Chapter 9 Activities

Ex1. Evolution:

- ➔ Quiz: Identify a function which needs to be improved/changed in your software product, what components/functions will be impacted? What errors will be able to be caused? Make a plan to enhance that software system.
- ➔ Sample answers:
    - o In an online book shopping system, the book viewing function needs to be improved.
    - o Present problems: this function only shows the title, cover page, and price of a product, but no customer reviews and no free preview
    - o Impacts: adding the customer reviews will impact the customer relationship management component, and adding the free preview will not impact the other components ➔ adding the free preview will be carried out first.
    - o Causable errors:
        - ▪ Adding the customer reviews causes some business constraint issues, e.g., what books are most interesting? How to calculate average? What books are most interested by a customer?
        - ▪ Adding the free preview might not cause severe errors.
    - o Plan:
        - ▪ (1) Adding the free preview: Embedding a PDF document into the website to load 5-10 sample pages for previewing a book.
        - ▪ (2) Develop a review module allowing star ratings and comments. To do this, need to redesign the parts in database which related to customers and books, redesign the book viewing interface, implement and validate

Ex2. WorkingWithLegacySystems-sample: students need to assume and assess the existing system to make a plan or a development strategy

Sample answer:

1. Business value assessment
    a. The use of the system: the system is used by a small group of people ➔ the system has *low business value.*
    b. The business processes: inefficient ➔ *low business value*
    c. System dependability: the system affects the business customers, if the system does not work ➔ customers cannot get their furniture. ➔ *high business value*
    d. The system outputs: the business still depends on system outputs ➔ *high business value*
2. System quality assessment
    a. Business process assessment (How well does the business process support the current goals of the business?)
    It is assumed that the system supports the business tasks, but it needs to be improved and adapt to the current requirements. ➔ high business value

b. Environment assessment (How effective is the system's environment and how expensive is it to maintain?)
The system has been used for 12 years, so the performance of the system does not satisfy the users' requirements. → upgrade the system, friendlier interface
c. Application assessment (What is the quality of the application software system?)
If the document of the system exists → maintain and improve
If the document of the system does not exist → re-engineer
For the data, we need to check the ERD and if the data of the system is up to date.
Evaluate the performance of the software process and hardware, we need to upgrade the hardware if necessary and optimize the algorithms.