

# SCAR

SIENA COLLEGE ACCURATE  
REGISTRATION

1

PRELIMINARY

DESIGN

DECEMBER 7TH, 2012

# Welcome

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**Mr. Michael Papadopoulos**

Assistant Vice President of Student Affairs

Director of Public Safety

Siena College

# Agenda

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- **Introduction**
- Restatement of Problem
- Current Stage of Development
- User Case Narratives
- UML Diagrams
- Website Map
- Data Flow Diagrams
- Requirements Inventory
- Testing
- Data Design
- Development Environment & Production Environment
- Prototype Screens
- Upcoming Stages of Development

# Introduction

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**Vincent Hueber**  
Team leader

**Patrick Decker**  
Project Manager

**Hans Hansen**  
Web-Master

**David Scirto**  
System Administrator

**Donovan Jackson**  
Documentarian

# Agenda

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- **Restatement of Problem**
- Current Stage of Development
- User Case Narratives
- UML Diagrams
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# Restatement of Problem

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- Too much manual input
- No secure way to guarantee accurate input
- Does not support repeated guests
- Form is susceptible to forgery
- No easy way to search current guests

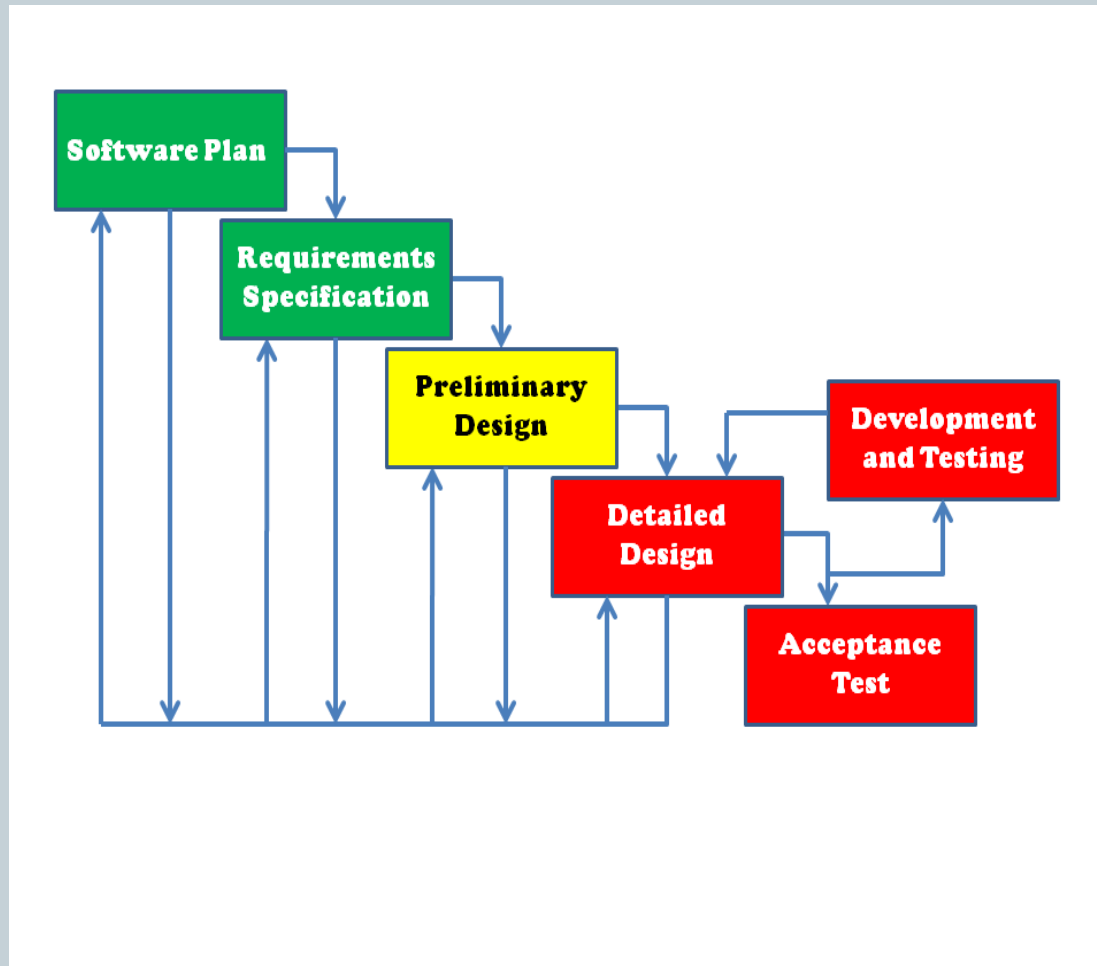
# Agenda

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- **Current Stage of Development**
- User Case Narratives
- UML Diagrams
- Website Map
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# Current Stage of Development

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# Agenda

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- **User Case Narratives**
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# User Case Narratives

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- A narrative about the abilities of each user
- Gives a detailed description of how each user can interact with the system

# Administrator User Case Narrative

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- Administrator
  - Log In/Log Out
    - ✦ Using User name and Password
  - Highest level of privileges
  - Ability to query database
  - Ability to place or remove bans on students and guests
  - Ability to shut down/ turn on guest registration
  - Ability to edit maximum number of guests
  - Ability to create new accounts

# Public Safety User Case Narratives

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- **Public Safety**
  - Log In/Log Out
    - ✦ Using Username and Password
  - Ability to query database
  - Receive notifications
  - Ability to swipe IDs

# Student User Case Narratives

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- Student
  - Log In
    - ✦ Using Username and Password
  - Ability to register guest
    - ✦ Web form or at Kiernan Hall
  - Ability to swipe SID
  - Receive confirmation email

# Guest User Case Narratives

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- Guest
  - Ability to swipe driver's license
  - Receive confirmation email
  - Fill out guest information
    - ✦ When registered at Kiernan Hall

# Overnight Host User Case Narratives

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- Overnight Host
  - Receive confirmation
  - Verify registration of guest

