Week 4-5-6-7

Assignment

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1. Create a work breakdown structure showing the interactions involved when a student registers for a course in a university. Courses may have limited enrollment, so the registration process must include checks that places are available. Assume that the student accesses an electronic course catalog to find out about available courses.
2. Suppose you were assigned to develop a logical model of the registration system at a school or college. Would you be better off using a top-down approach, or would a bottom-up strategy be better? What would influence your decision?
3. A systems analyst attended a weeklong workshop on structured analysis. When she returned to her job, she told her boss that structured analysis was not worth the time to learn and use on the job. Her view was that it was too academic and had too much new terminology to be useful. Do you agree? Why or why not?
4. You are an IT consultant, and you are asked to create a new system for a small real estate brokerage firm. You have no experience with object-oriented approach, and you decide to try it. How will you begin? How will the tasks differ from structured analysis?
5. As more companies outsource systems development, will there be less need for in-house systems analysts? Why or why not?

Answers:

**5.**Even if the companies outsource systems development,there will be need for in-house system analysts:

* Even if development has been outsourced, QA and testing remain in-house.They can be involved in determining test cases and determining they meet quality standards
* System analysts help ensure that external vendors understand the organization’s requirements and standards.
* As system analysts have understanding of the company’s operations, culture and needs,they can bridge the gap between business stakeholders and external development teams.
* System analysts may focus on cybersecurity,data privacy and compliance,ensuring that external development work adheres to the organization’s security and regulatory requirements.

**4.**Steps I should follow as an IT consultant for implementing object-oriented approach:

1)Firstly, I need to learn the fundamentals of object-oriented programming so that I apply it to the project.

2)I need to identify the key objects, in my case objects could be: Property,Agent,Client,Transaction.

3)I need to define object relationships which means how object are related.(e.g. Property object is associated with Agent object.

4)Encapsulation,abstraction,inheritance and polymorphism should be involved in the project.

5)Using UML diagrams for visualizing the process,utilizing design patterns in system development would also be helpful.

**3.**Using structured analysis depends on various factors,including the specific needs of organization,the complexity of the systems being developed,and the skills and preferences of the systems analyst and the development team.She need to take into account:

1)If the organization frequently deals with complex software systems,structured analysis can be a helpful tool for breaking down and documenting system requirements.But if the organization is busy with smaller or less complex project, the structured analysis is not needed.

2)Academic concepts and new terminology can be diffixult for some team members,as they are not familiar with the new system.But over time the becomes more familiar with the terminology,it can lead to clearer and more consistent communication.

3)It is important for an organization to be flexible and adapt their methodology to fit the project’s needs.If structured analysis is perceived as too rigid or academic,it can be tailored to align more closely with practical requirements.

**2.**There are some factors that could influence the decision:

1)If the requirements are well-defined and the overall structure of the system is clear,a top-down approach is suitable.If detailed functionalities are more critical and requirements are evolving,a bottom-up approach could be beneficial.

2)If there is urgent need for product and result, a bottom-up approach would be ideal choice.

3)Stakeholders’ preferences should be taken into account.

I think hybrid approach (both using top-down and bottom-up approaches) could be beneficial rather than using only one approach.

**1.**

Here is the WBS for registration process:

Registration process for a course:

1.Access electronic course catalog

1.1.Log in to the portal

1.2.Navigate to course catalog

1.3.View available courses

1.4.If there are any prerequisites for courses,check them

2.Course selection

2.1.Choose desired courses

2.2.Add selected courses to the registration cart

2.3.Remove courses from the cart(if needed)

2.4.Review the selected courses

3.Check course availability

3.1.Verify seat availability for each selected course

3.2.Handle limited enrollment situations

3.2.1.Waitlist option

3.2.2.Notification of available seats

3.2.3Automatic enrollment from waitlist(if possible)

4.Confirm registration

4.1.review registration details

4.2.Confirm course selection

4.3.Submit registration

4.4.Receive confirmation of successful registration

5.Payment(if there is paid courses)

5.1.View tuition and fees

5.2.Make payment

5.3.Receive payment confirmation

6.Additional services(if possible)

6.1.Request accommodation

6.2.Contact academic advisors

6.3.Access learning resources

7.Post-registration

7.1.Receive class schedule

7.2.Access course materials

7.3.Receive notifications and reminders