Introduction

Instructor: Ram Akella
UC Santa Cruz
9/24/2015

WEB PAGE:
* (write this down, go home, and bookmark it!)
http://classes.soe.ucsc.edu/tim050/Fall15/

Be sure to capitalize Fall15.
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TIM 50 -
TAs
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- Duan Zhang: dzhang33@ucsc.edu

What is this class about?

Acquiring a Song in 1980
Drive to record store
Search for hours for desired music
Buy

Acquiring a music/car in 2015
Push iTunes Button
Type name of song
Press “Buy”
1980: Who’s got the power?

Record Store
Record Store
Record Store
Record Store
Record Label
Record Label
Record Label
Record Label

2015: Who’s got the power?

Record Label
Record Label
Record Label
Record Label
Record Label
Record Label
Record Label

UPS

- DIAD
  (Delivery Information Access Device)

Business Process Example

Customer → Order
Sales → Take Order
Finance → Enter Order
Inventory Control → Credit Check
Warehousing → Check Stock

Find Stock → Print Packing List
Find Goods → Print Invoice
Ship

Tell Mfg. to make order

A Streamlined Business Process

Customer → Order
Sales → Take Order
Finance → Enter Order
Inventory Control → Credit Check
Warehousing → Check Stock

Print Packing List
Find Goods
Ship
Tell Mfg. to make order

A Reengineered Business Process

Customer → Order
Sales → Take Order
Finance → Enter Order
Inventory Control → Credit Check
Automatic Checking of Stock
Inform Mfg. to replenish stock
Print Packing List
Find Goods
Ship
Some Examples

- Supply Chain Management
- Customer relationship Management
- Transaction Processing
- Enterprise Resource Planning

What is an information system?

- First let us answer: what is a system?
  - Interrelated components
    - Input
    - Processing
    - Output

Input \rightarrow \text{SYSTEM} \rightarrow Output

What is information technology?

- It’s the technology you use to make an information system
  - Computer Hardware, Software, Networks, etc...

Courses Objectives

- The objectives of TIM 50 are to understand
  - needs of business
  - role of information systems in supporting those needs
  - How information systems are designed
  - How information technology is evolving
  - How changes in technology can enable new ways of doing business.
  - How to conceptualize and analyze new technologies to solve business problems.

TIM 50

- What it is not:
  - A programming class
    - (Though some simple programming may be required for some assignments and/or projects)
  - A detailed focus in any particular technology.
    - (A survey of IS technology landscape and its relation to business problems)
TIM 50 Course Pre-requisites

- No specific programming language knowledge required, though useful

What comes first?

- Do business needs drive the design of technology?
- ...Or does the technology drive the design of a business?
- Both!

Course Organization

- Top Down (Roughly)
  - IT Terminology and IT History
  - Businesses and their needs
  - Technological Applications
  - Technology concepts
  - Important “building block” Information Technologies
  - Data Bases
  - Networks
- Case Studies Throughout

Reading Material 1

Selected Chapters from:
D. Messerschmitt, Understanding Networked Applications

Case Studies

+ Harvard Business = Reading Material 1

Reading Material 2

Selected Chapters from:
Laudon & Laudon, Essentials of MIS, 11th edition
Case Studies

- Otis Elevator
- Cisco Systems
- Alibaba
- Zhejiang Corporation
- Amazon Web Services

Class Webpage

http://classes.soe.ucsc.edu/tim050/Fall15/

Contains
- Syllabus
- Assignments
- Instructor contact information
- Requirements for assignments and projects
- Exam dates

Lecture Plan (Posted on Web page)

<table>
<thead>
<tr>
<th>Class</th>
<th>Date</th>
<th>Topics</th>
<th>Reading</th>
<th>Assignments</th>
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<tr>
<td>1</td>
<td>9/02</td>
<td>Class Introduction</td>
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<tr>
<td>2</td>
<td>9/09</td>
<td>Business Design and Transformation, Case of Enterprise</td>
<td>Lecture 2 &amp; Lecture 3</td>
<td>Assignment 1 due Wed 9/10, Assignment 2 due Wed 9/17</td>
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<td>Compromising with IT: Transforming Business Processes</td>
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<td>Business Process Transformation (Casino, Enterprise Applications)</td>
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<td>Enterprise Applications Continuation</td>
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<td>Enterprise Applications, Casino Enterprise Applications, Online Business</td>
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<td>10/21</td>
<td>IP Domains</td>
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<td>10/28</td>
<td>Midterm Exam</td>
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<td>11/04</td>
<td>Start Second Continuation</td>
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<td>Winter</td>
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Final Exam

Evaluation (posted on web page)

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<tr>
<td>Extra optional instructor discretionary bonus points</td>
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**Database Exercises (10%)**
- Early in the quarter, TAs will hold tutorial sessions on MS Access
  - Choose from 3 times in each of week 3 and week 4.
- Times to be announced this week.