# Agenda

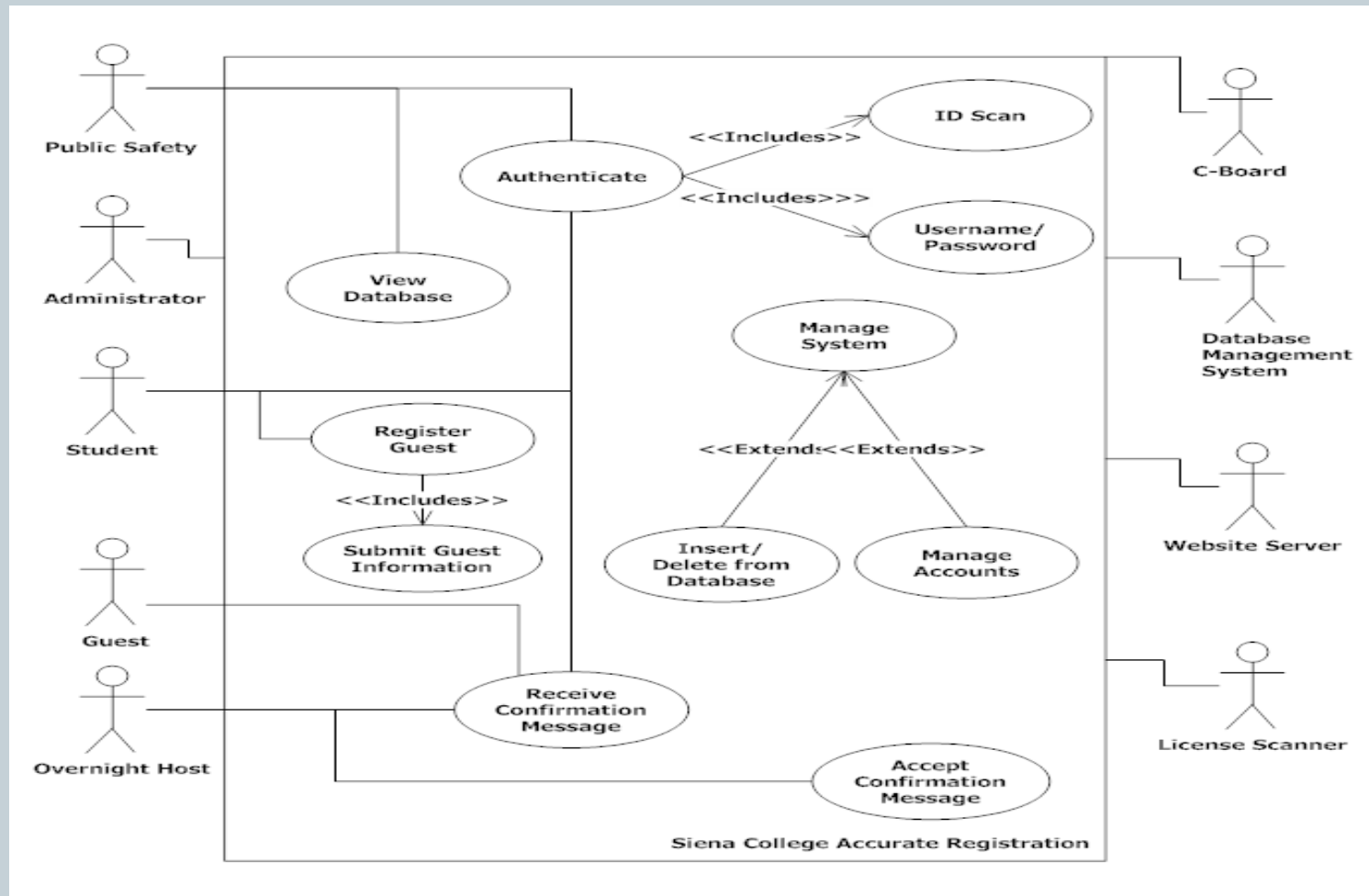
16

- **UML Diagrams**
- Website Map
- Data Flow Diagrams
- Requirements Inventory
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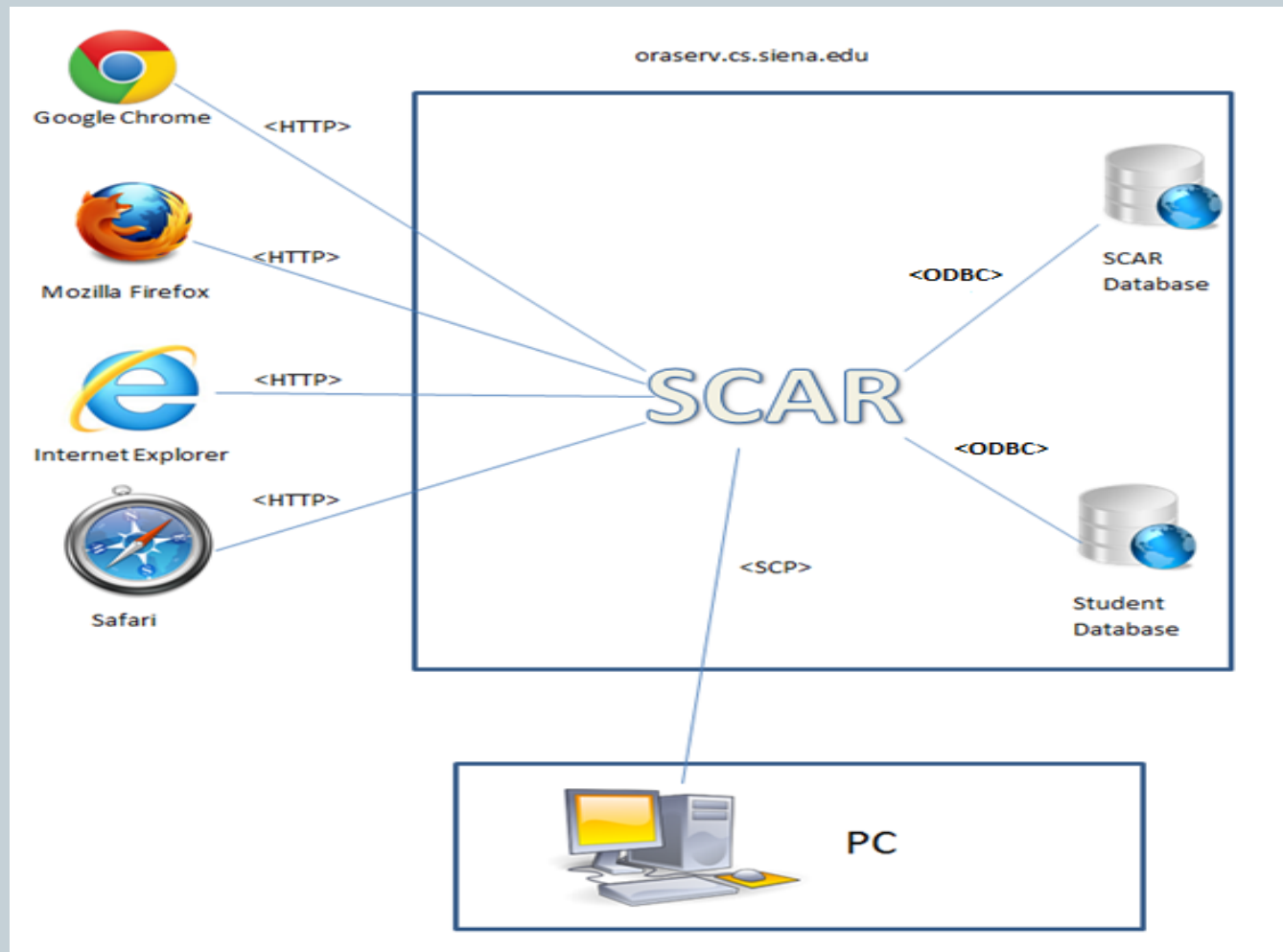
# Use Case Diagram

