



COMP30022 IT Capstone Project

Semester 2, 2025

Lecture 3

Intro to Requirements

Project Announcements

- Team formation almost complete
 - Thanks for your cooperation
- Tool set up should have happened
- Stand ups expected at each workshop
- Client meetings have started

- Answering ED questions
- IP agreements

- Connecting on Linked In

Overview of Lecture



- Requirements
- Motivational Modelling
- In-camera session

Client humour

<https://programmerhumor.io/programming-memes/yes-now/>



Clients

- Important component of the capstone unit
- Diverse set of clients in this semester
- Project to meet their needs/interests
- Needs may not be clear
- Different from assignment specification



Types of Requirements

- Functional requirements
- Quality (Non-functional) requirements
 - Security, Scalability, Portability, Maintainability
 - Ease of Use
 - Performance Requirements
- *Emotional requirements*

Agile Requirements Trajectory

Inception

- Determining what is to be built
- Eliciting and prioritizing client wants and needs
- Documenting client requests

Sprints

- Updating requirements and priorities

Conclusion

- When is it complete?
 - If no agreement, can result in legal disputes

Appreciate this is new territory for most

Requirements in COMP30022

- Change from previous CIS subjects
- Some exposure to what IT projects are like in practice
 - IP agreements
 - Confidentiality agreements
 - Privacy of artifacts
 - (<https://about.unimelb.edu.au/strategy/governance/compliance-obligations/privacy>)
- No fixed process due to varying projects, backgrounds of students, different team capabilities, ...
- Recommended approaches
- Practise learning things
 - user stories, motivational modelling, client interaction

User stories

- Common approach in agile development
- **User stories** are short, simple descriptions of a feature told from the perspective of the person who desires the new capability, usually a user or customer of the system. They typically follow a simple template:
- **As a < type of user >, I want < some goal > so that < some reason >.**
- Organised into **epics**

From <https://www.mountaingoatsoftware.com/>

Example User stories from 2022

Epic: Buy, sell, search real estate properties, proudly and in an easy-to-use, clean, professional manner

US1: As a buyer, I want to be able to browse and search properties, and remain interested through the process.

US2: As a buyer, I want to also be able to:

- a) Look up items using keywords*
- b) Browse listings*
- c) Lookup a seller account*
- d) Contact a seller*

Another user story

As Sellers and Buyers, we want to be able to:

a) Create an account

b) Login and logout

c) Edit details

d) View orders

Prioritising Requirements

- Add a label to user stories
- Many methods
 - Essential, optional
 - High, Medium, Low
 - MoSCoW (must, should, could, won't)

MoSCoW table

ID	As a <role>	I want to <do something > (sub-story)	Priority	Story
1	Buyer	Look up items using keywords	Must	Browse and search properties, and remain interested in the process
2	Buyer	Browse listings	Must	Browse and search properties, and remain interested in the process
3	Buyer	Lookup a seller account	Must	Browse and search properties, and remain interested in the process
4	Buyer	Contact a seller	Must	Browse and search properties, and remain interested in the process
5	Buyer	Place an order	Must	buy properties confidently and feel secure about the process.
6	Buyer	Modify an order	Should	
7	Buyer	Add listings to cart	Must	
8	Buyer	Pay	Must	
9	Buyer	Cancel orders	Must	
10	Buyer	Get personalized things	Could	
11	Buyer	Rate listings	Could	
12	Seller	Create a listing	Must	Sell properties while feeling honest and empowered
13	Seller	View statistics	Could	Sell properties while feeling honest and empowered
14	Seller	Modify a listing	Must	Sell properties while feeling honest and empowered
15	Seller	Decline an order	Must	Sell properties while feeling honest and empowered
16	Sellers and Buyers	Create an account	Must	
17	Sellers and Buyers	Login and logout	Must	
18	Sellers and Buyers	Edit details	Must	

Personas

- A way of depicting a typical client
- Comes from Human-Computer Interaction (HCI) and understanding the customer
- Plenty of tools available, eg Xtensio

Randall Siavash



"Everything in life is somewhere else,
and you get there in a car"

Age: 23

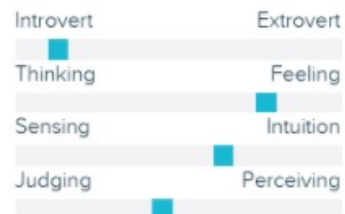
Work: Software Engineering
student

Status: Single

Location: Melbourne, VIC

Tier: Primary End User

Personality



Inactive

Optimistic

Slow learner

Friendly

Goals

- Address the goals of the project.
- To capture what the system should be designed to do.
- A better understanding of the roles and concerns of the team members.
- Become more motivated.

