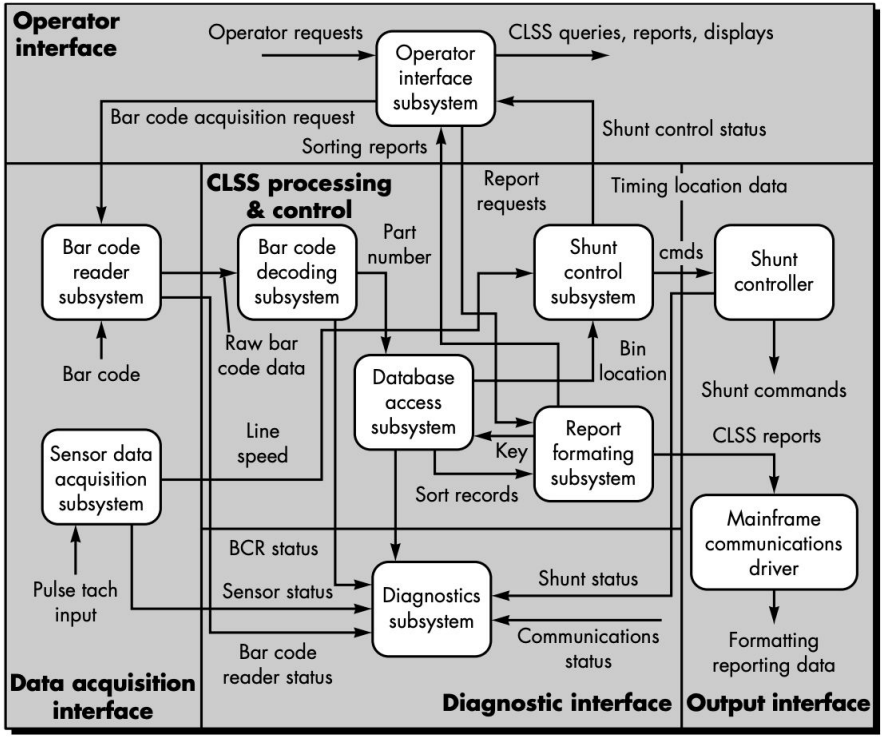
The SCD provides a “big picture” view of the system you must build. Every detail need not be specified at this level. Refine the SCD hierarchically to elaborate the system.



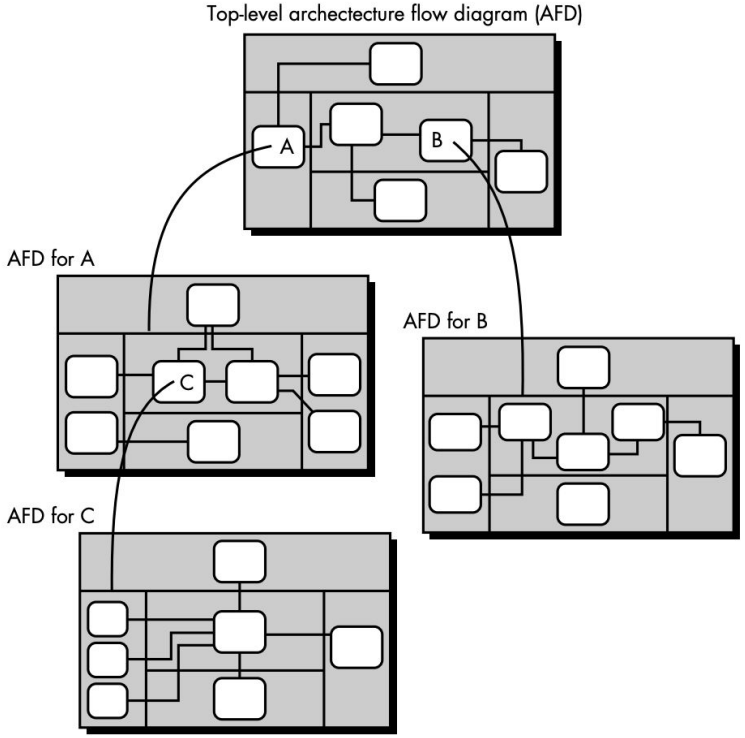
System context diagram for CLSS

system flow diagram (SFD)

The system engineer refines the system context diagram by considering the shaded rectangle in SCD in more detail. The major subsystems that enable the conveyor line sorting system to function within the context defined by the SCD are identified. the major subsystems are defined in a system flow diagram (SFD) that is derived from the SCD.The initial system flow diagram becomes the top node of a hierarchy of SFDs. Each rounded rectangle in the original SFD can be expanded into another architecture template dedicated solely to it.



