EASTERN UNIVERSITY, SRI LANKA
DEPARTMENT OF MATHEMATICS
EXTERNAL DEGREE EXAMINATION IN SCIENCE – 2008/2009
SECOND YEAR, SECOND SEMESTER (FEB. /APRIL, 2011)
EXTCS 205 – SOFTWARE ENGINEERING PRINCIPLES
(Proper & Repeat)

Answer all questions   **Time: 01 Hour**

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1)

   a) What are the goals of Software Engineering?

   b) What are the two types of software products?

   c) List four attributes of the well engineered software products.

   d) List four software quality attributes. Briefly explain how these attributes connected with the quality of a software product?

   e) List four software engineering lifecycle models.

   f) Briefly explain the 'Waterfall model' with the aid of block diagrams. List two advantages and two draw backs of the above model.

2)

   a) List three advantages of the object oriented software design.

   b) Discuss the importance of data flow diagrams in the context of software design.

   c) What do you understand by balancing of dataflow diagrams?

   d) A brief description for a portion of the online ordering system is given below:

A Company has an online ordering system for its customers. The customers purchase the products online and the payments made through the Credit Card. When an order placed online, the system must send an "Acknowledgement" to the customer and the 'customer and order information' (including credit card information) are entered into the Customer database. The system must verify the Credit Card information (card number and order amount) with respective Credit Card Company. If the Credit Card Company rejects the payment, the online system must send an Order rejection report to the customer. Otherwise, the system must forward the order to the shipping unit. Once an order received to the shipping unit, it sends a confirmation and delivery information to the customer and updates the customer database and the inventory database.

Draw a **context diagram** and **top level dataflow diagram** for the above system.