17

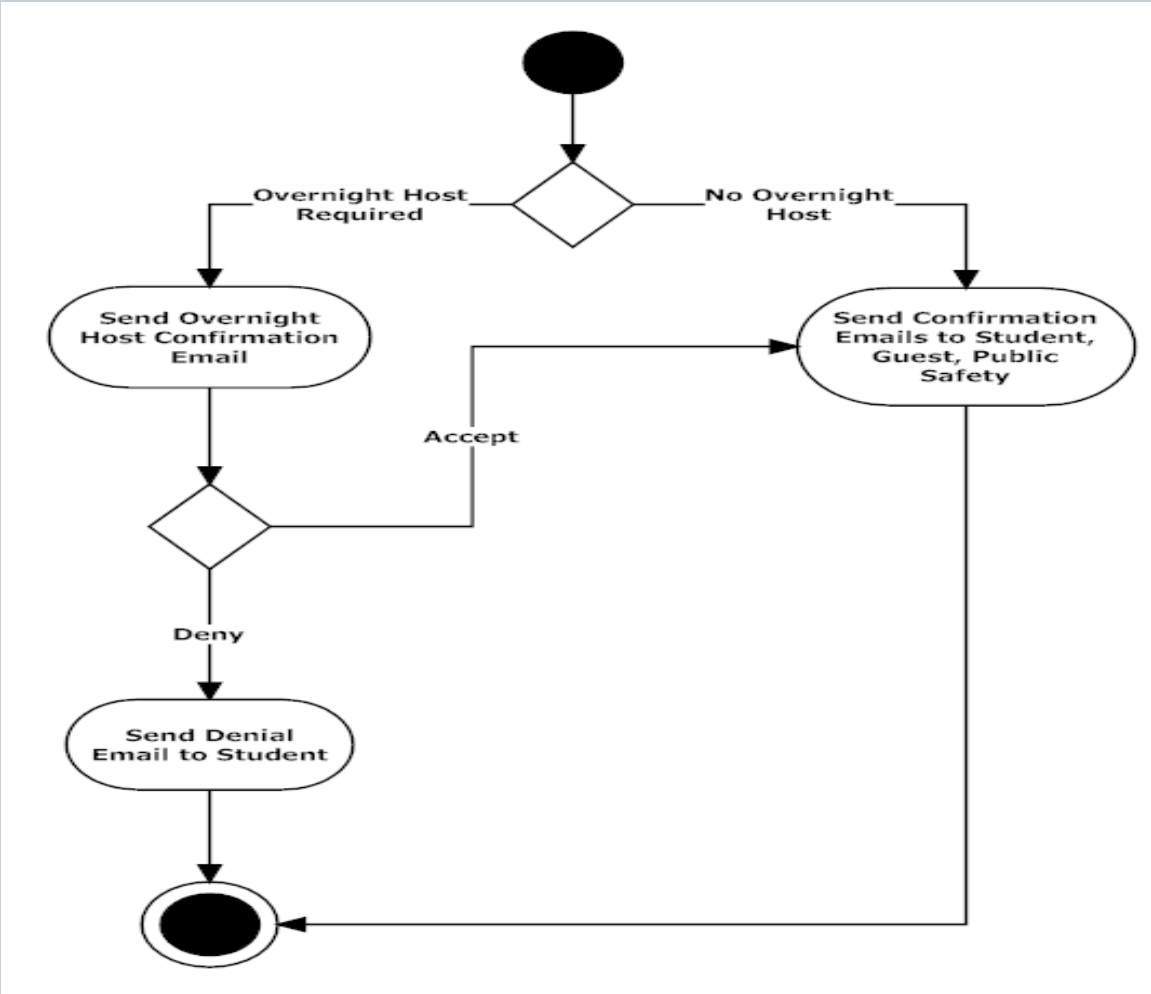


# Deployment Diagram

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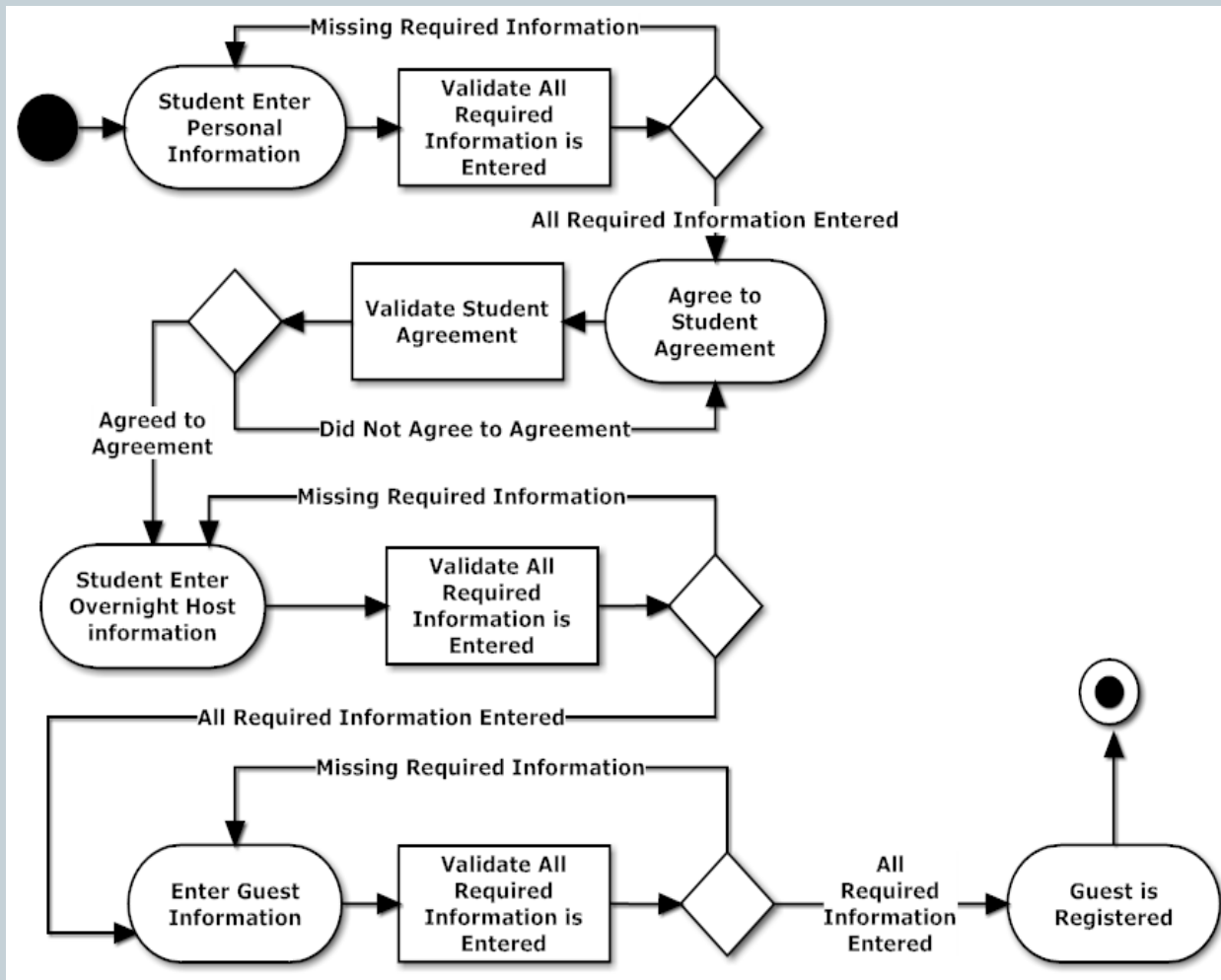


