Programming Analogies

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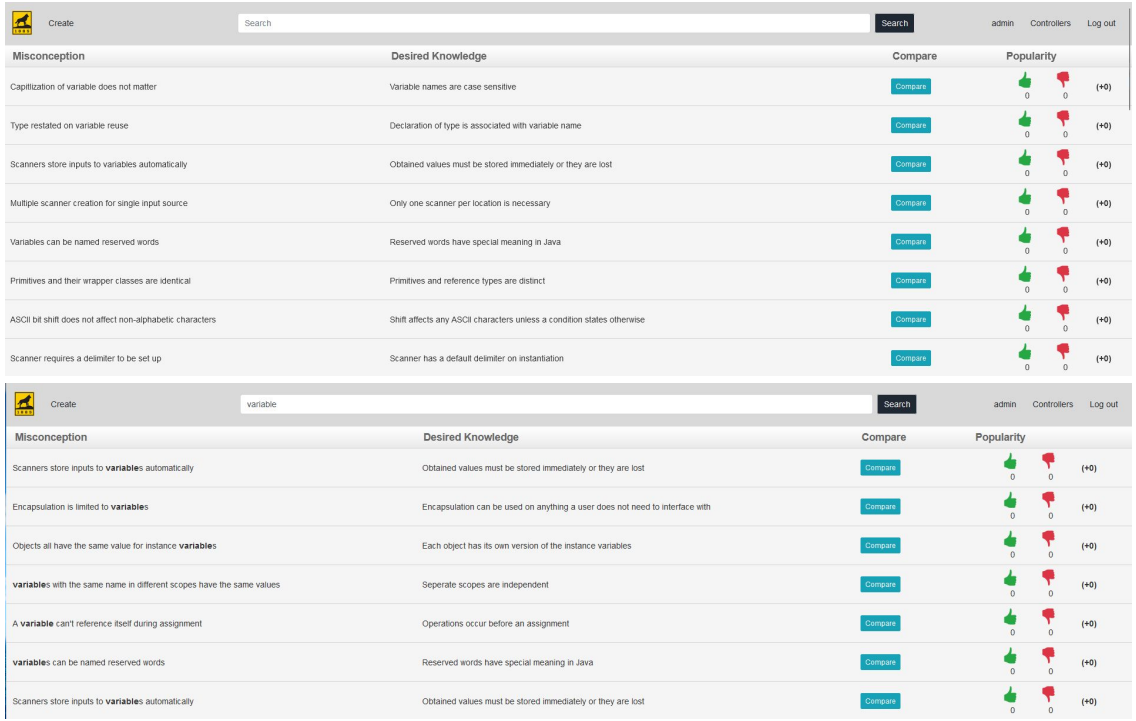
Description of Users and Environment

- Environment
  - System that will clarify computer science topics through meaningful, real-world analogies
- Primary Users
  - Professors/High School teachers/Teacher Assistants
    - Translate knowledge to analogies to explain principles
    - Provide clarity and engagement with students
  - Administrators
    - Manage the application
- Secondary Users
  - Students who need clarification regarding a topic (view only, no creating analogies)
    - Ranging from high school to third & fourth-year university students
  - Scientist (Dr. Briana Bettin)