System flow diagram for CLSS



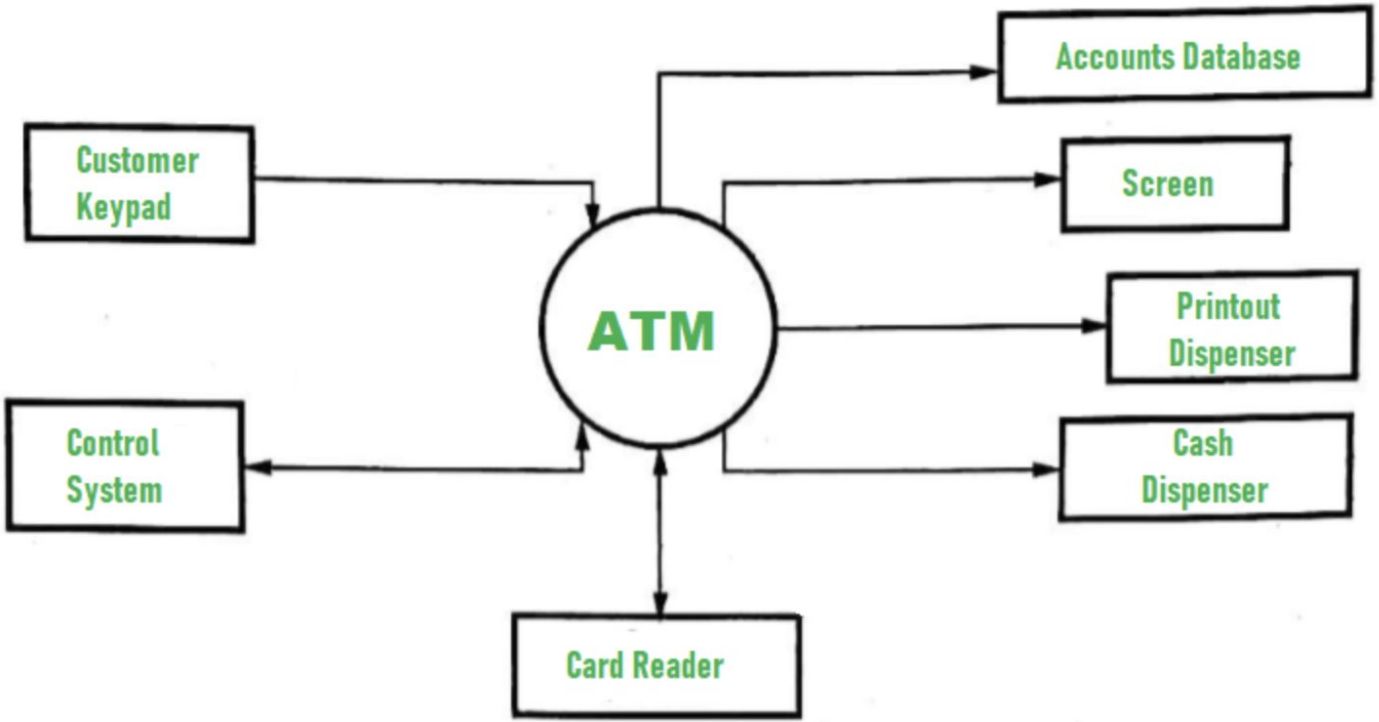
Building an SFD hierarchy

SYSTEM MODELING

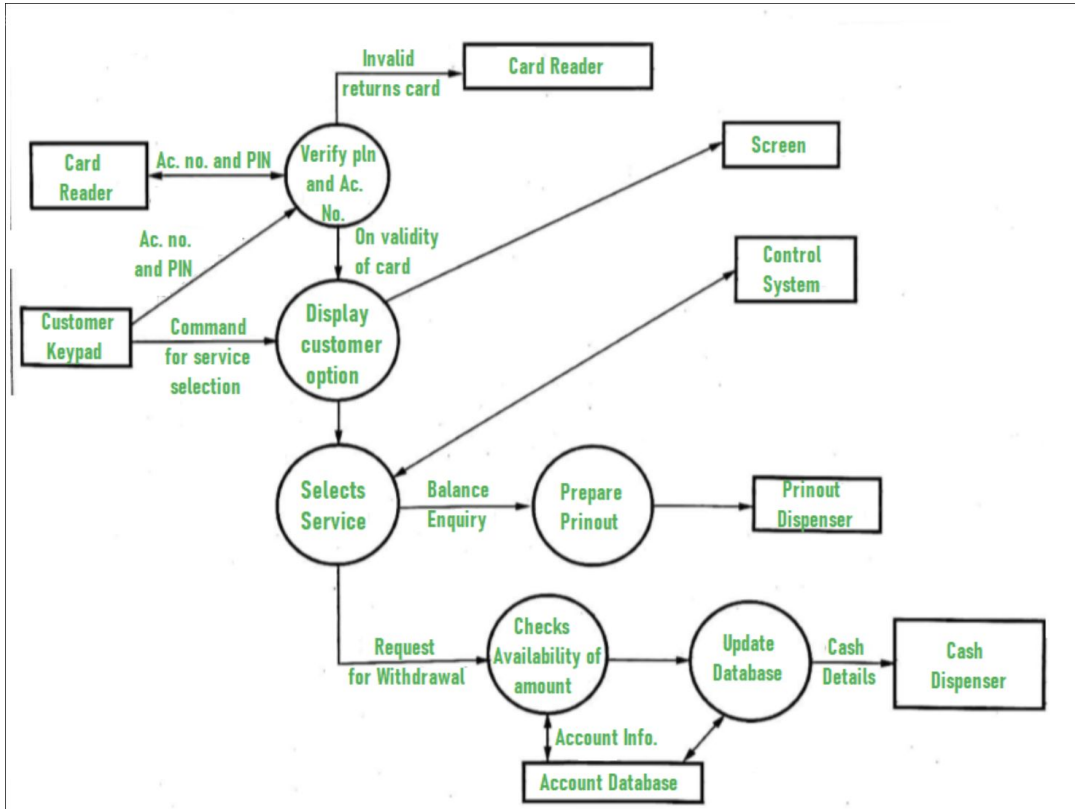
Example-02[Automated teller machine]

Automated teller Machine(ATM)

An automated teller machine (ATM) or cash machine (in British English) is an electronic telecommunications device that enables customers of financial institutions to perform financial transactions, such as cash withdrawals, deposits, funds transfers, balance inquiries or account information inquiries, at any time and without the need for direct interaction with bank staff.