# Confirm Activity Diagram



# Register Activity Diagram

20



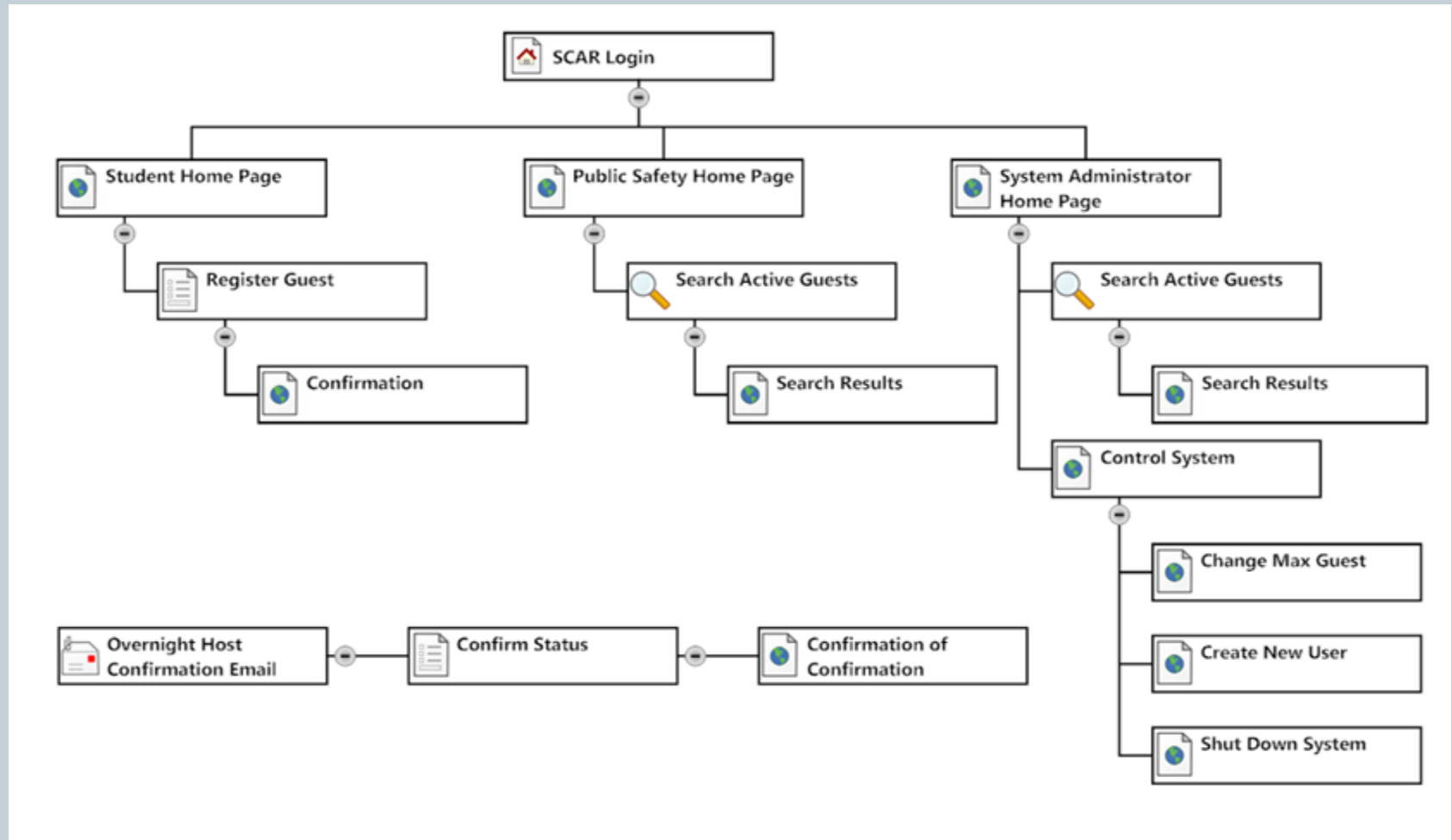
# Agenda

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- **Website Map**
- Data Flow Diagrams
- Requirements Inventory
- Testing
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# Website Map

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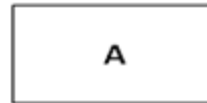
# Agenda

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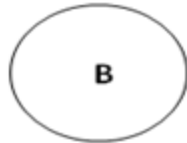
- **Data Flow Diagrams**
- Requirements Inventory
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# Data Flow Diagram Legend