Demonstration of UI

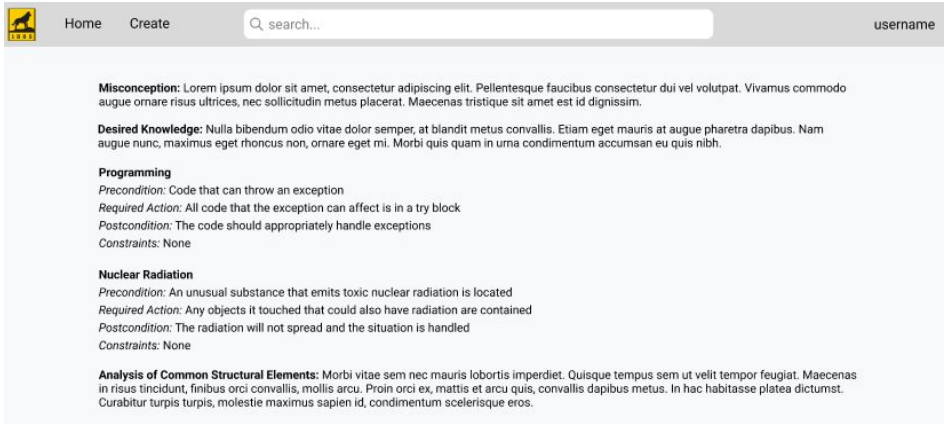
Browsing Pages (Prototype)

