

# What I wish seniors knew about D.E.A.T.H.

Design/Engineering/Architecture/Testing Hearing

D.E.A.T.H. is coming Wednesday.  
Have you made your preparations?

## Shawn's stated objective

“The objective of the review is relatively simple: the team must **demonstrate the application of what they learned** in their respective Computer Science and Software Engineering programs regarding **Requirements Engineering** (e.g., formulating Problem Statements and Specifying Requirements in various forms) completed thus far in their Senior Capstone Projects.”

# Shawn's stated deliverables

- 1) The formation of the problem and how it is expressed in the problem statement;
- 2) Capture and expression of the needs as they pertain to the problem statement;
- 3) The expression and organization of the software features and their traceability to the needs;
- 4) The expression and organization of the software requirements, constraints, and the like and their traceability to the features and needs;
- 5) Relevant user scenarios, use cases, and mock-ups/prototypes; and
- 6) Initial organization of the Software Architecture and how it relates to the requirements artifacts.

# How most students read this email

- 1) The formation of the problem and how it is expressed in the **problem statement**;
- 2) Capture and expression of the **needs** as they pertain to the problem statement;
- 3) The expression and organization of the software **features** and their traceability to the needs;
- 4) The expression and organization of the **software requirements**, constraints, and the like and their **traceability** to the features and needs;
- 5) Relevant user scenarios, **use cases**, and mock-ups/**prototypes**; and
- 6) Initial organization of the Software Architecture and how it relates to the requirements artifacts.

“Shawn mainly wants to go back and rehash **CSSE371 deliverables**, even though we didn’t actually write any of this for our senior project.”

“Quick! Make a **login use case**.”

“Architecture is just a footnote. What is Hays going on about?”

# How an architect would read this email

- 1) The formation of the problem and how it is expressed in the problem statement;
- 2) Capture and expression of the needs as they pertain to the problem statement;
- 3) The expression and organization of the software features and their traceability to the needs;
- 4) The expression and organization of the software requirements, constraints, and the like and their traceability to the features and needs;
- 5) Relevant user scenarios, ~~use cases~~, and mock-ups/prototypes; and
- 6) Initial organization of the **Software Architecture** and **how it relates** to the requirements artifacts.

“Oh we are conducting an initial architecture review.”

“I’m supposed to talk about the **architecture drivers** that led to my architecture.”

“My team doesn’t write use cases because we follow Kent Beck’s Extreme Programming. I’ll present my **real architecture drivers** that I identified though XP instead of making up use cases I’ll never use.”

# Reflect before your D.E.A.T.H.

- **Why** are you running your project the way you are?
  - Divide your process decisions into:
    1. Ad-hoc
    2. Repeating course techniques as-is
    3. Careful research and selection among alternatives
- **What drivers** led you to build the initial architecture the way you envisioned?

# Present a process

- Share:
  1. The **steps** you followed to arrive at your initial architecture.
  2. The **artifacts** you consumed/produced along the way.
  3. The **views** a professional architect would share.
- If you do this: you will naturally hit the CSSE371 stuff in Shawn's list.
- If you do not do this: be prepared to do this.

# Things not to say

- **Obviously wrong things:**

- “Our project is special, therefore we have no Needs.”
- “We don’t use Sprint Retrospectives because our software process is Scrum.”
- “Here is our use case:” <shows user story>

- ***Non sequitur:***

- “We don’t have X because our software process is Scrum.”
- “We don’t have X because we are coding in Unity.”

- **Appeals to our authority:**

- “We did it this way because after a 30s conversation, Hays said to do it this way.”



## In short

- D.E.A.T.H. comes for all, not just SE majors
- Reflect on your actual process
- Present authentic documents and information
- Show the drivers that led you to your initial architecture