MIS3506

Digital Design & Innovation Studio

Exam # 03: Review Session

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What's on the Final?

Readings -

- Moggridge on the Design Process
- Brainstorming Doesn't Work: Try This Technique Instead
- "Prototypes" Jogger, 77-81
- "use Cases" Jogger, 150-175
- Usibility.gov Personas
- Data Modeling 101
- What Makes a Good Business Rule

What's on the Final?

Prototyping -

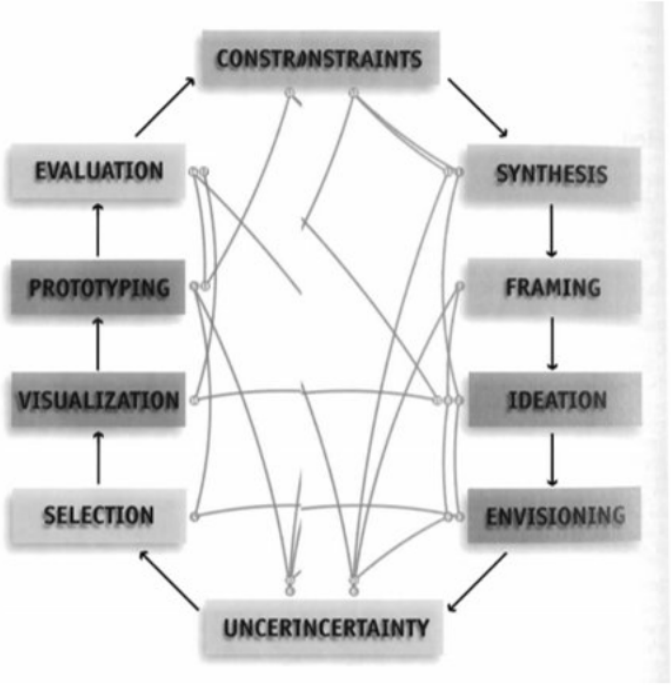
- Prototyping – look at a narrative, scope document, etc… compare it against a prototype – determine how the BA did, what is missing, what's too much, what could be added…

What is DESIGN PROCESS?

1. Define the problem
2. Create & consider many options
3. Refine selected options
4. Repeat (optional)
5. Pick the winner, execute

Moggridge – 10 Steps in the Design Process

- What are they?
- What's the sequence?



Bill Moggridge / Designing Interactions / Process

Business Rules are . . .

NOT ABOUT NAVIGATION

- Keep Business Rules as Simple as Possible

Gas Deposit Business Rules

- A customer with a good credit score is not charged a deposit.
- A customer wanting gas service pays a $150 “turn on” fee.
- A customer with a balance must pay that balance, in full, before “turn on”.
- A customer with new construction and 3 gas appliances has all fees waived.
- A customer with a poor connect/disconnect history must be charged a deposit of $400.
- A customer with poor credit score must be charged a $200 deposit.

For Tapp, you…

Document all of the BUSINESS RULES you will need for your project (and show how your prototype implements them)

- Word document
- Business Rule identifier
- Ordered in an appropriate way

PERSONAS are:

1. Archetypal people involved with a product or service
2. More than just a "USER" – specific people
3. Devised from OBSERVING and TALKING to people
4. A composite of many people

From SAFER: Designing for Interaction

What are some best practices for developing personas?

What's the difference between a horizontal & a vertical prototype?

- Horizontal - functional
- Vertical - technical

What's the difference between an evolutionary & a Throwaway prototype?

Why use a prototype?

What is the purpose of a use case?
What is included in a use case?

- Interactions between a user and the system
- Document the detailed steps for normal system usage
  - Errors & Variations too
- Shorthand for related scenarios
- Requirements Documentation
- Basis for developing test cases

Data

- How are data models used?
- Why do we normalize?

Data Modeling 101

1. A normal entity depicts one concept
2. Attributes should be cohesive, describing everything you need to know about the entity.
3. Get the right level of detail, it can significant impact your prototype
4. Use naming conventions for your entities & attributes. Be consistent.
5. The relationships between entities are conceptually identical to the relationships between objects.
6. Cardinality asks “how many” whereas optionality asks “whether you must have something.”

Use cases are a description of how an actor accomplishes a goal using your solution.

Adapted from Memory Jogger (p150)

So, what's in a use case?