Browsing Pages

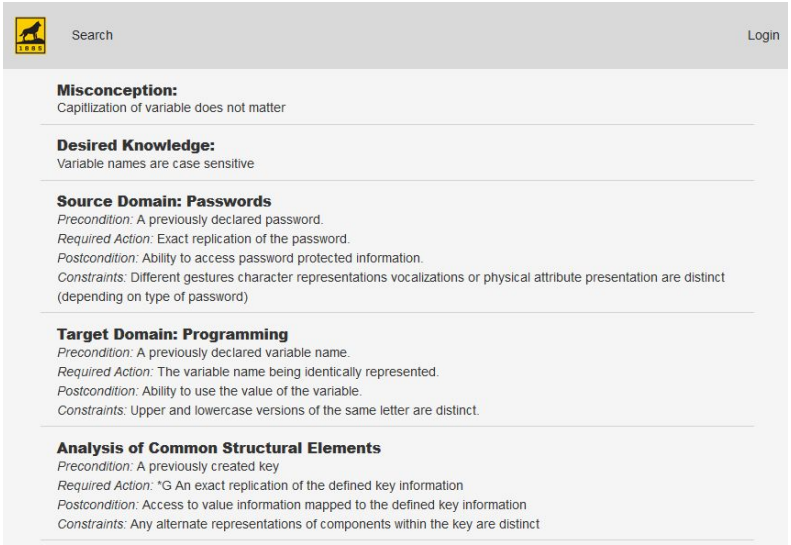


Analogy Page

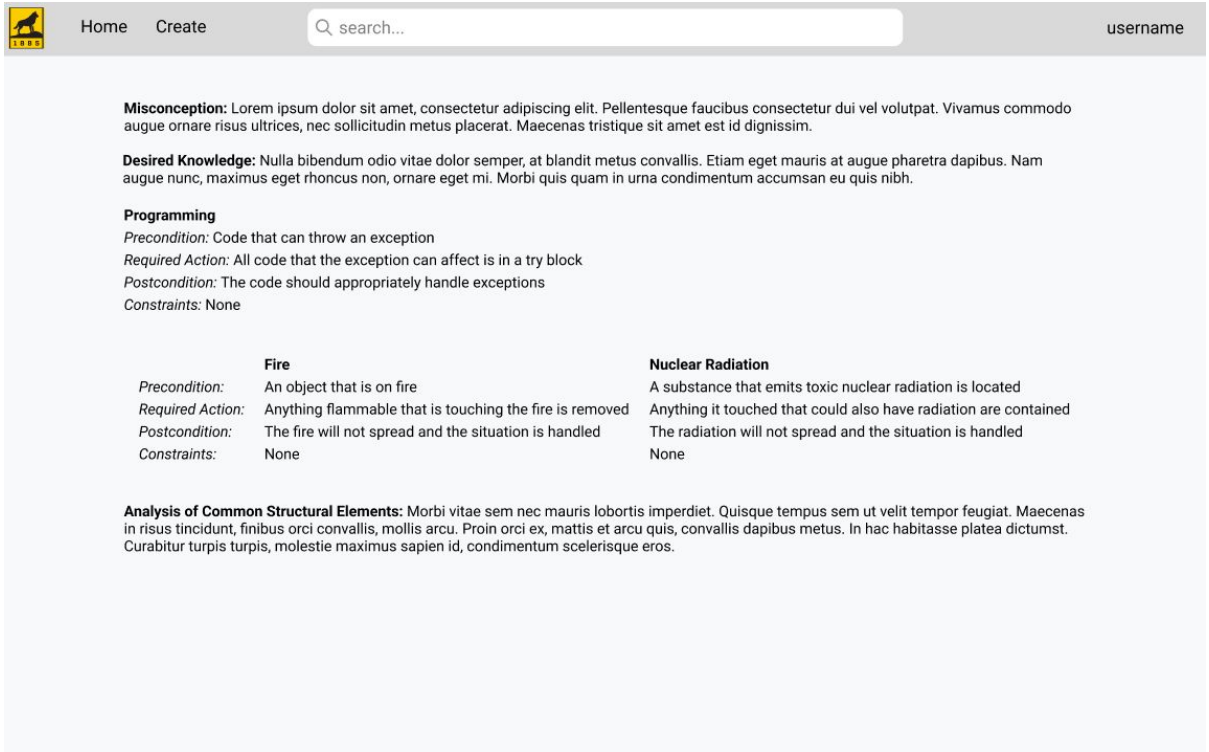
Prototype



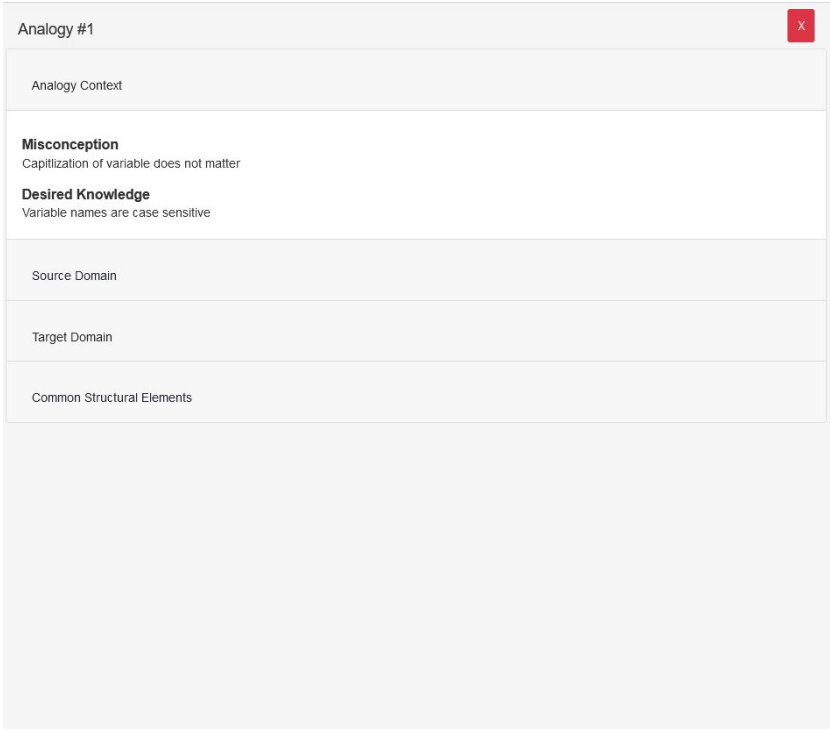
Implementation



Analogy Compare (Prototype)

