MIS 3504

Digital Design and Innovation Studio

8: THE ART OF DESIGN

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Exam #2
Next week
Sales Order Swim Lane

Customer

External Sales

Internal Sales

Warehouse

Accounting

Books

Receive Order

Add Date

Credit ?

Packing Slip Invoice

Get Goods

Pay Invoice

Delivery Date

Credit Limit

Prep Invoice

Pick, Pack, Ship

Accept Payment

Too many handoffs

Buy?

Buy?

Buy?

Too many handoffs

Share Data

Potential Bottleneck

Missing Branch
Swim Lane Issues

1. Do all people and databases have a lane?
2. Is the flow clear?
3. Have you documented each step?
4. Have you documented each decision?
5. Are there decisions with only one outflow?
6. Where is information (documents and data) being stored?
Schema for Night Owl Ticket Purchases

(Tickets are purchased by customers using credit cards)

<table>
<thead>
<tr>
<th>Ticket</th>
<th>Ticket Sale Header</th>
<th>Credit Card</th>
<th>Customer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ticket ID#</td>
<td>Sale ID#</td>
<td>Card Number</td>
<td>Customer ID#</td>
</tr>
<tr>
<td>Ticket Cost</td>
<td>Sale Date</td>
<td>Card Name</td>
<td>Last Name</td>
</tr>
<tr>
<td>Show Name</td>
<td>Sale Total Cost</td>
<td>Expiration Date</td>
<td>First Name</td>
</tr>
<tr>
<td>Show Date</td>
<td>Card Number</td>
<td>Card Security Code</td>
<td>Email Address</td>
</tr>
<tr>
<td>Sale ID#</td>
<td></td>
<td>Customer ID#</td>
<td>Loyalty?</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Loyalty Count</td>
</tr>
</tbody>
</table>

Repetitive Data = Missing Entity

Wrong Cardinality

Missing Attributes
Issues with data

1. Are all stand alone nouns identified as entities, or synonyms of an entity?
2. If a noun describes something else, it's an attribute.
3. If the entity has no attributes, then it probably isn’t an entity.
4. If two entities have mostly the same attributes, then they are probably the same entity.
5. If a number of attributes in an entity describe something else, it is probably two entities.
Gas Deposit Decision Tree

Credit?  
- Good: New?  
  - Yes: 3 or More?  
    - Yes: No Fee  
    - No: History?  
      - Yes: 3 or More?  
        - Yes: No Fee  
        - No: $150 + balance  
      - No: $150 + $200  
  - Bad: Bad  

Outcomes not identified in rules  

History?  
- Good: $150  
- Bad: $150 + balance  

What is the order of the rules?  
More than one rule consolidated
Issues with business rules

1. Do you have a business rule for every decision in your swim lane?
2. Your focus should be the work, not who does it or the conditions.
3. Is your rule in passive voice?
4. In a decision tree, do you have a branch for each outcome of every rule?
Now the fun **starts**
SYNTHESIS
BRAINSTORMING SOLUTIONS
“Business creativity is all about finding fresh and innovative solutions to problems, and identifying opportunities to improve the way we do things.”

From How Creative are You? http://www.mindtools.com/pages/article/creativity-quiz.htm
What is **DESIGN PROCESS**

1: Define the problem
2: create and consider many options
3: refine selected directions
3.5: repeat (optional)
4: pick the winner, execute
CREATE AND CONSIDER
MANY OPTIONS
“We happen to think idea generation is an art form. It's about setting a safe, creative space for people to feel like they can say anything, be wild, not be judged, so that new ideas can be born.”

IDEO http://www.openideo.com/fieldnotes/openideo-team-notes/seven-tips-on-better-brainstorming
What are the RULES for BRAINSTORMING
IDEO’s 7 Rules for BRAINSTORMING

1. Defer judgment

2. Encourage wild ideas

3. Build on the ideas of others

4. Stay focused on the topic

5. One conversation at a time

6. Be visual

7. Go for quantity

http://www.openideo.com/fieldnotes/openideo-team-notes/seven-tips-on-better-brainstorming
QUANTITY = the power of MORE

More IDEAS / More OPTIONS / More ENGAGEMENT / More CONTRIBUTIONS / More MEANINGFUL SOLUTIONS
LIMITED IDEAS EQUALS LIMITED THINKING
GENERATE MANY IDEAS
BUILD AND COMBINE
DO NOT EDIT AND
ELIMINATE (EARLY ON)
Team work session
Consider

1. **What** are your objectives? What problem are you trying to solve?

2. **Who** are your affected stakeholders?

3. **How** will you solve the problem **FOR THEM**?
Step 1: (CREATE + FILL IN THE TEMPLATE PROVIDED)

As a TEAM, make a list of your main OBJECTIVES for your project.

5 MINUTES

Who are the main stakeholders?
(Press (Editorial / Marketing), Scholars, Readers, Students, Enthusiasts, Authors)

What do they WANT? What do they HAVE? What do they NEED? -- related to the OBJECTIVES

15 MINUTES
<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>WANTS</th>
<th>NEEDS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholder 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stakeholder 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Stakeholder 2</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Stakeholder</th>
</tr>
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</table>

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<th><strong>WANTS</strong></th>
<th><strong>NEEDS</strong></th>
<th><strong>HAS</strong></th>
<th>Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stakeholder 1</td>
<td>More information about the subject and to learn more about the author</td>
<td>An easy way to access or link to additional content</td>
<td>Video of interviews and Q&amp;A Sessions with the Author in their archives</td>
<td>TU PRESS</td>
</tr>
<tr>
<td>Reader/Student</td>
<td></td>
<td></td>
<td>C</td>
<td></td>
</tr>
<tr>
<td>Stakeholder 3</td>
<td>A way to engage readers on the website to build awareness of products to increase sales</td>
<td>More interactive content about the books</td>
<td></td>
<td>TU Press Marketing</td>
</tr>
</tbody>
</table>
Step 2:

INDIVIDUALLY (this is quiet time) write/draw (AT LEAST) 5 concrete solution ideas to solve a particular need – each on a separate post-it note.

5 MINUTES
Step 3: SHARE them with your team. Place each on the wall as you describe them.

10 MINUTES
EMBRACE CONSTRAINTS
THEY ARE LIBERATING
Step 4:
INDIVIDUALLY (this is quiet time again) TAKE an idea from the wall and use it to GENERATE 2 more. REPEAT. Use all of your time. 5 MIN

+ IDEA 1.1  IDEA 1.2
Step 5: SHARE them with your team. Place each on the wall as you DESCRIBE them 10 MINUTES

+ IDEA 1.1
+ IDEA 1.2

IDEA 1
IDEA 2
IDEA 3
IDEA 4
IDEA 5
6. Organize your ideas. Look for patterns and relationships. 10 min
RECORD YOUR WORK
BUILD WITH THESE IDEAS
END