System context Diagram of ATM



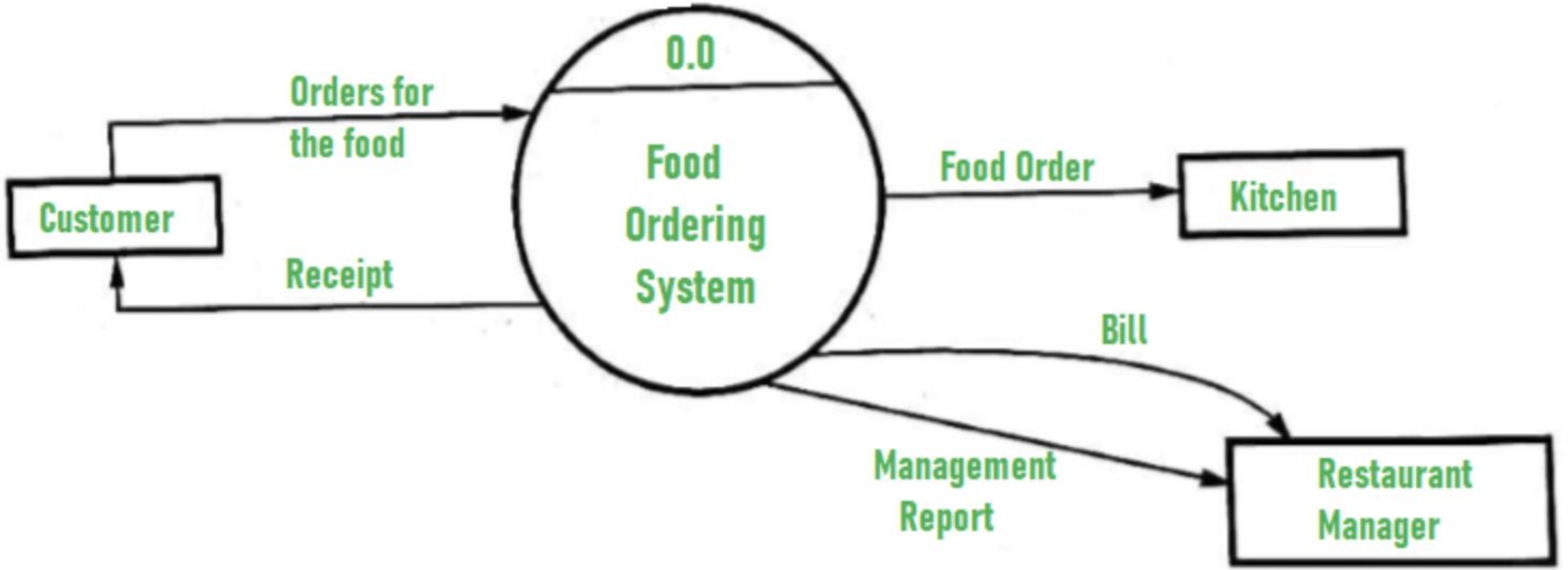
System Flow diagram Of ATM Software

SYSTEM MODELING

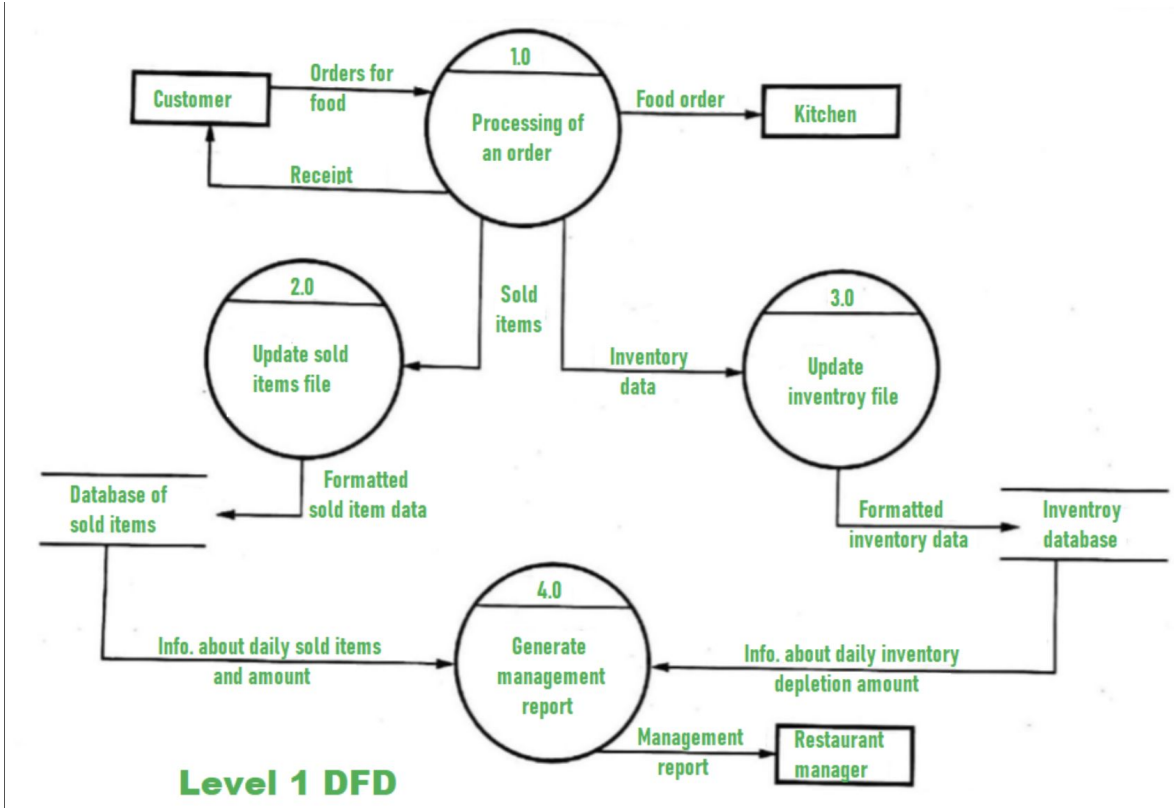
Example-03[Food Ordering System]

