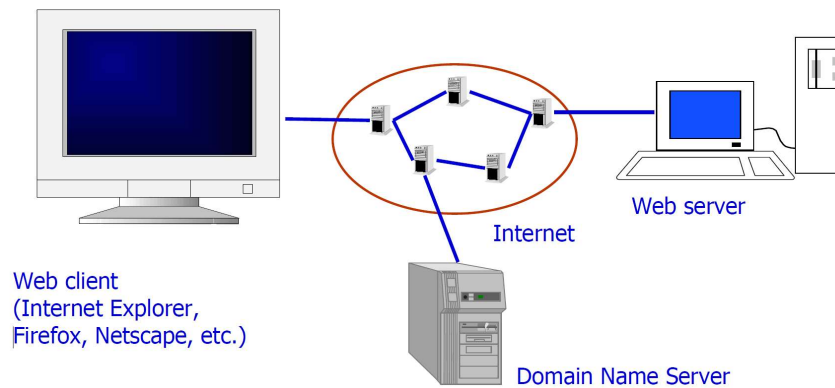


IT trivia for today How the (original) Web works



Open Location: <http://web.mit.edu/sloan/www/index.html>



2

Anatomy of a URL



URL = Uniform Resource Locator

<http://web.mit.edu/sloan/www/index.html>

↑
Name of protocol
for communication
with server
(http is standard web
protocol)

↑
Domain name of web
server where page is
stored

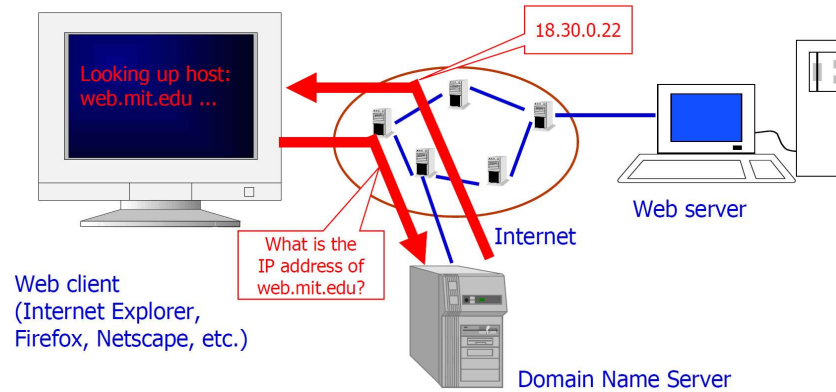
↑
Pathname of file
within web server's
local file system

- index.html : default page to display
- On the Server: There is a default **root folder** for the website
 - /var/www/vhosts/pinformatics.tamhsc.edu/httpdocs
 - Location of : pinformatics.tamhsc.edu/ or pinformatics.org
 - Specified in the webserver software (e.g. Apache)

3

How the Web Works (1)

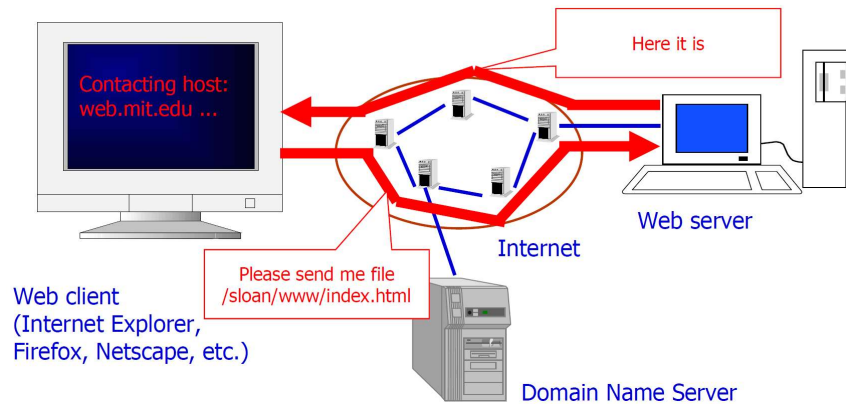
Open Location: <http://web.mit.edu/sloan/www/index.html>



4

How the Web Works (2)

