Focused Prototypes

What Is a Prototype?

From Wikipedia: "The original purpose of a prototype is to allow users of the software to evaluate developers' proposals for the design of the eventual product by actually trying them out, rather than having to interpret and evaluate the design based on descriptions. Prototyping can also be used by end users to describe and prove requirements that developers have not considered, and that can be a key factor in the commercial relationship between developers and their clients. Prototype software is often referred to as alpha grade, meaning it is the first version to run. Often only a few functions are implemented, the primary focus of the alpha is to have a functional base code on to which features may be added. Once alpha grade software has most of the required features integrated into it, it becomes beta software for testing of the entire software and to adjust the program to respond correctly during situations unforeseen during development."

- Minimal mockups to test (grouped) ideas
    - Examine key issues w/o assumption that using this approach
- Risk analysis e.g.
    - Prototype most challenging or highest priority questions
    - Pick best idea from each affinity group for prototyping
    - Prototype each affinity group
- Should be for throw-away use - do not use code
- Later use should be driven by open issues & decision making needs

UI Prototypes

- May be done by non-technical individuals
- Rapid UI prototypes can use e.g. CSS, HTML, Flash
- Can help accelerate discussion
- Help make sure everyone agreeing to same concrete look & feel

Why Prototype?

From Wikipedia: "Often the end users may not be able to provide a complete set of application objectives, detailed input, processing, or output requirements in the initial stage. After the user evaluation, another prototype will be built based on feedback from users, and again the cycle returns to customer evaluation. The cycle starts by listening to the user, followed by building or revising a mock-up, and letting the user test the mock-up, then back."

- Engineering mockups critical in other domains (e.g. construction)
- Identify relationships between components
- Identify risks
- Identify potential engineering savings from design changes
- Understanding interfaces between components
- Understanding testing principles

Prototyping Process

Taken from Wikipedia:

1. Identify basic requirements
    - Determine basic requirements including the input and output information desired. Details, such as security, can typically be ignored.
2. Develop Initial Prototype
    - The initial prototype is developed that includes only user interfaces.
3. Review
    - The customers, including end-users, examine the prototype and provide feedback on additions or changes.
4. Revise and Enhance the Prototype
    - Using the feedback both the specifications and the prototype can be improved. Negotiation about what is within the scope of the contract/product may be necessary. If changes are introduced then a repeat of steps #3 and #4 may be needed.

Use of Prototypes in Our Project

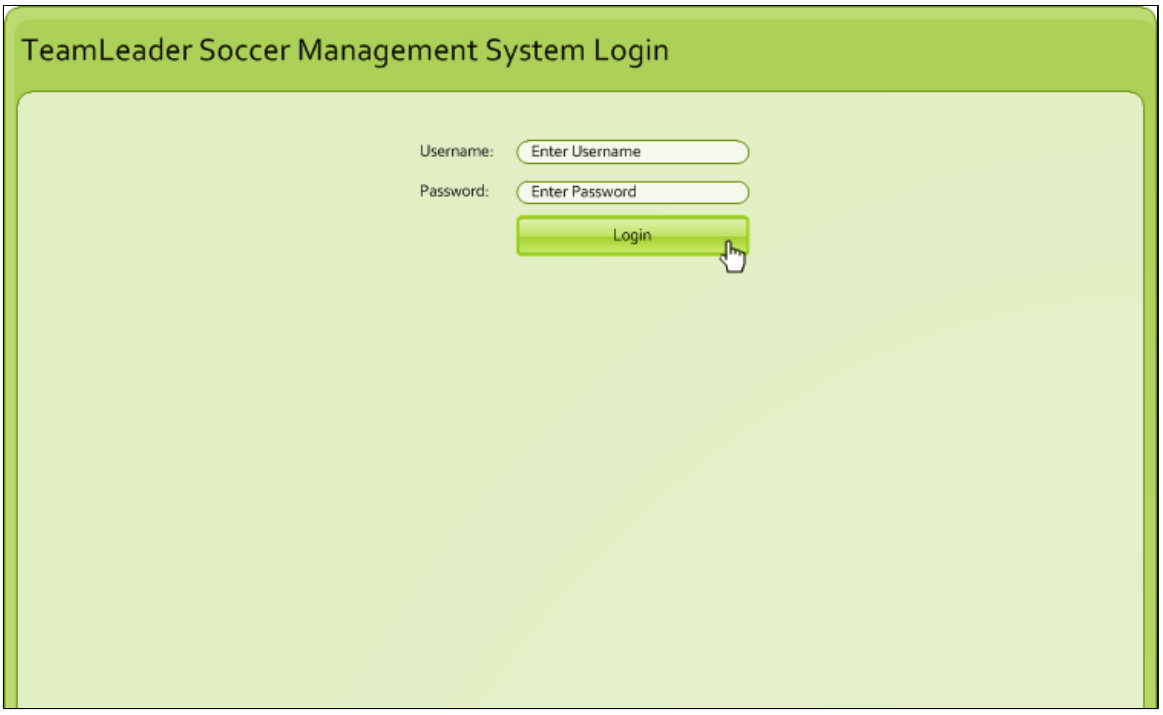
As the software application the group has been working with over the course of the term was already well into development when the class started, much of the prototyping had already been done, and a relatively complete piece of software was available. However, for any new functionality added, or major changes made, the group has, and will continue, to use prototypes as needed to reduce risks.