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Entity



Process



Datastore



Data Flow

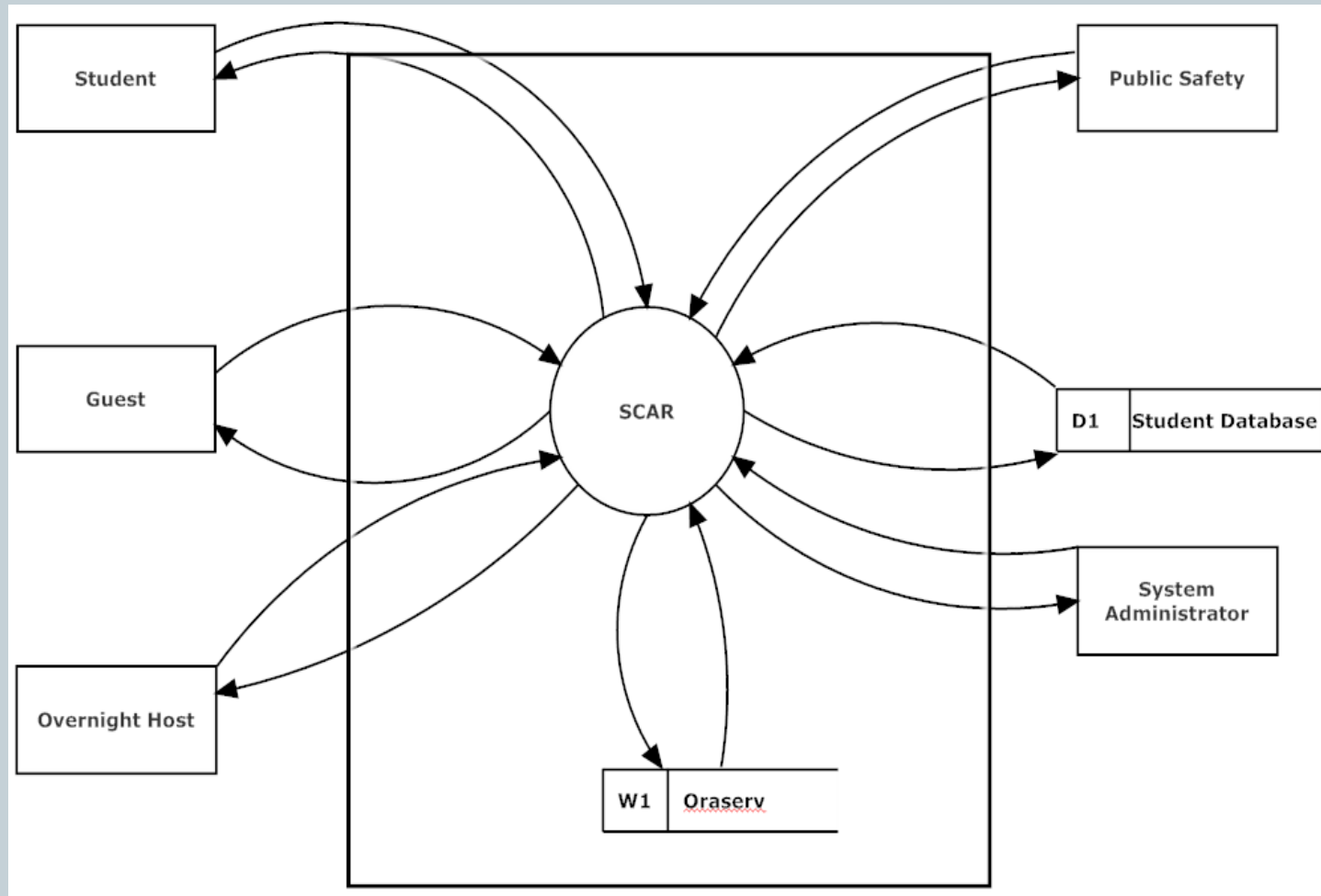


Boundary Line



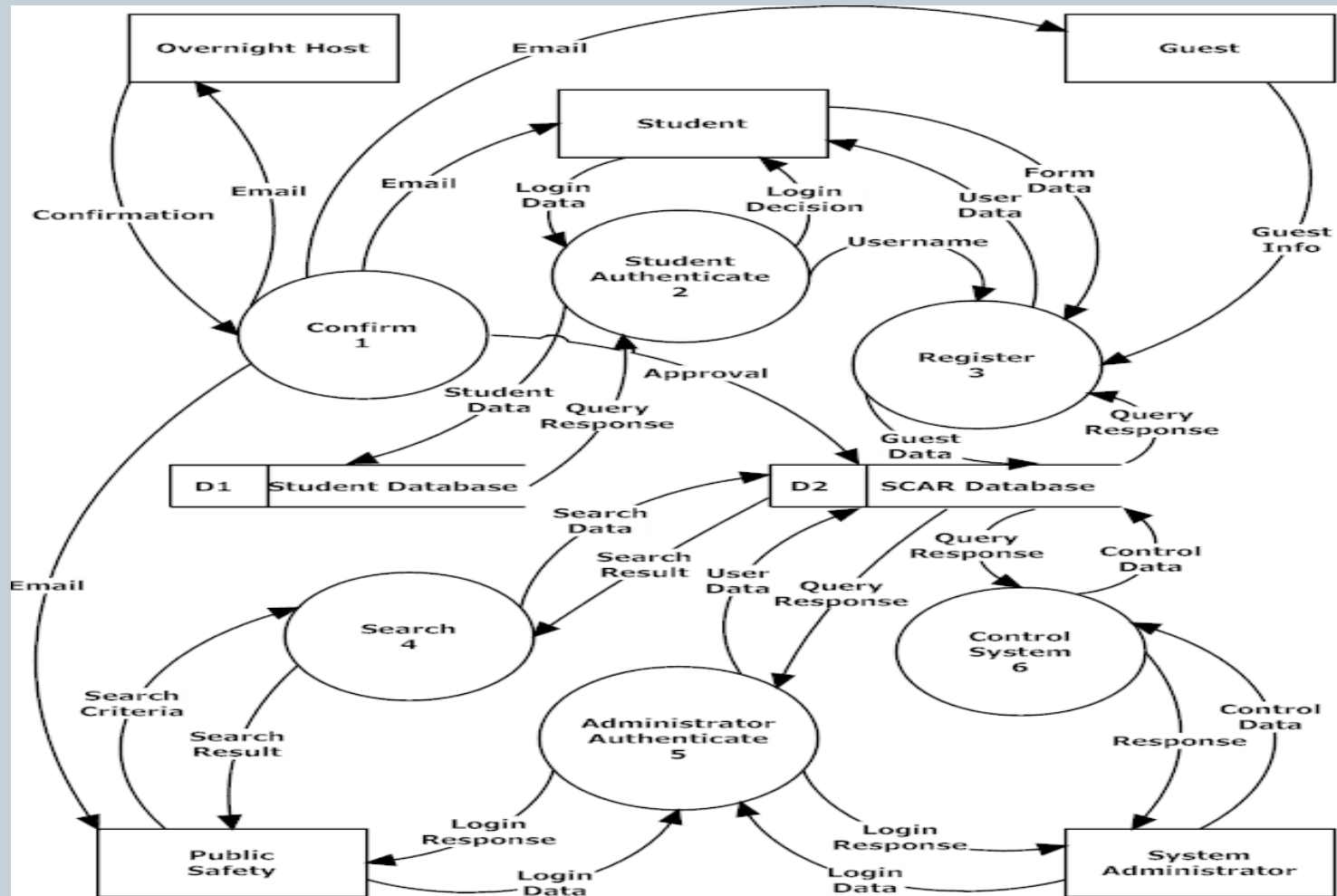