Food Ordering System

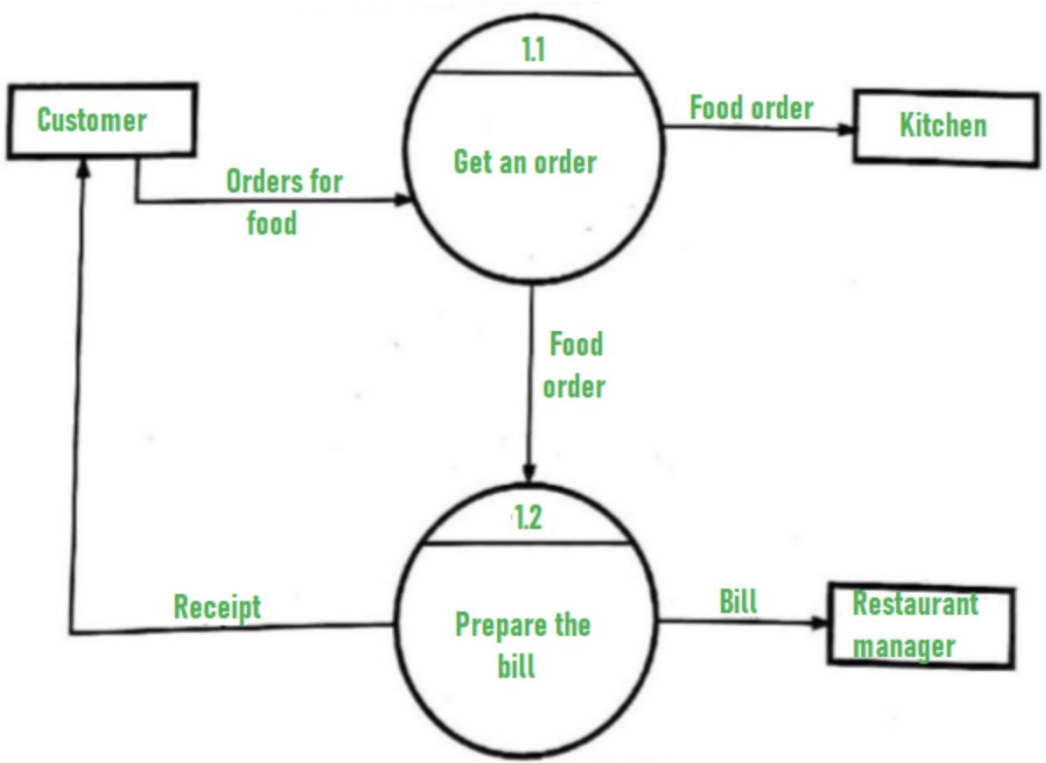
Food Ordering System is actually a type of software that allows the manager of restaurants to manage and accept the placed orders over the Internet or in the restaurant.



At this level, the Input and Output of the system are shown. The system is designed and established across the world with input and output at this level.



Here We are describing how Food Ordering System is using this information and passing it to the restaurant manager.



Detailed information about “Processing of an Order” is shown Here.