Day 1

Terms to Know

Day 1

`Data : refus to raw facts that are collected or recorded

`Information : data that has been processed or orginized

`Information System : Collection of people, processes, and technology that work together to manage and process data to produce usefull information.`
Example : System used to track inventory.

`Waterfall : methodology/approach to a project of any kind that represents that each step is its own part of the process, can't go to the next step without doing the one before

`LMS : (learning management software/system) used to plan, deliver, and manage educational courses or training programs` ex: Moodle, D2L

`Agile : method of software that emphasizes flexability and iteration program adaptation, through small, incremental improvments

`Scrum : framework for managing and completing complex projects, based on the agile approach`

`System/software development lifecycle : (SDLC) high quality, low cost structured process 5 or 7 step process:` 1. Preminilary Design
`2. System Analysis` 3. System Design
`4. Programming` 5. Testing
`6. Implementation` [^1]
`7. Maintenance`2
1 Pre-Production
2 Production

`Business System Analysis : the analysis of business systems`

Day 2

`Revenue : income generated by business operation - $ from selling products/services`

`Profit :  financial benefit realized when revenue generated from a business operation exceeds the expenses, costs, and taxes involved` > Also known as the bottom Line`

`Asset : resourse that is meant to be used for at least over a year to generate profit` ex: land, caplital, a computer`

`Investment : Acquisition of an asset with hope it will generate a return/appreciation - involves risk`

`TCO : (total cost of ownership) acquisition costs and operating costs, including EOL` ex: information system`

`ROI : (return on investment) value of investments and comparing them %%

Day 2

- ## Implementing
  - Trade offs
    - Whats the cost?
    - Can it even be done?
    - etc
- ## SDLC (System/software Development Lifecycle)
  - **Preliminary Analysis**
    - A request for a replacement or new system is first reviewed
    - `What is the problem-to-be-solved? Creating a solution possible? Alternatives? ...`

        - Important in determining if the project should be initiated
            - the purpsoe
            - assessment basics
            - CBA (cost benefit analysis)

- ## Exercise
    - B.C. shells out $300K to help fund 3rd study into high-speed rail to Washington and Oregon
    - What are they doing?
        - BC government is investing another $300,000 (on top of $600,000) into a high speed rail system between Vancouver, Seattle, and Portland.
    - What's the problem?
        - cost
    - What's the (estimated) cost?
        - "Cost of construction estimated at $42 billion US"
    - Who would pay those costs?
    - What are the benefits?
        - Much faster transportation - 400km max
            - greener
            - lower cost
            - more jobs
            - comfort
    - Who receives the benefits?
        - People
    - What are the alternatives?
    -

Day 3

- # Netflix
  - what does it offer?
  - watch movies
  - downloads
  - games
  - multi languages
  - diff devices
  - keeps track
  - recommendation
  - catalog
  - multi-profile
  - Performance
  - security
  -
- # Requirements
  - what a business needs from its information systems AND how it needs those systems to operate
  - The business needs **ALL** of its requirements
    - Software/Systems
    - needs information systems
  - **Functional** => specific features or functionallity that software must have in order to meet the needs of its users
    - what we usually see
  - **Non-Functional** => broader characteristics of the software. such as performance, security, and usability
    - not something we usually think about
    - != not important
- # SDLC
  - **CBA** drives the entire process ROI
    - Job Security
  - How are they connected to requirements
    1. Preminilary Design

    - uses the problem to create requirements
    - what problem to solve?
2. System Analysis
    - Requirements elicititation
3. System Design
    - Design UI/UX based on the requirements
4. Programming
    - Develop requirements from design
5. Testing
    - Functional requirement - Ensures functionality of a software
    - testing functional requirements
6. Implementation
    - production
    - UAT
    - installing the system (HW, SW, people,)
    - Peformance (non-functional) meets requirements (testing non-functional requirements)
7. Maintenance
    - bug fixes
    - new features + new requirements

- # Accessibility
    - Specific connotations in our field
    - **Not** a fancy way to say "easy to use" or "nice-looking"

- Exercise
    - functional requirements
        - What does the application need to do?
        - what are the necessary features or capabilities
    - non-functional requirements
        - constraints on how the application should function
        - ex: compliance, performance, support

- **FURPS + requirements**
  - Functionality
    - Capabilities and features of the app (product)
  - Usability
    - Considering the person (or people) who will be using the app
  - Reliability
    - How much system downtime is acceptable
  - Performance
    - Application response time throughput
    - (Accuracy)
  - Supportability
    - Make sure the application can be tested, extended, serviced. installed and configured
- **Scalability**
  - Accomidate increase/decrease business volume in info systems

Day 4

- Review

Match the terms to the appropriate definition.

✓	4	Profit
✓	2	Cost Benefit Analysis
✓	6	Functional requirements
✓	1	Requirements
✓	9	Software/Systems Development Lifecycle (SDLC)
✗	12 (7)	Non-functional requirements
✗	7 (12)	Production
✓	8	Scalability
✓	3	Revenue
✓	10	Data
✓	11	Information
✓	5	Total Cost of Ownership (TCO)

1. What a business needs from its information systems.
2. The costs outlined in a business case are weighed against expected benefits to determine whether a project is worth doing - is called a _____.
3. The money a business makes from selling products and/or services.
4. The money that belong to the owner(s) of a business after all expenses are subtracted from the money the business makes selling its products and/or services.
5. All of the direct and indirect costs incurred by a business in the acquisition, operation, maintenance, and disposal of information systems.
6. Specific features that software or information systems must have in order to meet the needs of its users.
7. Broad characteristics of the software or information system, such as usability, reliability, performance, security, and supportability.
8. Making sure that applications and systems can perform well whether there is a large increase or decrease in business volume and a corresponding increase or decrease in the load on the information system(s).
9. A structured approach to building and delivering information systems to an organization.
10. Raw facts
11. Raw facts transformed into output(s) according to Business Rules
12. The information system(s) that an organization uses in its day-to-day operations are said to be in _____.

-
- What is a Business process?
- What is a 'process model'?
- Benefits of Process Model?
- Exercise
  - Write steps to submit an assignment
    1. Click Activities > Assignments in your desired course
    2. Click the assignment you would like to submit your assignment to
    3. Click **Add a File**
    4. Drag and drop the file
    5. Click Submit
  - Write steps to book an appointment with an instructor

Day 5

- SDLC

- CLasses and Objects
    - Class
        - represents things
        - The ___
            - the person
            - the question
            - the *jumping* --> X
        - **Three Things
            - methods
            - attributes / characteristics
                - defines what a class is
            - NAME
        - Method/behavior

- UML (Unified Modelling Language)
  |**Object : Employee**----------|
  |**Attributes**--------------------|
self._----------------------
----------**Behaviors**---------
--------somthing()-----------

- exercise
    - Actors for the LMS
        - student
            - upload subissions
            - view material/marks
            - write discussion posts
        - instructor
            - add course material

        - creates tests/quizes
        - view/mark submissions
    - admin
        - add/remove instructors and students/create accounts
        - manage users
    - markers
        - mark subissions
        - give feeback
- # In the UML
    - class Students(person)
        - FN
        - LN
        - DoB
        - Student ID
        - Email
        - Course
    - Class Instructors(person)
        - FN/LN
        - Email
        - course
        - inst ID
        - Background
        - misc
        - DOB
    - Class Person
        - FN/LM
        - Email
        - DOB
        - address
        - etc
- # Use Cases
    - stylized story

    - about an actor
    - interacting with a system
    - under specific circumstances
    - to produce an outcome of value, i.e. the reason 'why'

- actors interact with verbnoun