# Context Diagram

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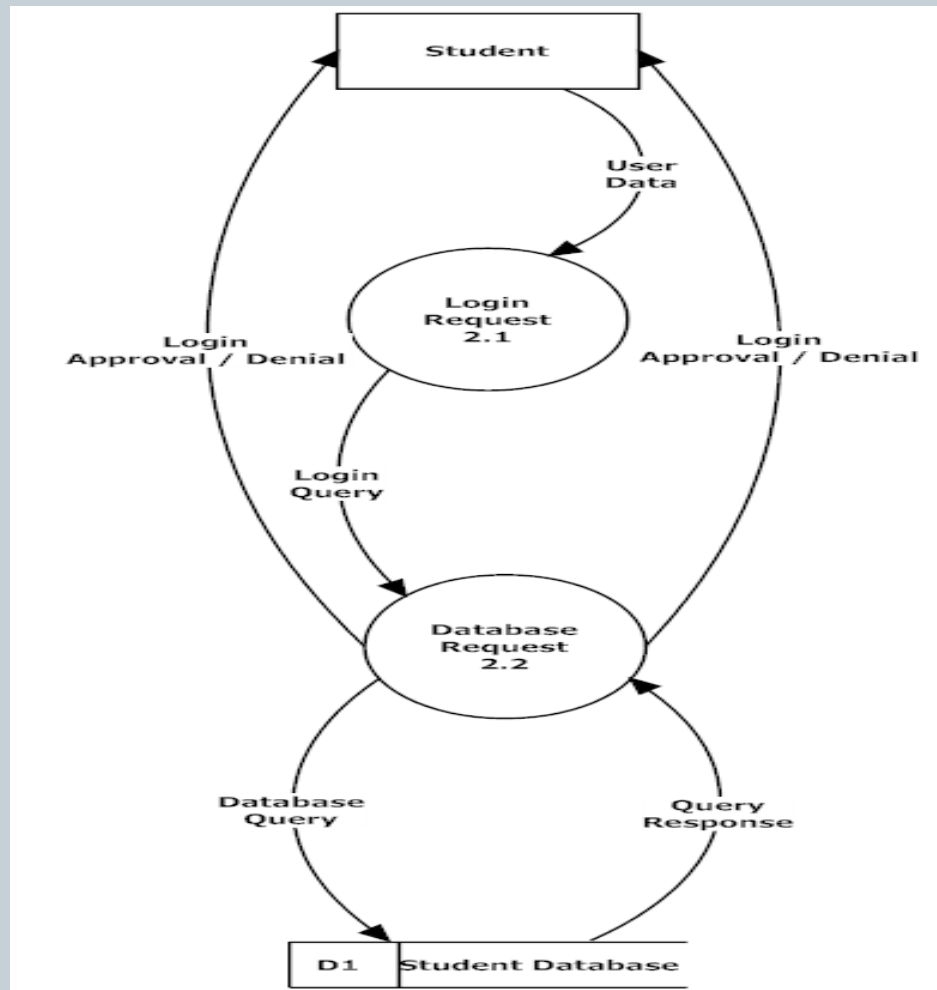
# Level 0: SCAR

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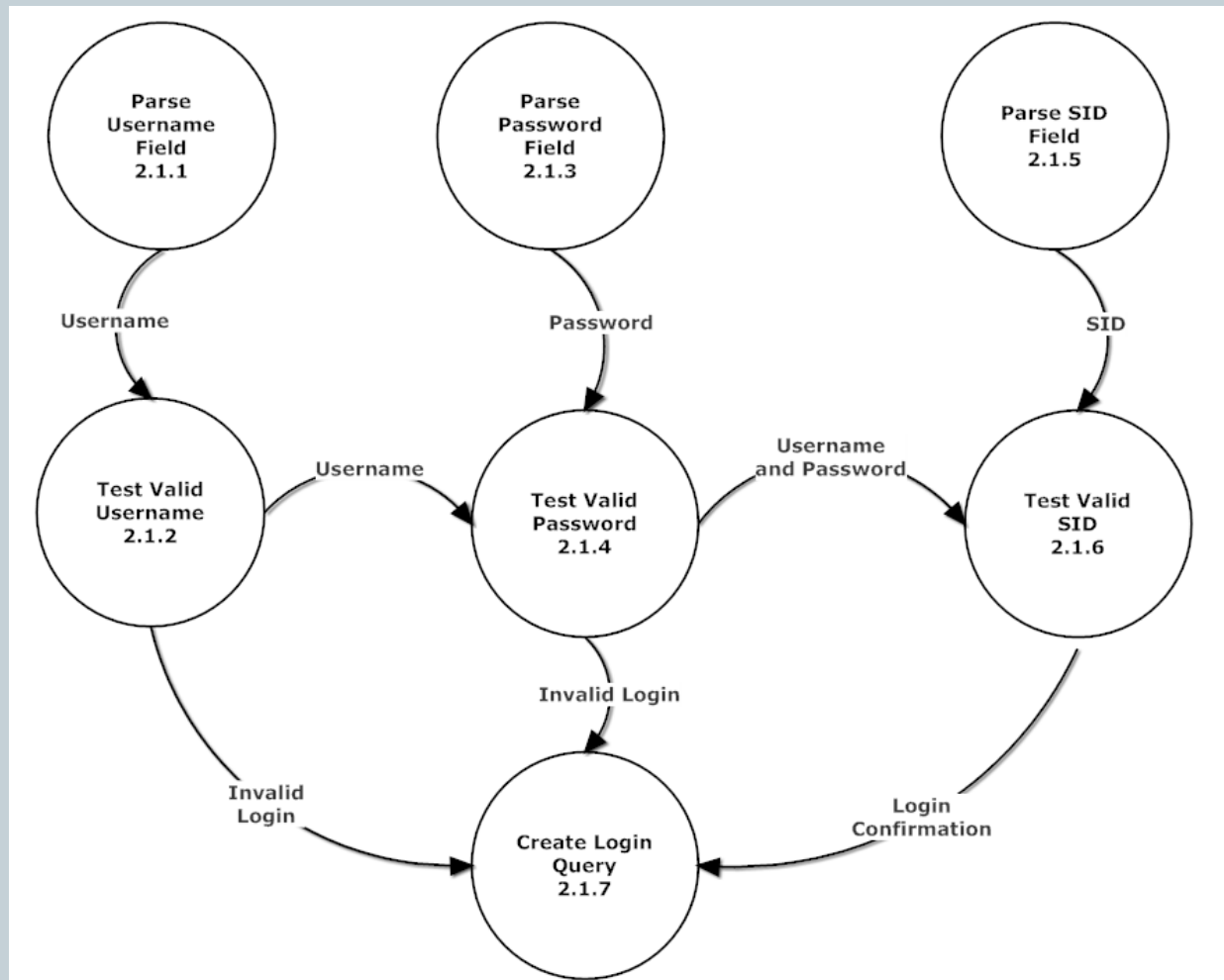
# Level 1: Student Authenticate