- High-level identifying data
- A summary of what the use case achieves
- Detailed steps the actor will need to take
- Exception steps that may be needed as a result of errors
- Variations that describe alternative paths through the use case

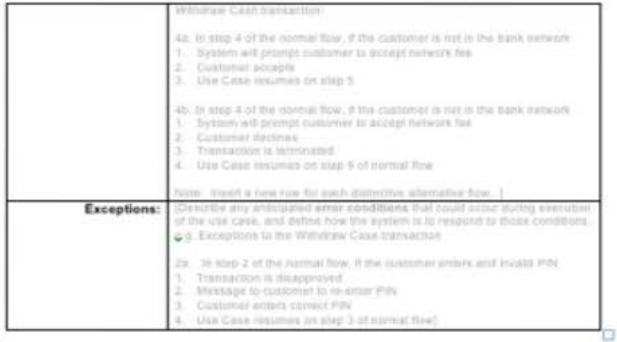
Use Case Template

1 **Feature Name** (Example: ATM Transaction)

1.1 Feature Process Flow / Use Case Model

1.2 Use Case(s)

Use Case ID:	[Enter a unique numeric identifier for the Use Case. e.g.: UC-1.2.1]
Use Case Name:	[Enter a short name for the Use Case which will be a verb-noun phrase. e.g.: Withdraw Cash]
Created By:	**Last Updated By:**
Date Created:	**Last Revision Date:**
Actors:	[An actor is a person or other entity external to the software system being specified who interacts with the system and performs use cases to accomplish tasks. Different actors often correspond to different user classes, or roles, identified from the customer community that will use the product. Name the actor that will be initiating this use case (primary) and any other actors who will participate in completing the use case (secondary).]
Description:	[Provide a brief description of the reason for and outcome of this use case.]
Trigger:	[Identify the event that initiates the use case. This could be an external business event or system event that causes the use case to begin, or it could be the first step in the normal flow.]
Preconditions:	[List any activities that must take place, or any conditions that must be true, before the use case can be started. Number each pre-condition, e.g.: 1. Customer has active deposit account with ATM privileges 2. Customer has an activated ATM card.]
Postconditions:	[Describe the state of the system at the conclusion of the use case execution. Should include both minimal guarantees (what must happen even if the actor's goal is not achieved) and the success guarantees (what happens when the actor's goal is achieved). Number each post-condition, e.g.: 1. Customer receives cash 2. Customer account balance is reduced by the amount of the withdrawal (and transaction fees)]
Normal Flow:	[Provide a detailed description of the user actions and system responses that will take place during execution of the use case under **normal, expected** conditions. This dialog sequence will ultimately lead to accomplishing the goal stated in the use case name and description. 1. Customer inserts ATM card 2. Customer enters PIN 3. System prompts customer to enter language performance English or Spanish 4. System validates if customer is in the bank network 5. System prompts user to select transaction type 6. Customer selects Withdrawal From Checking 7. System prompts user to enter withdrawal amount 8. ... 9. System ejects ATM card]
Variations: [Alternative Flow 1 – Not in Network]	[Enumerate **legitimate** branches from the Main flow to handle special conditions (also known as extensions). For each alternative flow, reference the branching step number of the normal flow and the name/number must be true in order for this extension to be executed. e.g.: Alternative Flows in the



	Withdraw Cash transaction 4a. In step 4 of the normal flow, if the customer is not in the bank network 1. System will prompt customer to accept network fee 2. Customer accepts 3. Use Case resumes on step 5 4b. In step 4 of the normal flow, if the customer is not in the bank network 1. System will prompt customer to accept network fee 2. Customer declines 3. Transaction is terminated 4. Use Case resumes on step 9 of normal flow Note: Insert a new row for each distinctive alternative flow...]
Exceptions:	[Describe any anticipated **error conditions** that could occur during execution of the use case, and define how the system is to respond to those conditions. e.g. Exceptions to the Withdraw Case transaction 2a. In step 2 of the normal flow, if the customer enters and invalid PIN 1. Transaction is disapproved 2. Message to customer to re-enter PIN 3. Customer enters correct PIN 4. Use Case resumes on step 3 of normal flow]

MIS 3506 Keys to your Exam Success

- Reread your texts and sample cases
- Study individually and with your peers
- Review your class notes
- Don't rush through the exam
- Carefully read the exam case studies
- Trust your instincts

STUDENT FEEDBACK FORMS

- Please be certain to fill out your ESFF's
- Your feedback is very important!