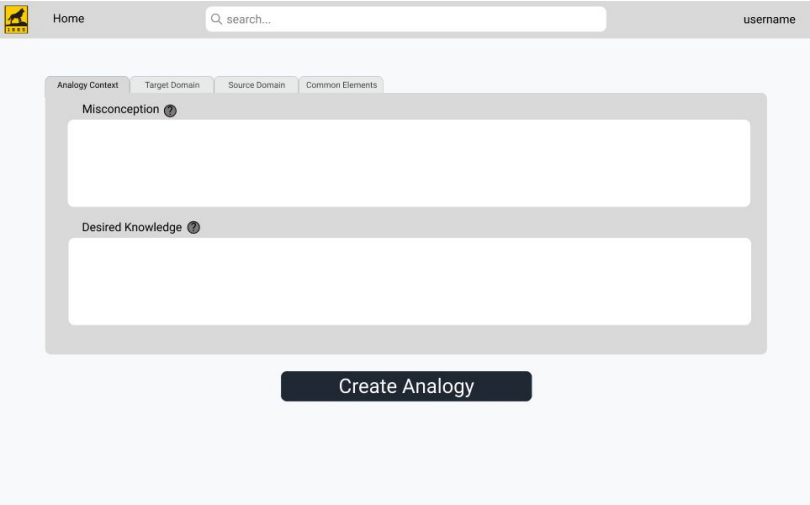


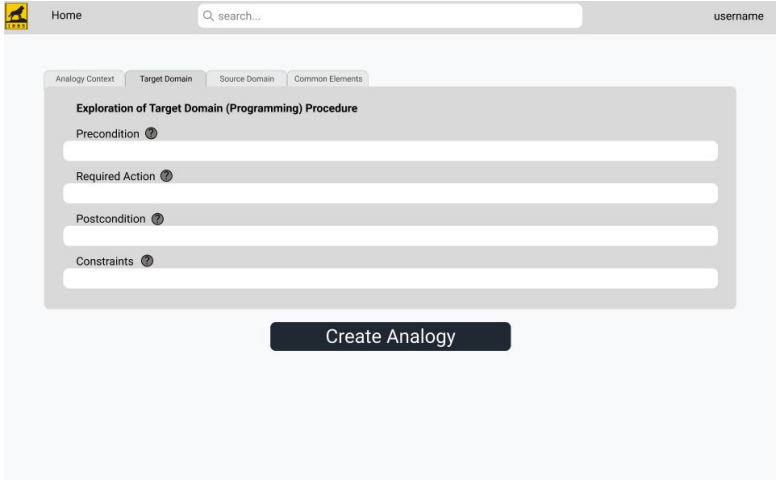
Analogy Compare Page



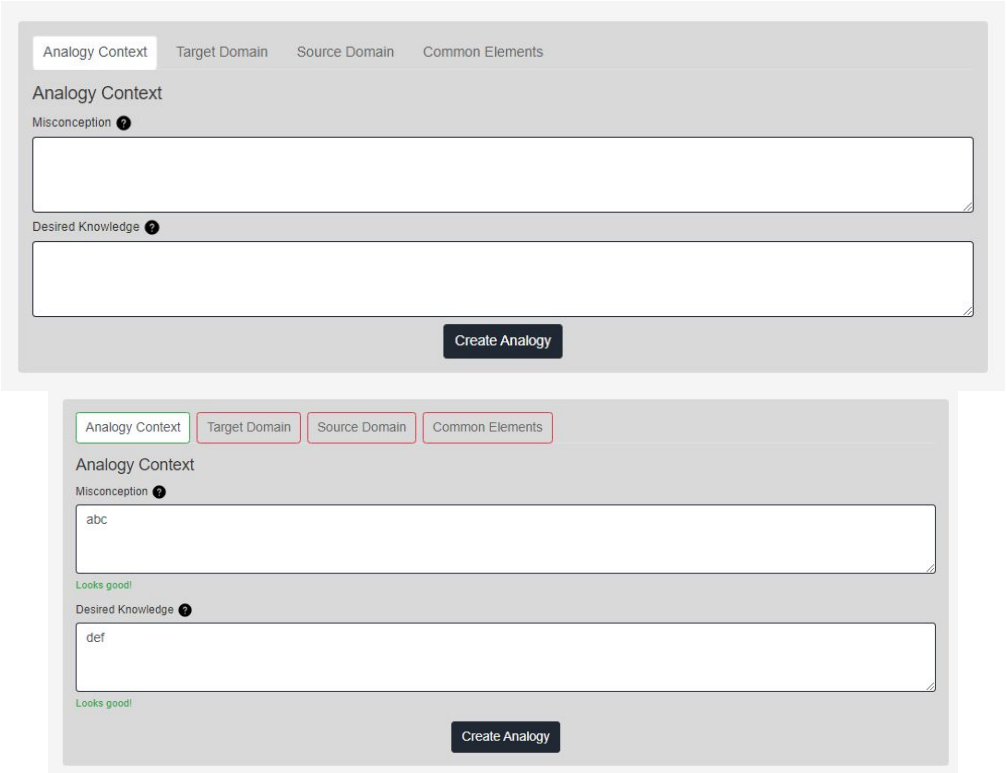
Misconception	Desired Knowledge	Compare	Popularity
Capitlization of variable does not matter	Variable names are case sensitive	Compare	0 0 (+0)
Type restated on variable reuse	Declaration of type is associated with variable name	Compare	0 0 (+0)
Scanners store inputs to variables automatically	Obtained values must be stored immediately or they are lost	Compare	0 0 (+0)
Multiple scanner creation for single input source	Only one scanner per location is necessary	Compare	0 0 (+0)
Variables can be named reserved words	Reserved words have special meaning in Java	Compare	0 0 (+0)
Primitives and their wrapper classes are identical	Primitives and reference types are distinct	Compare	0 0 (+0)
ASCII bit shift does not affect non-alphabetic characters	Shift affects any ASCII characters unless a condition states otherwise	Compare	0 0 (+0)
Scanner requires a delimiter to be set up	Scanner has a default delimiter on instantiation	Compare	0 0 (+0)
Setting the result to double will stop integer division truncation	Floating point must be introduced to the division for floating point results to be remembered	Compare	0 0 (+0)
Primitive assignments maintain references	Primitive assignments copy a value to another primitive	Compare	0 0 (+0)
Code can be anywhere in a java file	The code should be contained within a class	Compare	0 0 (+0)
Semicolons are not needed to end statements	Semicolons should end all regular statements	Compare	0 0 (+0)

Create Analogy Page (Prototype)