Open Location: <http://web.mit.edu/sloan/www/index.html>

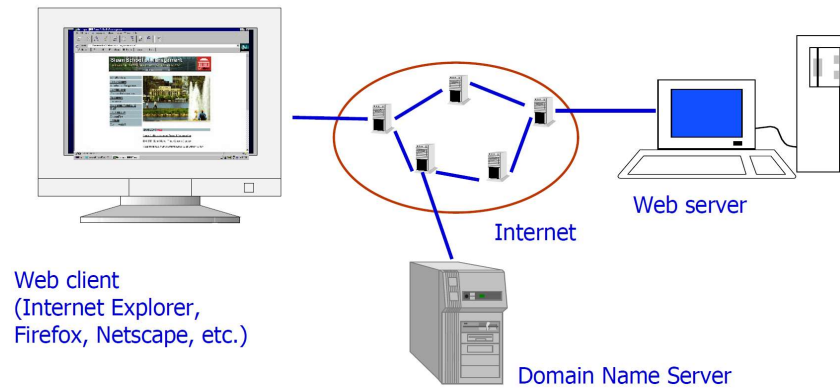


5

How the Web Works (3)



Open Location: <http://web.mit.edu/sloan/www/index.html>



6



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System Implementation & Support

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Course URL: <http://pinformatics.org/phpm631>

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Establish an Implementation Team

- Primary function is to plan, coordinate, budget, and manage all aspects of the new system implementation
- Composition of team (should include some of the same people involved in selecting the system)
 - Project leader
 - System champion
 - Key individuals from the areas that are the focus of the new system
 - Vendor representatives
 - IT professionals

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Team Responsibilities



- Clearly define the project scope and goals
- Identify accountability for the successful completion of the project
 - Business sponsor
 - Business owner(s)
 - Project manager
 - IT manager
- Establish and institute a project plan

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TriZetto® 2014
**HEALTHCARE
 CONFERENCE**
Competing to Win in a Post-Reform World

The following slides are adapted from
<http://www.trizetto.com/HCC2014/>

CareAdvance Provider: Agile Development Collaboration

Janice Mead, RN Sr. Product Manager
CareAdvance Provider Product Owner

COMPLIANCE



EFFICIENCY



CARE



MAY 18 – 21, 2014
JW Marriott San Antonio Hill Country



11

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12

CAE Agile Roles

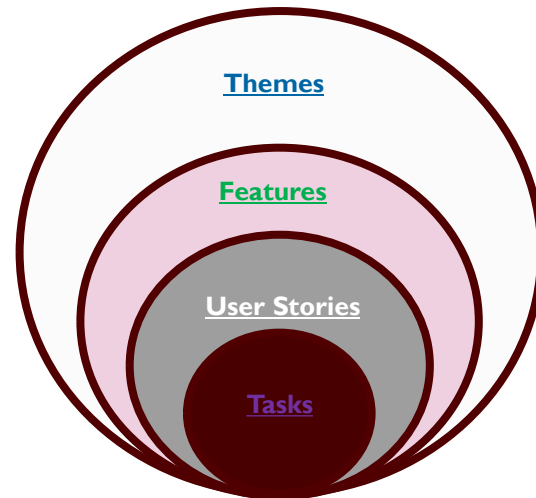
- Product Manager: Breadth
 - Defines Roadmap - High Level Themes and Features
 - Presents business need and value to the Product Owners
- Product Owner: Depth
 - Writes User Stories for Features
 - Prioritizes the User Stories in the Backlog
 - Grooms the User Stories with the Scrum Team
- Scrum Team Members
 - Grooms and **Sizes** the User Stories
 - Commits to doing the work
- Scrum Master
 - Protects the team
 - Removes impediments to completing work

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Product Backlog Hierarchy

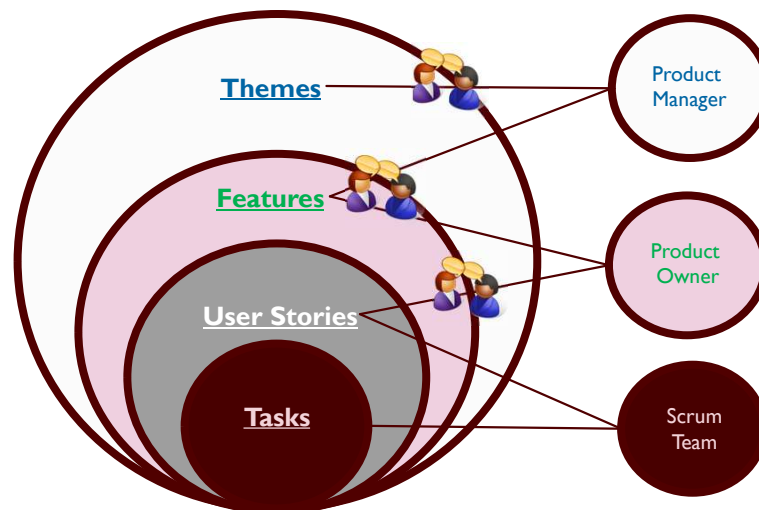


- Theme: Helps with planning discussion and roadmap
 - An idea that spans multiple Scrum Teams and Sprints
 - May fit into a Release
 - No detail
- Feature: High level descriptions and **Acceptance Criteria**
 - An idea that may span multiple Scrum Teams and Sprints
 - Usually fits into a Release
 - Some detail
- User Story (a.k.a. Product Backlog Item)
 - Work item for a Sprint for a Scrum Team
 - Complete testable piece of work
 - Very detailed
- Task
 - Chunk of work for team members
 - When all tasks are completed and reviewed, the User Story is done



