INDIVIDUAL CASE STUDY 2

Assigned: Sep 29, 2014
Due: Monday Oct 20, 2014 before the Class by Email to Vasant (required). Also, please bring a hard-copy, and submit (recommended).
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Description

You (IT Lead) of a start-up company Penny-Wise Card Services (PWCS) are tasked to help company’s Business Lead to come up with the Business Requirements, Use Cases, and develop Systems Requirements for an on-line credit-card payment system. The work involves developing a web-based payment system that the Small Business can plug in on their web-sites as a widget to process the payments. PWCS hopes to keep the cost of payments to 1.5% rather than typical 3% of the transaction amount, with a very low margin of 2%. For example, when a Small Business customer buys a product or service for $10, PWSS would charge only 15 cents to the Small Business, and only 0.3 cents would be the PWSS income. PWSS hopes to have a high volume of transaction as part of its Business Case to make money.

The Credit Card Payment system involves a User Interface that allows at the minimum collecting name, address, home telephone number, and credit card type (Master Card, Visa) form the end users. The transaction amount should be processed by the PWCS Payment Service Layer using SOA (service-oriented architecture). Payment Service communicates with the Credit Card Payment Gateways provided by Visa and Master Card for (1) Authorization of the Payment through the Customer’s Bank, and (2) settlement of the transaction amount during a nightly batch process.

As part of this assignment:

1. Develop two Use Cases (for example taking payment using the UI screen, passing the payment information to the services, communication of payment information to payment gateway, settlement of payment at night, nightly reporting of the payment amount, monthly report of the transaction amount and the income, embedding payment widget to the Small Business UIs, etc.)
2. Create Business Requirements for the two Use Cases you selected.
3. Create Systems Requirements for the corresponding Business Requirements in step 2 above.
4. Many templates can be used to create Use Cases, Business Requirements. For this assignment, you should use the template provided in the class presentation for page 23 (Use Case), page 19 (Systems Requirements), page 17 (Business Requirements) of Week 4. Please limit to 3-5 pages single-space.

Note: Assignment grade will depend on completeness and the quality of your work.

Additional Guidance

You should work individually for this assignment.

You can come up with your own Use Cases in addition to the ones those provided as examples above.

Use Cases outline how actors interact with the systems. Business Requirements typically shows how users or Business perceive the system to behave functionally. Systems Requirements show how systems components fulfill the Business Requirements.

Business Requirements are typically at higher level and address how the Business or user sees the functionality to work. Performance and Usability requirements can also be added. Many times Business Requirements are not very clear or comprehensive, though the User tries to make them so. A few requirements could be clarified using Business Use cases, but users would typically not cover all the use cases.

The best Systems Requirements are detailed, clear (unambiguous), consistent, traceable, verifiable, modifiable, and prioritized. Systems Requirements are typically more detailed, and address areas beyond Business requirements such as interface requirements, data retention requirements, scalability requirements, security requirements, operational requirements etc.

Use your creativity and make realistic assumptions where appropriate.

Any questions, let’s discuss at the end of the regular classes (preferred), or feel free to contact me.