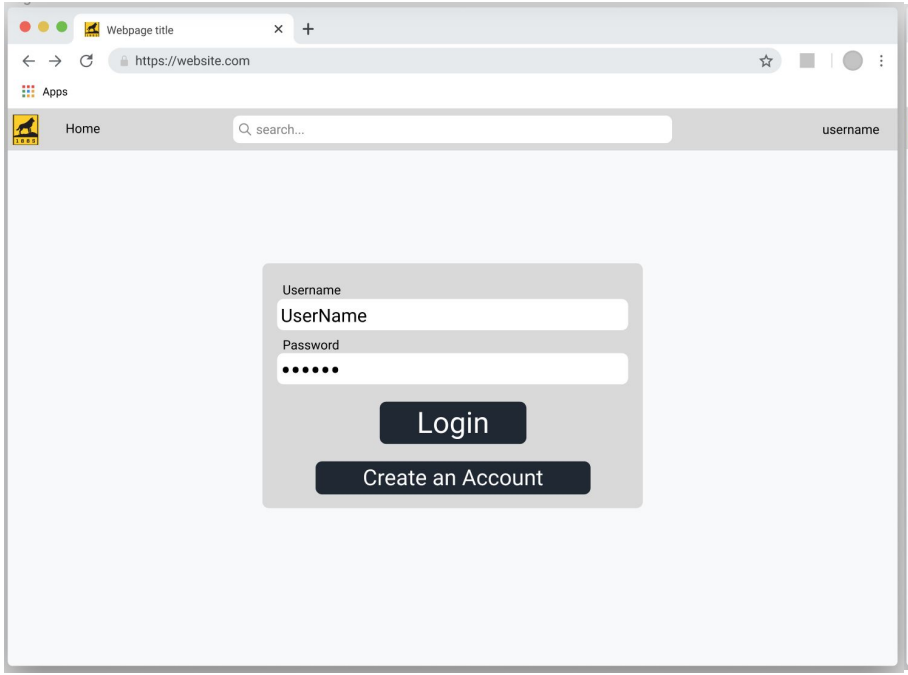


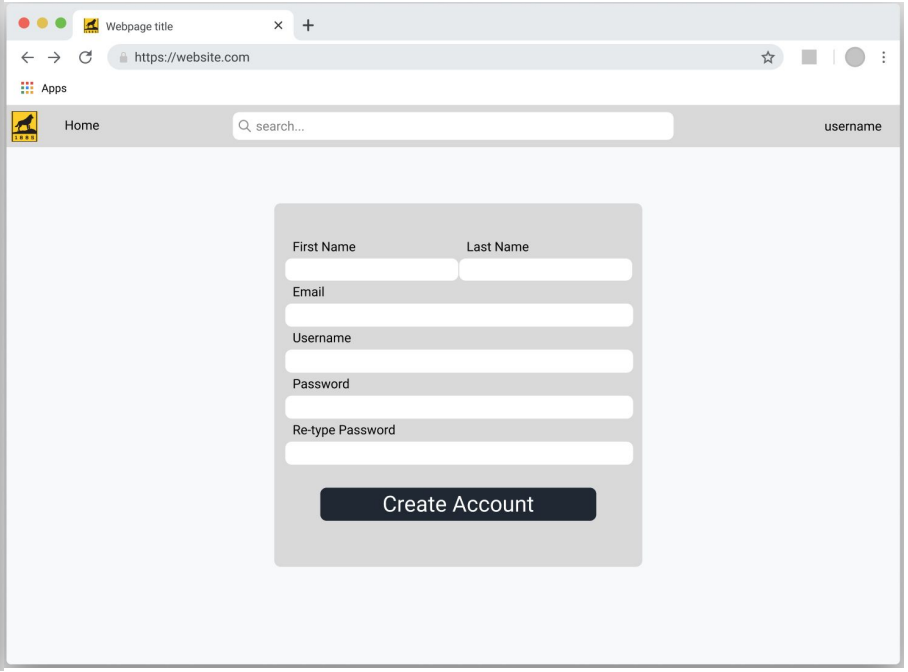