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Product Roadmap Ownership



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CAE Scrum Teams



- Clinical CareAdvance (CCA)
 - Multiple Scrum Teams- logical areas of responsibility
 - Case/Disease Management
 - Utilization Management
 - Application Workflow
 - Constituents
 - Content
 - Rules
 - Common Application Components
 - Infrastructure
 - Development Operations and Architecture
- Each Scrum Team is composed of members who have the roles we just discussed
 - 1 Product Manager (usually PM of more than one product)
 - 1 Product Owner
 - 1 Scrum Master
 - Team of Developers and Quality Analysts

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CAE Scrum Teams



- CareAdvance Provider
 - One Team responsible for the Product
- Value Based Benefits
 - One Team responsible for the Product
- Each Scrum Team has its own backlog
 - Product Owners identify inter-team dependencies
 - Product Owners set the priority for their team's backlog
 - Team and PO groom User Stories to remove ambiguity and size the effort
 - Team makes the Release and Sprint commitments

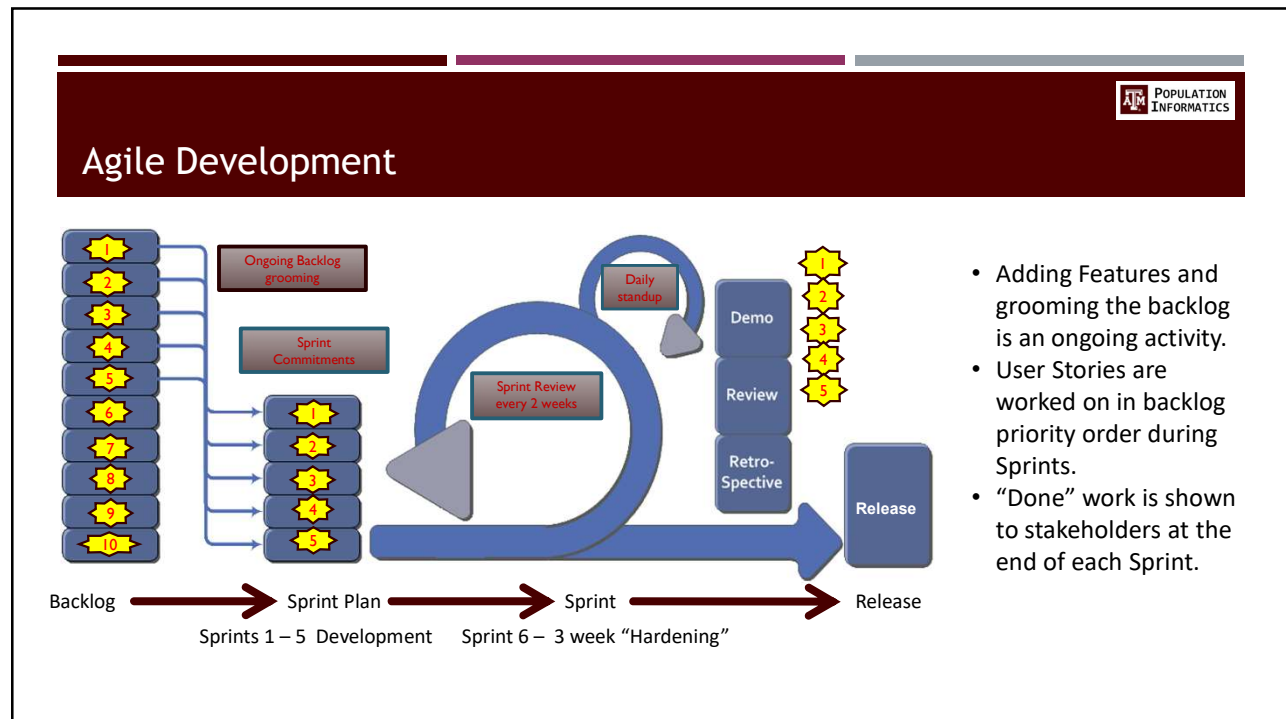
17

Client Collaboration

[Health care provider collaborating with engineers]