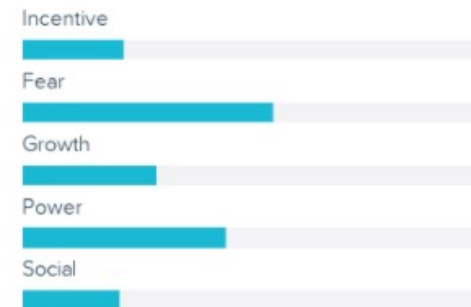
Frustrations

- For teamwork, comments and notes cannot be attached (not good for communication).
- Not clear for others to have a quick understanding of the delivered diagram.
- Complicated operations, very hard to get started.

Bio

Randall is a Software Engineering student who is doing a project with other classmates during this semester. He is not a fast learner and wants everything easy to use and easy to manage. One of his responsibility is to use the tool to create a high-level diagram describing the system in his project and build a team model to establish a collaborative relationship between team members. Due to his introverted personality, he is struggling with letting people get a full understanding of the ideas he came out with.

Motivation



Brands & Influencers

NETFLIX



w3schools.com

Technology



Taylor Hernandez



"Have enough courage to start and enough heart to finish."

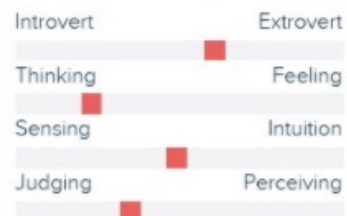
Age: 50

Family: Married

Location: Melbourne, VIC

Character: Primary End User

Personality



Affable

Meticulous

Fair

Capable

Encouraging

Goals

- To manage her projects
- To make her project requirements more clear
- To run projects with her team smoothly

Frustrations

- The model cannot show the team's progress
- Not familiar with the tool
- The colors used in the model cannot distinguish each part

Bio

Taylor is quite interested in this tool and she thinks it will help her manage her work well. In her daily work, she needs to do many projects individually or work in a team sometimes. It is important for her to gather requirements and make them clear. In this case, motivational models will help a lot in her projects to organize the whole project. And the image-exporting function makes it easier to display. However, in her daily use, there are some difficulties in using this model. Some functions are not clear enough so that she used them in the wrong way. Also, the single color in it makes the model less intuitive to have a comprehensive understanding of the whole project.

Motivation

Incentive

Fear

Growth

Power

Social

Brands & Influencers



Technology

IT & Internet

Mobile Apps

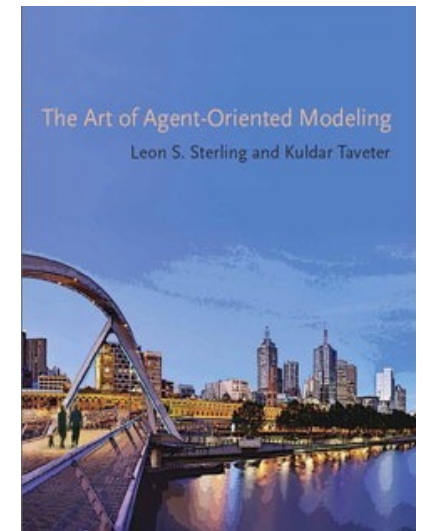
Touch Screens

Expectations for COMP30022

- Need a requirements document encompassing functional and quality requirements
 - user stories recommended
 - prioritisation recommended
- Do/be/feel method for elicitation suggested to develop an agreed (motivational) model with your client
- As appropriate, check consistency between user stories and motivational model
- At the end of each sprint, check whether the model still accurately captures your understanding

What is motivational modelling?