Create Analogy Page

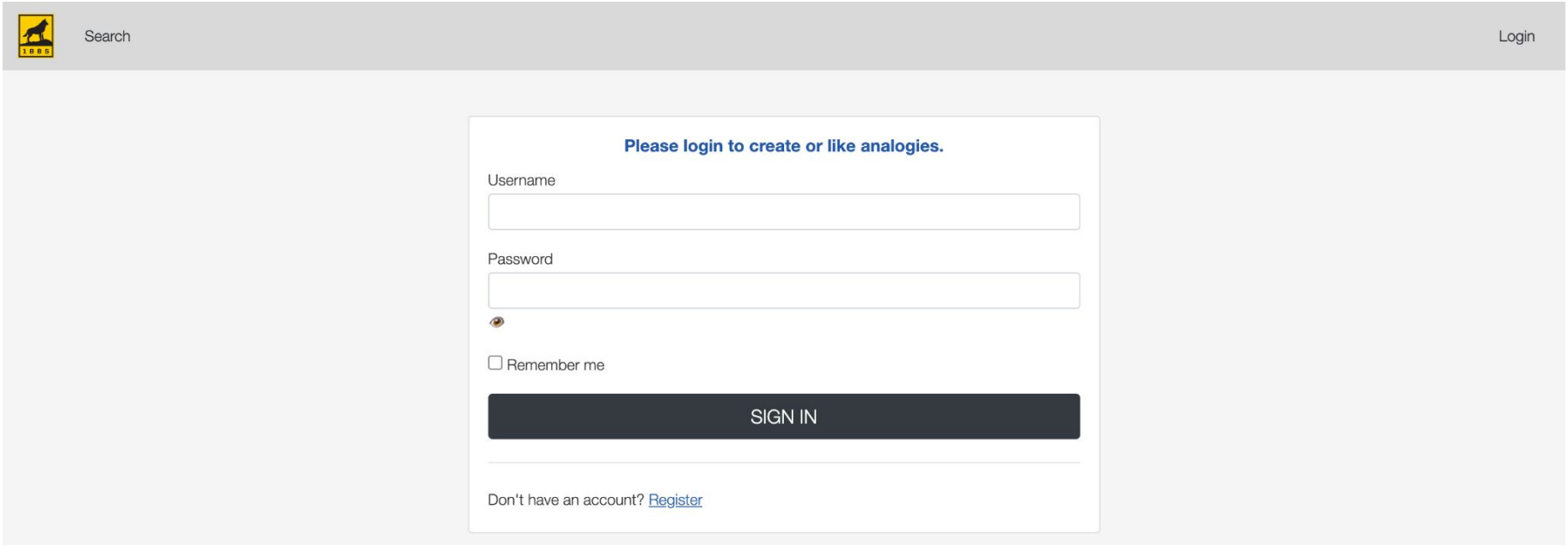


Registration and Login Page (Prototype)

