GOALS
IN REQUIREMENTS ENGINEERING
Questions…

• What is a Goal Tree?
• What is a Goal?
• Why are they useful for RE?
• How do you identify them?
What is a Goal Tree?

Graphical representation of the reduction of problems (or goals) to sub-problems (or sub-goals).

And Or Trees - http://en.wikipedia.org/wiki/And%28%EB%90%88%EB%A1%9C_tree
What is a Goal?

A goal is an **objective** the system under consideration should achieve.
What’s the link?

• The use case is a collection of scenarios that together accomplish a specific user “goal”.  
  - https://eee.uci.edu/12s/37110/slides/Cases.pdf
Why are they useful for RE?

- Eliciting and Identify requirements
- Structuring requirements
- Explaining Requirements to Stakeholders
  - since they are graphical representations.
- Managing Conflicts
  - Different stakeholders will have different goals and sometimes they will conflict.
How do you identify goals?

- Software systems are built to solve problems.
  - Try finding that List (of Problems)
- Look for keywords that convey intent in the documentation that you might have about your projects.
- Refinement - HOW
- Abstraction - WHY
- Conflict and Obstacle Resolution
Types of Problems (Goals)

• Functional Goals
  • Satisfaction Goals
  • Information Goals

• Non-Functional Goals
  • Accuracy Goals
  • Performance Goals
    • Time
      • Response Time
      • Through-put
    • Space
  • Security
    • Confidentiality
    • Integrity
    • Availability
**HOW & WHY - Refinement and Abstraction**

Why?
- Score Points
- Get to Home Base

- No Shrubberies in front of the Home base
- No alligator’s head in the Home base
- Not Occupied
- Travel Across River

- Get to River Bank
- Hops Across Highway
- Dodge Traffic
  - Dodge Left bound traffic
  - How?
  - Dodge Right bound traffic
  - How?

- Jump on Turtles
  - Turtle Above water
  - Forward/Backward/Side ways

- Jump on Logs
  - Forward/Backward/Side ways

- Jump on Alligator
  - Not in Alligator’s Mouth
  - Forward/Backward/Side ways

Class Activity

• List out the problems that you think you are trying to solve in your respective projects. First do this individually without discussing much with your teammates. Look for the intent-keywords (15 mins)

• Compare the problems that you listed out and form a consolidated list. See if you have missed out on any problems. (5 mins)

• Now, take the list and form a Goal Tree, using the WHY and HOW questions. Again, first do this individually without a great deal of discussion. (15 mins)

• Compare the goal trees. Again, consolidate it into a single goal tree. (10 mins)