When
Who

18



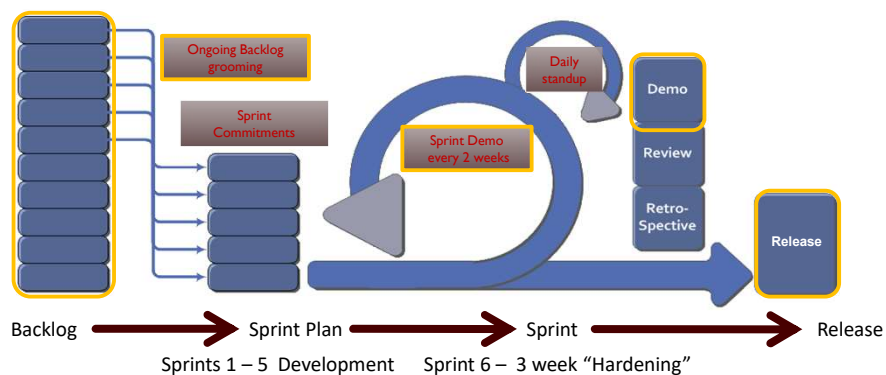
19

Client Opportunities for Input

- Theme and Features - Think Breadth
 - What is the business need?
 - What problem are you trying to solve?
 - What is your high level workflow?
- User Stories - Think Depth
 - What does the user need to do and why?
 - What is acceptable functionality?
- Sprint Demo
 - How does what we built so far look?
 - Are we headed in the right direction?

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Opportunity for Client (=health care providers) Influence



- Backlog Grooming
 - Product Manager Defines Themes and Features
 - Product Owner adds User Stories to the Backlog; Prioritizes
 - Team Grooming and Commitments
 - Daily Stand-up
- Sprint Demo
- Release Review

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End-of-Sprint Demos

- Teams show off completed work
 - Not a technical review
 - Only pieces of the full picture
- Stakeholders are encouraged to attend
- Opportunity to give feedback
 - Fail fast to allow time to respond
- Work shown may or may not be in the release
 - Complex feature work may stretch into the next release

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Organizing Information Technology Services

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Outline

- Core functions of an IT department
- IT leadership roles
 - Key attributes of high-performing CIOs
- IT staff roles
 - Key attributes of high-performing staff
- Centralization v. decentralization of IT services
- Agility and innovativeness
- Outsourcing
- Evaluating IT effectiveness



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Core Functions IT Department



- Operations and technical support
 - Manages the IT infrastructure (e.g., servers, networks, operating systems, database management systems, workstations)
 - Installs new technology, applies upgrades, troubleshoots and repairs the infrastructure, performs backups, responds to user problems
- Applications management
 - Manages the process of acquiring new systems, developing and implementing new systems, ongoing enhancement, troubleshooting, and working with application suppliers

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Core Functions IT Department



- Specialized groups
 - Specialized functions depend on the type of organization of the organization's approach to IT
- IT administration
 - Oversees the development of the IT strategic plan, manages contracts with vendors, handles the IT budget, provides HR support for IT staff members, managing the space occupied by the IT department

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IT Roles Senior Leadership



- Chief information officer (CIO)
 - Manages the IT department; the executive who can successfully lead the organization in its efforts to apply IT to advance its strategies
- Chief technology officer (CTO)
 - Defines technology standards; ensures technical infrastructure is current; ensures all technologies fit
 - Tracks emerging technology and identifies the ones that might provide value to the organization

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IT Roles Senior Leadership



- Chief security officer (CISO)
 - Ensures the organization has an effective information security plan, appropriate procedures are in place to keep information systems secure and safe from tampering or misuse, and appropriate disaster recovery procedures are in place
- Chief medical information officer (CMIO)
 - Emerged as a result of growing interest in adopting clinical information systems and leveraging those systems to improve care
 - Typically a physician; Filled through a part-time commitment by a member of the medical staff

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Key Attributes High-Performing CIOs



- Sets vision and strategy
- Integrates information technology for business success
- Makes change happen
- Builds technological confidence
- Partners with customers
- Ensures information technology talent
- Builds networks and community

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IT Roles Staff



- The project leader
 - Manages IT projects (e.g., implementations, deployment of infrastructure)
- The systems analyst
 - Works closely with managers and end user in identifying information system needs and problems, evaluating workflow, and determining strategies for optimizing particular systems
 - Prepares cost-benefit and return-on-investment analyses