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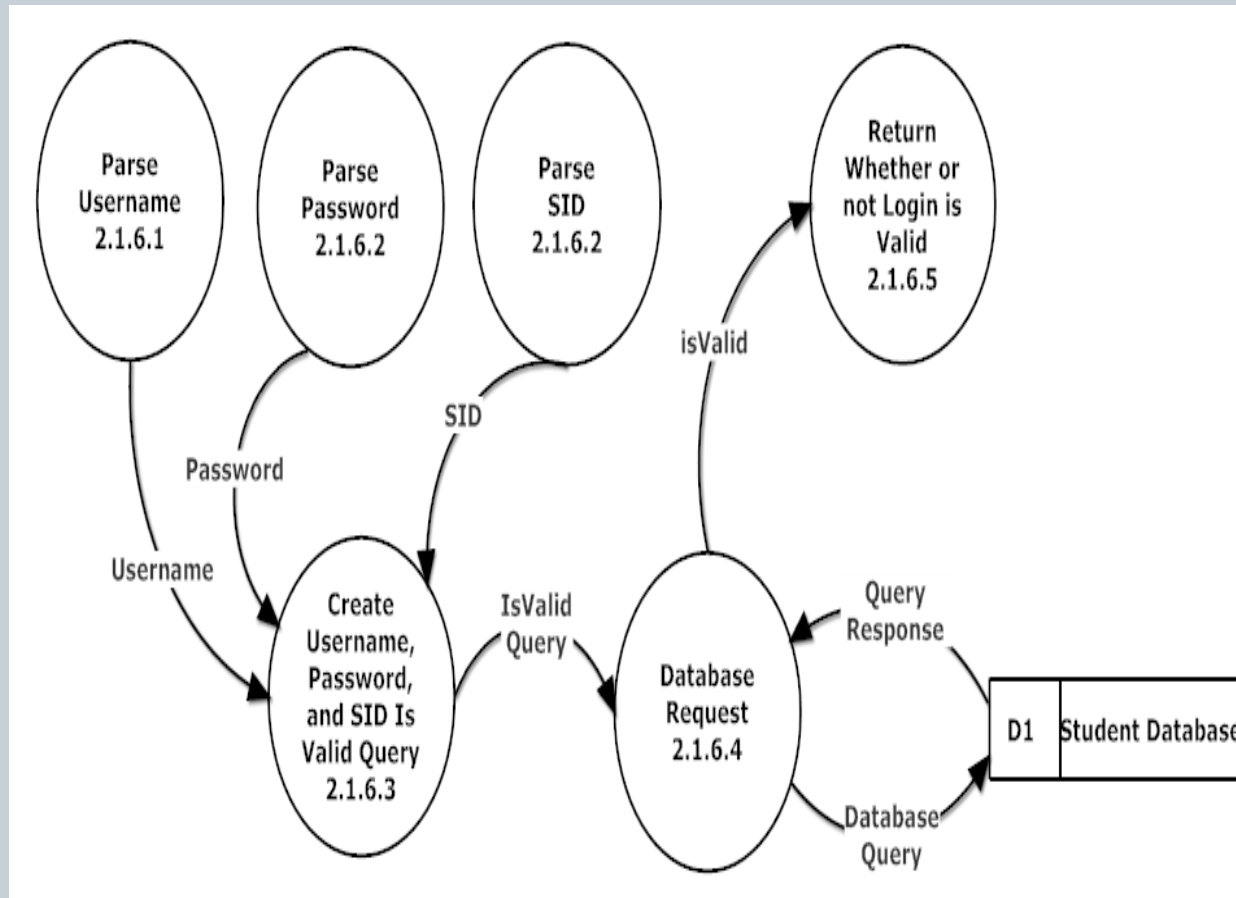
# Level 2: Login Request

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# Level 3: Login Request

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# Agenda

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- **Requirements Inventory**
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# Non-Functional Requirements

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- Efficient
- Student Friendly
- Intuitive to use for Public Safety
- Easily Maintained
- Aesthetically Pleasing

# Functional Requirements for SCAR

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- Useable on all major browsers
- Secure
- Data must be archived upon the end of each year
- Online form has requirements so that it must be completed
- Printouts must be readable
- Abides by Siena Life (Page 53 – 55 of the 2012-2013 issue)



# Public Safety Requirements

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- Login Required
- Has the ability to search database
- Receives registration confirmation email
- Ability to make notes on students

# System Administrator Requirements

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- Includes same privileges as public safety
- Login Required
- Ability to turn off/ turn on system
- Ability to create new user accounts
- Ability to change max number of guests
- Notified when guest quota is approaching

# Student Requirements

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- Login Required
- Ability to register guest
- Registration form will automatically populate student data upon login
- Previously registered guests will be stored
- Receives registration confirmation email
- Swipe of SID card will populate form

# Guest Requirements

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- Swipe of drivers license will populate form
- Receives a unique GRID number
- Guest printout will be readable
- Vehicle registration will be stored
- Receives registration confirmation email

# Overnight Host Requirements

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- **Receives registration confirmation email**
  - Confirmation email contains link to approve or deny registration

# Agenda

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- **Testing**
- Data Design
- Development Environment & Production Environment
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# Overview and Strategy

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- All requirements will be tested
- All processes will be tested through Unit Tests
- Testing on students and public safety
- Tested on all major web browsers

# Test Cases

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- Set of conditions to determine functionality
- Unit tests will determine if a process meets all functional requirements



# Student Authenticate Unit Test

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Pass/Fail Status	Test Number	Description	Action to perform test (input)	Steps to be Executed	State Before Test	Expected result
N/A	1.100	Null Username Field	Leave username field blank.	Press submit.	Empty Form.	Displays message "Please enter a valid Username"
N/A	1.200	Null Password Field	Leave password field blank.	Fill in username field. Press submit.	Empty Form.	Displays message "Please enter a valid Password"
N/A	1.300	901 Field Activates	N/A	Fill in username field with valid username. Fill in password field with valid password.	Empty Form.	Activates 901 Field
N/A	1.400	Null SID Field	Leave SID field blank	Fill in username field with valid username. Fill in password field with valid password. Press Submit	Empty Form.	Displays messages "Please enter a valid SID"
N/A	1.500	Reached Max Attempts	Attempt to log in illegally 3 times	Fill out form 3 times (illegally). Press submit	Empty Form.	Displays message "Max Login Attempts Reached"
N/A	1.600	Successful Student Login	Input correct user login information	Input valid username. Input valid password. Press Submit	Empty Form.	Move to Guest Registration Page
N/A	1.700	Incorrect Password	Input valid username, incorrect password	Input valid username. Input incorrect password. Press submit.	Empty Form.	Displays message "Incorrect password"

# Acceptance Test

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- Unit tests will determine acceptance of each process
- Students and public safety will help to test non-functional requirements
- Acceptance criteria is met once all requirements are met

# Agenda

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- **Data Design**
- Development Environment & Production Environment
- Prototype Screens
- Upcoming Stages of Development

# Data Dictionary

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Data Name	Applicable to	Data Type	Data Size	Description	Acceptable Input	Good Examples of Input	Bad Examples of Input	Notes
userName	Authenticate	Varchar	5-15 Chars	Username	A-Z, a-z, 0-9	jh22smit, andraros, 091234	jr\$, 345-uty, 43!!0	The database is queried to find each user
userPass	Authenticate	Varchar	8-15 Chars	Password	ASCII 48-90	Pjs901578954, vch, 87239	js 75, \$03@!)	
passwordReset	Configuration	Varchar	8-15 Chars	Password	ASCII 48-90	Pjs901578954, vch, 87239	js 75, \$03@!)	Administrative User can access this
loginMess	Authenticate	Varchar	Up to 100 Chars	Message concerning authentication	0-9, ;	Incorrect username or password!		Triggered by failed authentication
searchCriteria	Search	Varchar	1-255 Chars	SQL query	ASCII 32-126	Select * from Students		This is the field that will hold the Public Safety Search criteria
systemON	Control System	Varchar	2-3 Chars	Administrator can Control if Registration is on or off	On, Off	On, Off	Null	
numGuests	Control System	Varchar	1 -4 Chars	Number of guests registered	0-9	2300, 1800	45000, -72	
notes	Control System	text	0-2,147,483,647 Chars	Used to make notes on a student	ASCII 32-126	Student was suspended for probation.		Public Safety and administrator can make notes on students mostly for suspension.
percentGuests	Control System	Varchar	1 -4 Chars	Percent of numGuests currently reigsterd	0-9, %	50%, 75%	130%, -30%	This field will be used to notify Adminstartor the percentage of max number of guests registered.

