The Open University of Sri Lanka
B. Sc. Degree program – Level 05
Open Book Test 2009/2010
CSU 3277: Software Engineering
Duration: One and half hours

Date 29.09.2009   Time: 4.00 p.m. to 5.30 p.m.

In order to control the Reckitt Repairs project there will be a system to track the work and movement of parts. The current system includes a small computer system to track the movement of parts but does not interface this with the control of work.

The types of machine repaired by Reckitt consist of a number of different parts that are removed from the machine, cleaned, and inspected for defects. If defects are found, the parts need to be re-manufactured. Finally, all the different parts need to be replaced in the correct machine in the right place, this entire process needs to be monitored and controlled carefully to ensure that parts are not lost and that projects are completed on time and within budget.

The current operations of Reckitt Repairs can be broken up into the following activities:
- Customers send in requests for repairs to the Project Office.
- The Project Office replies to confirm acceptance of the request and plans the work.
- The Project Office also monitors and programs the work (detailed planning of work packages and phases). It sends progress reports to Customers, notifies Finance when the work is done and the Management of any changes in the work plans.
- The Project Manager allocates staff to work, controls and monitors (with the help of a computer) the movement of parts in and out of machines and reports to the Management.
- The computer generates reports from the Parts File for the Management.
- The Factory manufactures new parts and informs the Project Office about their progress and records the movement of the parts in the Machine/Parts Book.
- The Cleaning Room cleans parts and informs the Project Office about their progress and records the movement of the parts in the Machine/Parts Book.

The following data is held manually, with the exception of the Parts File:

Job Order Book List of all projects and customers. The status of the project is monitored here under the headings Planned Start Date, Planned End Date, Actual Start Date, and Actual End Date.

Project Plans These are set up by the project office to show the different work packages and the phases within the work packages.

Staff Records A card index of all staff with their qualifications.

Work- Plans Detailed plans of the work with staff allocations and details of parts to be worked on in a work package.

Machine/Parts Book The machine details and all parts are detailed in this book with any special requirements for any particular part. All movements of parts are recorded here under standard location headings.

Parts File is a Computer-based file showing the parts and their current and planned locations.

Use a Context Diagram followed by a Level0 Data Flow Diagram to represent this system.