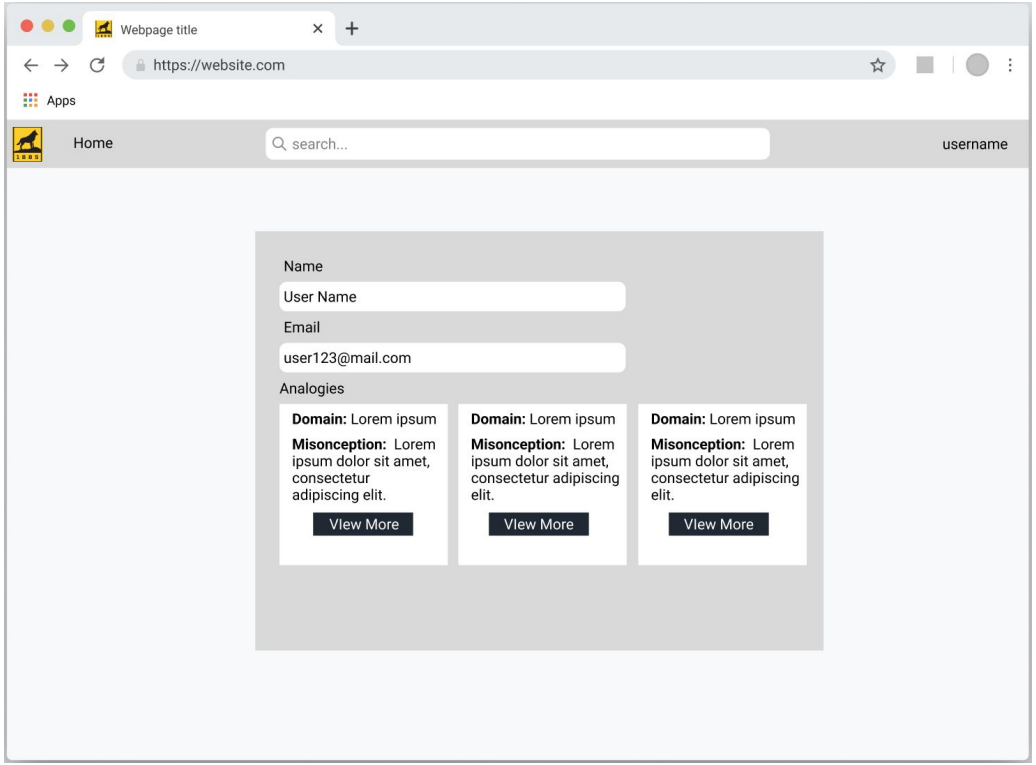




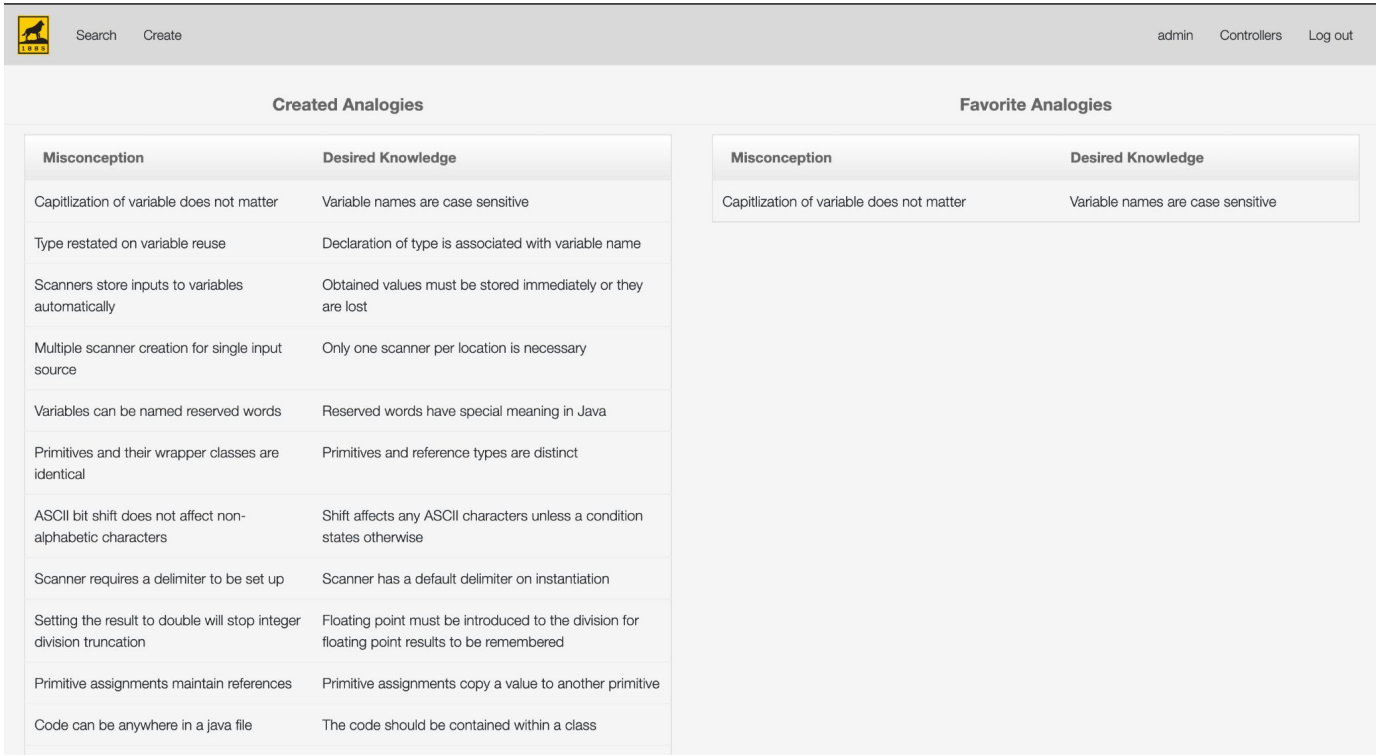
Registration and Login Page



Account Page (Prototype)



Account Page



Live Website Demo

Usability Concerns

Concerns

- Accessibility of analogies
- Comparing analogies in a comprehensible way
- Bugs/Error handling

TODOs

Completed

- Create analogies
- View & search analogies
- Compare analogies
- Login/registration
- Administrative roles
- Account page
- Likes and favorites

Plan to Complete

- Help page

Thanks For Watching!
Any Questions?