# Agenda

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- **Development Environment & Production Environment**
- Prototype Screens
- Upcoming Stages of Development

# Development Environment

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- Software Engineering Lab's Windows Computer & Macintosh Computer
- Software
  - Adobe Dreamweaver & Fireworks
  - All major web browsers
  - Notepad++
  - Apache HTTP server
- Server: [oraserv.cs.siena.edu](http://oraserv.cs.siena.edu)

# Production Environment

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- Will be designed for use on `oraserv.cs.siena.edu`
- Easily transferred to any server desired by the client

# Agenda

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- **Prototype Screens**
- Upcoming Stages of Development



# Student Login

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A Web Page

http://oraserv.cs.siena.edu

## Siena College Guest Registration

Username:

Password:

901-XX-XXXX

[Forgot Password?](#)

# (After Login) Off Campus Student

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A Web Page

http://oraserv.cs.siena.edu

## Siena College Guest Registration

First Name: John  
Last Name: Doe  
Address: 1 Main St.  
Loudonville, NY 12211  
Cell Phone: (555) 555 - 5555  
Email Address: ab12cdef@siena.edu  
Host SID: 901234567

# Off Campus Student Edit

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A Web Page

http://oraserv.cs.siena.edu

## Siena College Guest Registration

First Name:

Last Name:

Address:

Address:

City:

State:

Zip Code:

Cell Phone:

Email Address:

Host SID:

# (After Login) On Campus Student

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A Web Page

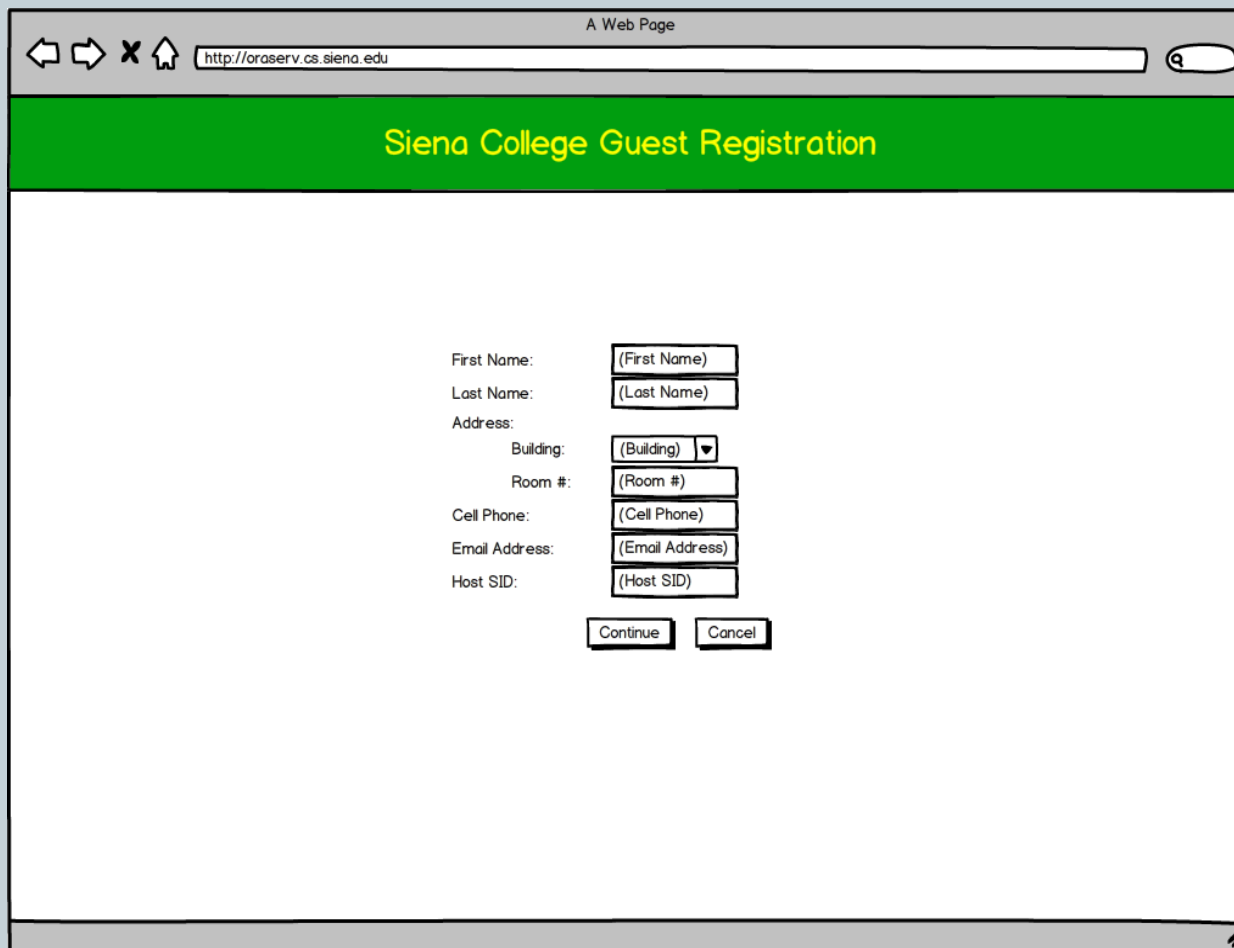
http://oraserv.cs.siena.edu

## Siena College Guest Registration

First Name: John  
Last Name: Doe  
Address  
Building: Plassman  
Room #: 100  
Cell Phone: (555) 555 - 5555  
Email Address: ab12cdef@siena.edu  
Host SID: 901234567

# On Campus Student Edit

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A Web Page

http://oraserv.cs.siena.edu

## Siena College Guest Registration

First Name:

Last Name:

Address:

Building:

Room #:

Cell Phone:

Email Address:

Host SID:

# Register Guest

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A Web Page

http://oraserv.cs.siena.edu

## Siena College Guest Registration

Returning Guest (Returning Guest) ▾

New Guest

First Name: (First Name)

Last Name: (Last Name)

Home Address: (Home Address)

City: (City)

State: (State)

Zip Code: (Zip)

Email Address: (Email Address)

Phone: (Phone)

Gender: (Gender) ▾

Guest DOB: (Guest DOB)

Continue Back

# Guest Search

A Web Page

http://oraserv.cs.siena.edu

## Siena College Guest Registration

### Guest Search

First Name: (First Name)      Email Address: (Email Address)  
Last Name: (Last Name)      Phone: (Phone)  
Home Address: (Home Address)      Guest DOB: (Guest DOB)  
City: (City)  
State: (State)

(Input Data)      Quick Search

Search      Clear

### Guests

First Name	Last Name	Home Address	City	State	Zip	Email Address	Phone	Gender	Guest DOB

# Agenda

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- **Upcoming Stages of Development**



# Next Steps

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- Detailed Design
  - 2013
- Acceptance test
  - 2013

# Any Questions?

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**Vincent Hueber**  
Team leader

**Patrick Decker**  
Project Manager

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