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Software Architecture Coursework

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**1. Abstract**

A nationwide retailing corporation (such as Homebase http://www.homebase.co.uk/ or B&Q http://www.diy.com/) is planning to develop a new distributed store management system for their retail branches to provide better coordination of their business. It has named the proposed system DE-Store. Your company want to pitch for the software development contract and plan to do this by developing a software prototype of an architecture that you believe would show that you could meet the needs of the project.

DE-Store is NOT an online shopping system; instead it is a DISTRIBUTED business management system. Please note that DE-Store is a DISTRIBUTED system. You are supposed to use the appropriate architecture styles and technologies you’ve learnt to develop an effective solution, such as client/server, peer to peer, service-oriented, RMI, three-tiered, etc. DE-Store is expected to be an expandable and adaptive system to accommodate changing business requirements in the future.

DE-Store aims to have a suite of store management functionalities such as price control, inventory control, delivery charge, approval of financial support, and performance analysis.

• Price Control: DE-Store allows the store manager to set the price of the products and to select products on a variety of sale offers, which include 3 for 2, buy one get one free, free delivery charges.

• Inventory Control: stock is monitored all the time by uploading data from the warehouse database. Items out of stock will be ordered from the central inventory system at the headquarters. DE-Store generates warning messages for items in low stock automatically and also sends them to the mobile message box of the store manager.

• Loyalty Card: the store can make further special offers to customers who regularly use their branches.

• Finance Approval: DE-Store offers its customer the opportunity to buy now and pay later using an online finance system, Enabling, which is linked to DE-Store via a portal.

• Reports and Analysis: DE-Store tracks the purchase activities of customers from the accounting database and generates reports on how the store is performing.

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**Key words: software architecture, distributed system, design**