Since some of the members of the project were part of the original development process, some of the original prototypes can be accessed. See below for examples of these.

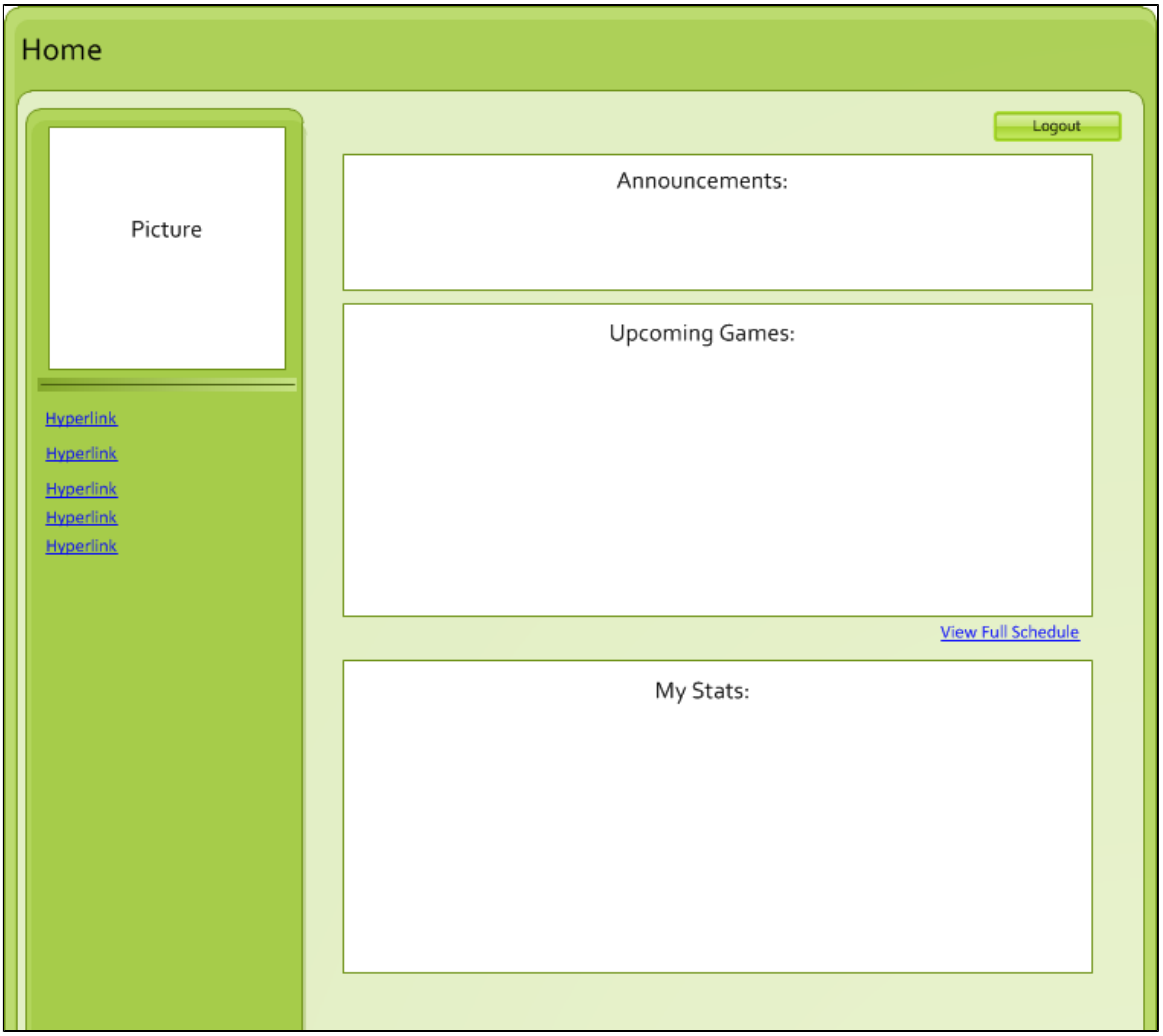
Prototypes

Gui Prototypes

Login Screen:



Player Home:



Functional Protoypes:

- The original development group from CMPT 370 created a series of prototypes using incremental delivery in which more features were added each time, and those included as well as the GUI were refined during each release.
- A series of slighty revised and modified prototypes have been released over the course of this project
    - Due to the requirements of the class, not a lot in terms of added functionality has been done

Current Development

- A revised prototype containing a risk-driven deliverable pertaining to the password system is currently in the works
    - It is expected to be released for user testing for Milestone 5
- The current stable prototype can always be viewed at the URL below:
    - http://rtvt.usask.ca:8080/cmpt371group02/
    - *It is best viewed in Firefox (because IE is a pile of shit)