**In Class Exercises/Quizzes (10%)**
- Some classes, we will break into groups to discuss readings and case studies
  - Groups will turn in answers after class
- Pop quizzes (In-Class)
  - ~3 per quarter. Easy questions pertaining to reading

**Exams**
- **Midterm**
  - October 22
- **Final**
  - December
- Closed book
- A mix of short answers and multiple choice

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**BUSINESS PAPER**

**Business Analysis Paper**
- Write a paper about a company of your choice.
- Pick a company for which information systems played a key role
- You’ll work in groups of about 4-5

**Business Analysis Paper**
- Paper Should address the following areas:
  - Industry Profile
  - Company Profile
  - Information Technology
  - Leadership
  - Market and Financial Performance
  - Trajectory
Business Analysis Paper

- **Industry Profile**
  - What is the industry?
  - What value does the industry provide to its customers?
  - Describe the competitive environment (Porter Model)

Business Analysis Paper

- **Company Profile**
  - What business is your company in?
  - What value does it provide its customers?
  - In what ways is it different than its competitors?
  - How has its history shaped what it can offer its customers?

Information Technology

- **Information Technology**
  - How does the company use IT to support or enable its business processes and competitive strategies?
  - What technologies does it use?
  - Does the company use existing technologies, develop its own technology, or some combination of both?
  - How much of the company's success do you attribute to its use of IT and/or the company's early adoption of IT into their business processes?
  - Is it used to enhance or differentiate their product, reduce costs, or both?

Business Analysis Paper

- **Leadership**
  - Who are/were the key leaders of the company
  - What decisions did these leaders make, in particular decisions relating to the deployment of IT?
  - What opportunities did they identify that helped make their company what it is today?

Business Analysis Paper

- **Market and Financial Performance**
  - What is the company's revenue and profit, and how has it evolved over the years?
  - How does the company's performance compare to its competitors?
  - Industry specific measures:
    - Cost per Available Seat Mile (Airlines)
    - Sales per square foot (retail)

Business Analysis Paper

- **Trajectory**
  - If the company successfully used information systems in its past, has it continued to innovate and improve up until today?
  - Is the company effectively postured for the future?
Citing Sources

- Plagiarism is illegal and cheating and will not be tolerated!!!
- More than thirty words verbatim must be cited.
- Any facts or figures that are not your own must be cited.
  - Ebay's US Revenues in 2002 were $1.39 billion [1].

You must cite your sources in the body of the text!!!!

“Semiconductors have found a place in virtually every electronic device in existence... industry was able to reach $200 billion in sales...” [1].

End Note:

Citing Sources

- The easiest way to lose points on your paper is to not cite sources!
- Guides on class website will be posted soon to help you cite your sources correctly.
- Talk to the TA or instructor if you have questions.

Suggested sources of Information

- Company website
- 10K report
  - (This is the annual report public companies file with Security and Exchange Commission.)
- Business article database
  - See UCSC Library website!
- Industry specific publications
  - Example: Aviation Week
- Books
- Good Magazines (The Economist)
- Consulting groups: Forrester, Gartner, ...

Business Analysis Paper Preferences

Due NEXT WEEK -- Tuesday 10/1!

- We want you to try to form your own groups.
  - However, we may modify the groups to balance skills and experience.

- As a group, turn in (paper):
  - Names of proposed group members with emails
  - List of companies you would like to study
- Use the form we provide on the class webpage!
Business Analysis Paper Preferences
Due Tuesday 4/7!

At least two of your preferred companies must be from this list:
Emirates (Airline),
CVS Caremark,
eBay,
Carrefour (Supermarket Chain),
Charles Schwab,
Inditex (Clothing retailer),
Safeway,
Toyota,
Amazon

With your preferences in mind, we will make the final company assignments to the groups.

Business Paper Preferences 4/7

- To help us create balanced groups...
- ...you will self identify your best skills from:
  - W: Writing
  - A: Accounting and Finance
  - C: Computers and technology
  - S: Business strategy
  - L: Literature Search

Business Paper Preferences

Example:
- Bob Smith  smith@yahoo.com  A, L
- Jane Doe  do@hotmail.com  C, W
- Chris Tomas  chris@gmail.com  S, W

Business Paper Proposal

- As a group write a 2-3 page description of what you plan to investigate in your business paper!
- Show that you’ve done some research!
- Cite some facts, and some technologies and or strategies that you’ve heard about the company that you would like to investigate further.
- Remember to cite your sources properly!!!
- DUE: October 20

Business Paper

First Draft
- draft of your final paper
- The closer to “done” the better

Due November 12

Business Paper

Final Draft
Due December 3 (Last Day of Class).