MARKUS AFONSO, A01333486 BSA MIDTERM

**Data** : refers to raw facts that are collected or recorded

**Information** : data that has been processed or organized

Information System : Collection of people, processes, and technology that work together to manage and process data to produce useful 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 flexibility and iteration program adaptation, through small, incremental improvements

**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. Preliminary Design

2. System Analysis

3. System Design

4. Programming

5. Testing

6. Implementation [Pre-Production]

7. Maintenance[Production]

**Business System Analysis** : the analysis of business systems

**Revenue** / **Top Line**: income generated by business operation - $ from selling products/services

**Profit** / **Bottom Line**:  financial benefit realized when revenue generated from a business operation exceeds the expenses, costs, and taxes involved

> Also known as the bottom Line

**Asset** : resource that is meant to be used for at least over a year to generate profit

ex: land, capital, 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 %%

**Production**: any information system an organization uses in its day-to-day operations

**BPM** (Business Process Model): understand how a business runs train new people improve how things work

**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 functione.g. compliance, performance, support

**Scalability** : Accommodate increase/decrease business volume in info systems

- Implementing

- Trade offs

- What’s 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 purpose

- 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](https://www.cbc.ca/news/canada/british-columbia/b-c-funds-3rd-high-speed-rail-study-to-u-s-1.6582003)

- 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

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- Netflix

- what does it offer?

- watch movies

- downloads

- games

- multi languages

- diff devices

- keeps track

- recommendation

- catalog

- multi-profile

- Performance

- security

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- 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 functionality 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. Preliminary Design

- uses the problem to create requirements

- what problem to solve?

2. System Analysis

- Requirements elicitation

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, )

- Performance (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"

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- 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

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- 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

Day 4

- Review

- 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\*\*----------|

|\*\*Attributes/characteristics\*\*-|

|self.\_\_\_\_\_---------------------|

|-------------------------------|

|-------------------------------|

|-----\*\*Behaviors/Methods\*\*-----|

|--------somthing()-------------|

- Actors for the LMS

- student

- upload submissions

- view material/marks

- write discussion posts

- instructor

- add course material

- creates tests/quizzes

- view/mark submissions

- admin

- add/remove instructors and students/create accounts

- manage users

- markers

- mark submissions

- give feedback

- In the UML

- class Students(person)

- FN

- LN

- DoB

- Student ID

- Email

- Course Scalability : Accommodate increase/decrease business volume in info systems

- 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

Calendar

Description automatically generated Diagram

Description automatically generated