- A method to understand a problem that is easy to connect with requirements and designs
- Based on research in agent-oriented software engineering and influenced by design thinking
- Deceptively simple
- Useful process
- Grew out of use case models
- Focus on emotions and design thinking
 - very powerful
- Modelling tool available

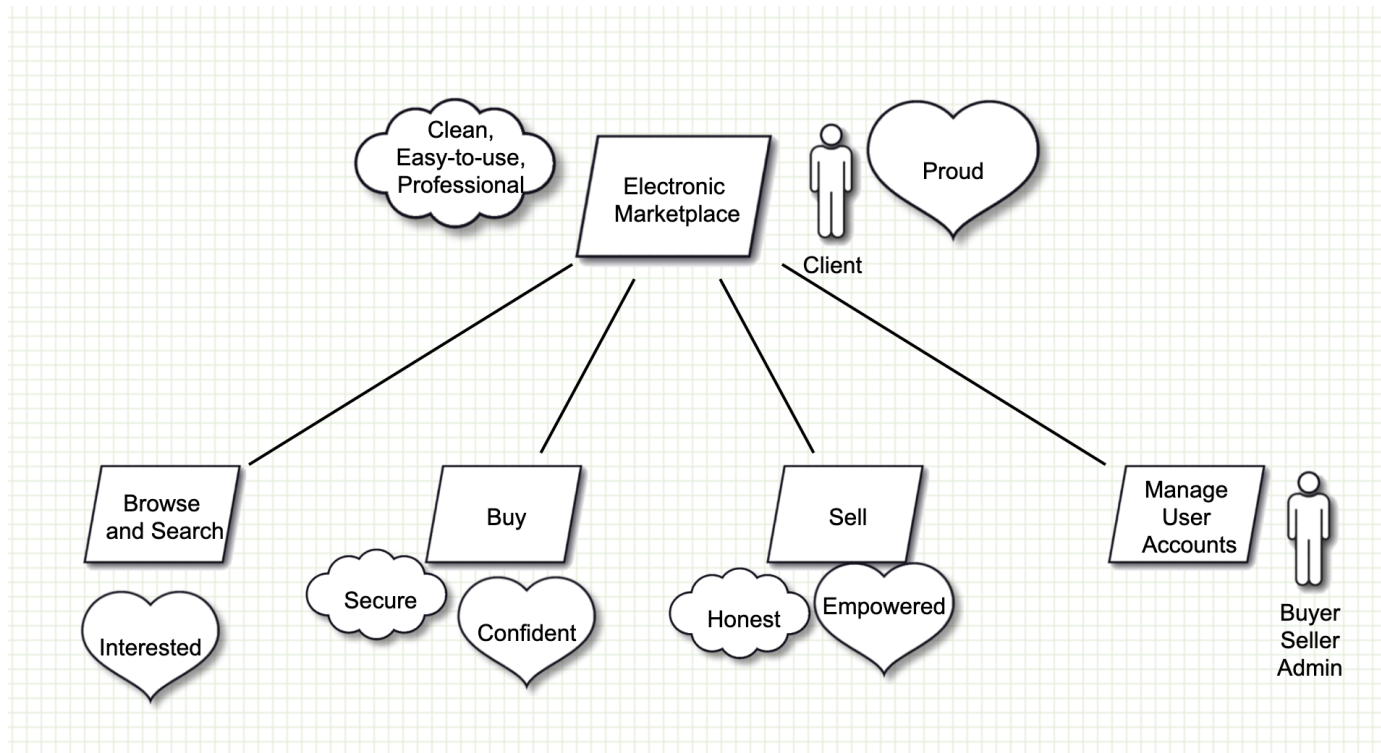


Motivational Model Symbols

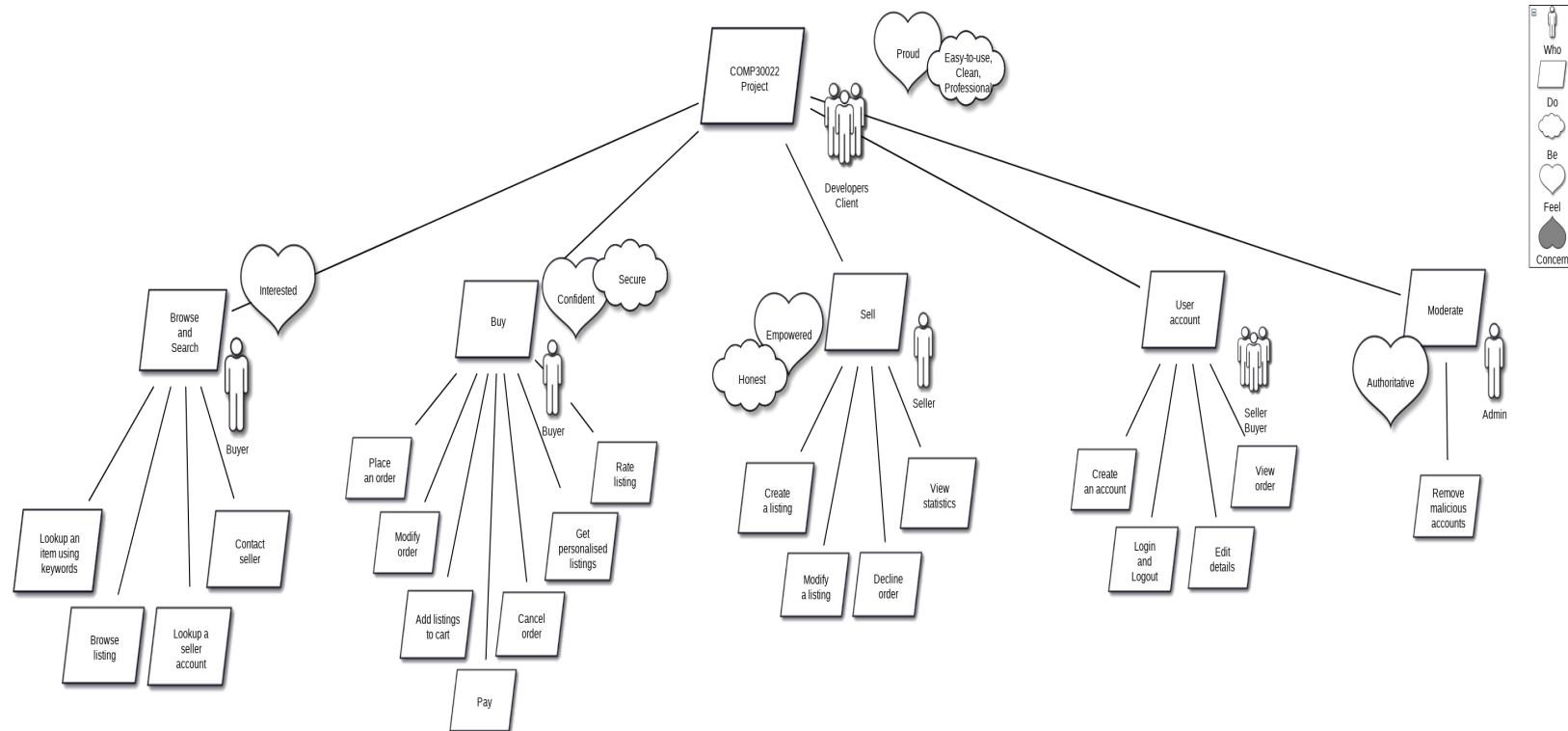


Roles
who achieves goals

Simple motivational model



Model from COMP30022 in 2022



Developing a Motivational Model

Three stage process

- 20-30 minute *positive* brainstorming (do/be/feel elicitation) to
 - Produce 4 lists: who, do, be, feel
- Transformation of lists into initial single page model with feedback from org/individual to tweak model
 - Can use custom tools and 'well-rehearsed' method
- Production of diagrams and artifacts

Ongoing monitoring and communication aide



Accessing AMMBER

- A Motivational Modeller for Building and Eliciting Requirements
- Access via <https://motivationalmodelling.github.io/mm-local-editor/>
- Download a personal modeler
- Very happy for feedback

Summary about requirements

- Documented requirements are required for your project
- Be realistic
- Requirements need to be approved by client
- Client interactions intended to be positive, productive, and lightweight
- Motivational modelling is a lightweight, efficient way to share understanding of the problem to be solved with a client
- Connects well with personas and user stories
- Recommended, but not mandated