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IT Roles Staff



■ The programmer

- Writes, tests, and maintains the programs that computers follow to perform their functions; conceives, designs, and tests logical structures for solving problems with computers
- Applications programmer: writes programs to handle specific user tasks; revises existing packaged software; customizes generic applications
- Systems programmer: writes programs to maintain and control infrastructure software

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IT Roles Staff



■ The database administrator

- Works with database management systems software and determines ways to organize and store data; ensures the performance of the database systems
- Plans and coordinates security measures

■ The network administrator

- Designs, tests, and evaluates systems such as LANs, wireless networks, the Internet, intranets, and other data communication systems
- Performs network modeling; researches related products and makes hardware and software recommendations

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Key Attributes High-Performing IT Staff



- They execute well
- They are good consultants
- They provide world-class support
- They stay current in their field of expertise

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Benefits Centralization of IT Services



- Enforcement of hardware and software standards
- Efficient administration of resources
- Better staffing
- Easier training
- Effective planning of shared systems
- Easier strategic IT planning
- Tighter control by senior management

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Benefits Decentralization of IT Services



- Better fit of IT to business needs
- Quick response time
- Encouragement of end user development of applications
- Innovative use of information systems

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Departmental Attributes



- Agility
 - The ability to form and disband teams quickly as staff members move from project to project
 - Organizational structures and reporting relationships must be flexible;
 - During a project. the project manager is the [temporary] boss of the project team members; team members may have several bosses during the course of a year if they work on different projects
 - Organized around projects, not functions

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Departmental Attributes

- Innovativeness

- Reward systems that encourage new ideas and successful implementation of innovative applications
- Create dedicated research and development groups
- Permit staff members to take sabbaticals or accept internships with other departments in the organization in an effort to expand IT members' awareness of organizational operations, cultures, and issues

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Outsourcing

- **In-house:** organizations hire their own IT staff members and form their own IT department
- **Outsource:** organizations ask a third party to provide the IT staff members and be responsible for the management of IT
 - Organizations may not have staff members with the skills, time, or resources to take on new projects or provide sufficient service
 - Organizations may outsource held desk services or website development so that internal IT staff can focus on implementing or supporting applications
 - May enable organizations to better control costs
 - May serve as “rescue mission” if IT has been mismanaged

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Key Areas Evaluating IT Effectiveness



- Governance
 - Are IT strategies aligned with the overall strategic goals?
- Budget development and resource allocation
 - **Benchmark:** Are we spending **too much or too little** on IT?
- System acquisition and system implementation
- IT service levels
 - What is the quality of the every day service being delivered?
 - Infrastructure, day-to-day support, consultation

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Infrastructure Metrics Evaluating IT Effectiveness



- **Reliability:** percentage of time that systems have unscheduled downtime
- **Response time:** how quickly an application moves from one screen to the next
- **Resiliency:** how quickly a system can recover after it goes down
- **Software bugs:** the number of bugs detected in an application per line of program code or hour of use

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Core IT Processes For an Effective IT Department



- Human capital management
- Platform management
- Relationship management
- Strategic planning
- Financial management
- Value innovation
- Solutions delivery
- Services provisioning

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Summary



- | | |
|---|--|
| <ul style="list-style-type: none"> ■ Core functions of an IT department <ul style="list-style-type: none"> ○ Operations and technical support ○ Applications management ○ Specialized groups ○ IT administration ■ IT leadership roles <ul style="list-style-type: none"> ○ CIO - CTO ○ CISO - CMIO | <ul style="list-style-type: none"> ■ IT staff roles <ul style="list-style-type: none"> ○ Project leader ○ Systems analyst ○ Programmer ○ Database administrator ○ Network administrator |
|---|--|

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Summary

- Benefits of centralization and decentralization of IT services
- Agility and innovativeness of an IT department
- Outsourcing
- Evaluating IT effectiveness
 - Governance
 - Budget development and resource allocation
 - System acquisition and system implementation
 - IT service levels

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Summary

- | | |
|---|--|
| <ul style="list-style-type: none"> ■ Infrastructure metrics <ul style="list-style-type: none"> ○ Reliability ○ Response time ○ Resiliency ○ Software bugs | <ul style="list-style-type: none"> ■ Core IT processes <ul style="list-style-type: none"> ○ Human capital management ○ Platform management ○ Relationship management ○ Strategic planning ○ Financial management ○ Value innovation ○ Solutions delivery ○ Services provisioning |
|---|--|

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Next week

- Read Chapter 7
- Quiz 6
- Assignment 4 Due
- Lab 5

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