# Database Tutorials

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- Oakes College 205

JANUARY
Class Announcements

- Project proposals due on 1/29!!
  - 2-3 pages
  - Give a plan what you will cover in report
  - Cite some references, and show that you have started your research!
  - Remember references must be cited in the body of the text with footnotes or end notes.
Submission:
- Designate 1 group “leader”
- Have that person email their name to the TA
- Each group’s “leader” submits electronically on e-commons
MRP evolves into ERP

- A common software architecture with modules to support different business functions.
  - Accounting, finance, sales, HRM, material management, etc...

- Key features:
  - Multi-functional
  - Integrated
  - Modular
How would you design an ERP?

Design a user interface for each module

- Ask user to fill in certain “fields” at particular times.
- Set up a sequence of events
  - When the sales department enters an order, that event triggers an event at the manufacturing department.

But by doing this, aren’t we presuming a particular business process?
Questions

How standardized are organizational processes?

- Customer service
- Finance
- Manufacturing
Fundamental options

- Customize the application to existing organization?
- Mold organization to off-the-shelf application?
  - Is software a good way to propagate best practices?
What Is Customer Relationship Management?

- Knowing the customer
  - In large businesses, too many customers and too many ways customers interact with firm

- Customer relationship management (CRM) systems
  - Capture and integrate customer data from all over the organization.
  - Consolidate and analyze customer data.
  - Distribute customer information to various systems and customer touch points across enterprise.
  - Provide single enterprise view of customers.
**CRM Software**

- **CRM packages typically include tools for:**
  - **Sales force automation (SFA)**
    - E.g., sales prospect and contact information, and sales quote generation capabilities
  - **Customer service**
    - E.g., assigning and managing customer service requests; Web-based self-service capabilities
  - **Marketing**
    - E.g., capturing prospect and customer data, scheduling and tracking direct-marketing mailings or e-mail
This process map shows how a best practice for promoting customer loyalty through customer service would be modeled by customer relationship management software. The CRM software helps firms identify high-value customers for preferential treatment.
Operational and Analytical CRM

• Operational CRM:
  • Customer-facing applications such as sales force automation, call center and customer service support, and marketing automation

• Analytical CRM:
  • Analyzes customer data output from operational CRM applications
  • Based on data warehouses populated by operational CRM systems and customer touch points
  • Customer lifetime value (CLTV)
Analytical CRM uses a customer data warehouse and tools to analyze customer data collected from the firm’s customer touch points and from other sources.

Figure 8-11
Business Value of Customer Relationship Management

- **Business benefits:**
  - Increased customer satisfaction
  - Reduced direct-marketing costs
  - More effective marketing
  - Lower costs for customer acquisition/retention
  - Increased sales revenue

- **Churn rate:**
  - Number of customers who stop using or purchasing products or services from a company
  - Indicator of growth or decline of firm’s customer base
Enterprise Application Challenges

- Highly expensive to purchase and implement enterprise applications—total cost may be four to five times the price of software
- Technology changes
- Business process changes
- Organizational changes
- Switching costs, dependence on software vendors
- Data standardization, management, cleansing
Extending Enterprise Software

• To bring greater value from enterprise applications
  • **Enterprise solutions/suites**: make applications more flexible, Web-enabled, integrated with other systems
  • **Service platform**: integrates multiple applications to deliver a seamless experience for all parties
    • **Order-to-cash process**
    • **Portal software**
Cisco Case
Unique Features of E-commerce Technology

• Richness
  • Supports video, audio, and text messages
Unique Features of E-commerce Technology

- Interactivity
  - The technology works through interaction with the user
  - Effect:
    - Consumers engaged in dialog that dynamically adjusts experience to the individual.
    - Consumer becomes co-participant in process of delivering goods to market.
Unique Features of E-commerce Technology

- Information density
  - Large increases in information density—the total amount and quality of information available to all market participants
- Effect:
  - Greater price transparency
  - Greater cost transparency
  - Enables merchants to engage in price discrimination
Unique Features of E-commerce Technology

- Personalization/Customization
  - Technology permits modification of messages, goods
  - Effect:
    - Personalized messages can be sent to individuals as well as groups.
    - Products and services can be customized to individual preferences.
Unique Features of E-commerce Technology

- Social technology
  - The technology promotes user content generation and social networking
  - Effect:
    - New Internet social and business models enable user content creation and distribution, and support social networks.
Key Concepts in E-commerce: Digital Markets and Digital Goods In a Global Marketplace

- Digital markets reduce
  - Information asymmetry
  - Search costs
  - Transaction costs
  - Menu costs

- Digital markets enable
  - Price discrimination
  - Dynamic pricing
  - Disintermediation