

# Subconscious Analysis Software

## Preliminary Design

enigma elucidation  
December 9<sup>th</sup>, 2011

# Welcome

Client:

Dr. Eric Breimer

Associate Professor of Computer Science

Siena College

& other guests



# Agenda

- Introduction
- Problem Overview
- Project Progression
- Requirements Inventory
- User Case Narratives
- UML Use Case Diagram
- Deployment Diagram
- Website Map
- UML Activity Diagrams
- Data Flow Diagrams
- Data Dictionary
- Testing
- Prototype Screens
- What's Next



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# Introduction

Lindsay Kulzer - Team Leader

Christopher Black - Database Administrator

Megan DeRudder - Lead Web Developer

Nathan Levine - Lead Project Engineer

Amanda Kurz - Documentarian

Daniel West - System Administrator



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# Problem Overview

## Implicit Association Tests (IATs)



The screenshot shows the interface of Subconscious Analysis Software. At the top, there is a logo and the text "Subconscious Analysis Software" and "Take an IAT". Below this, the title "IAT Test- Women and Technology" is displayed. The main area is divided into two columns: "Women and Technology" on the left and "Men and Non-Technology" on the right. In the center, there is an image of an iPhone. Below the image, the instruction "Sort the stimuli objects." is visible. At the bottom of the interface, the text "enigma elucidation Subconscious Analysis Software: Prototypes" is shown.

**Subconscious Analysis Software**  
Take an IAT

**IAT Test- Women and Technology**

**Women and Technology**

**Men and Non-Technology**

Sort the stimuli objects.

enigma elucidation Subconscious Analysis Software: Prototypes



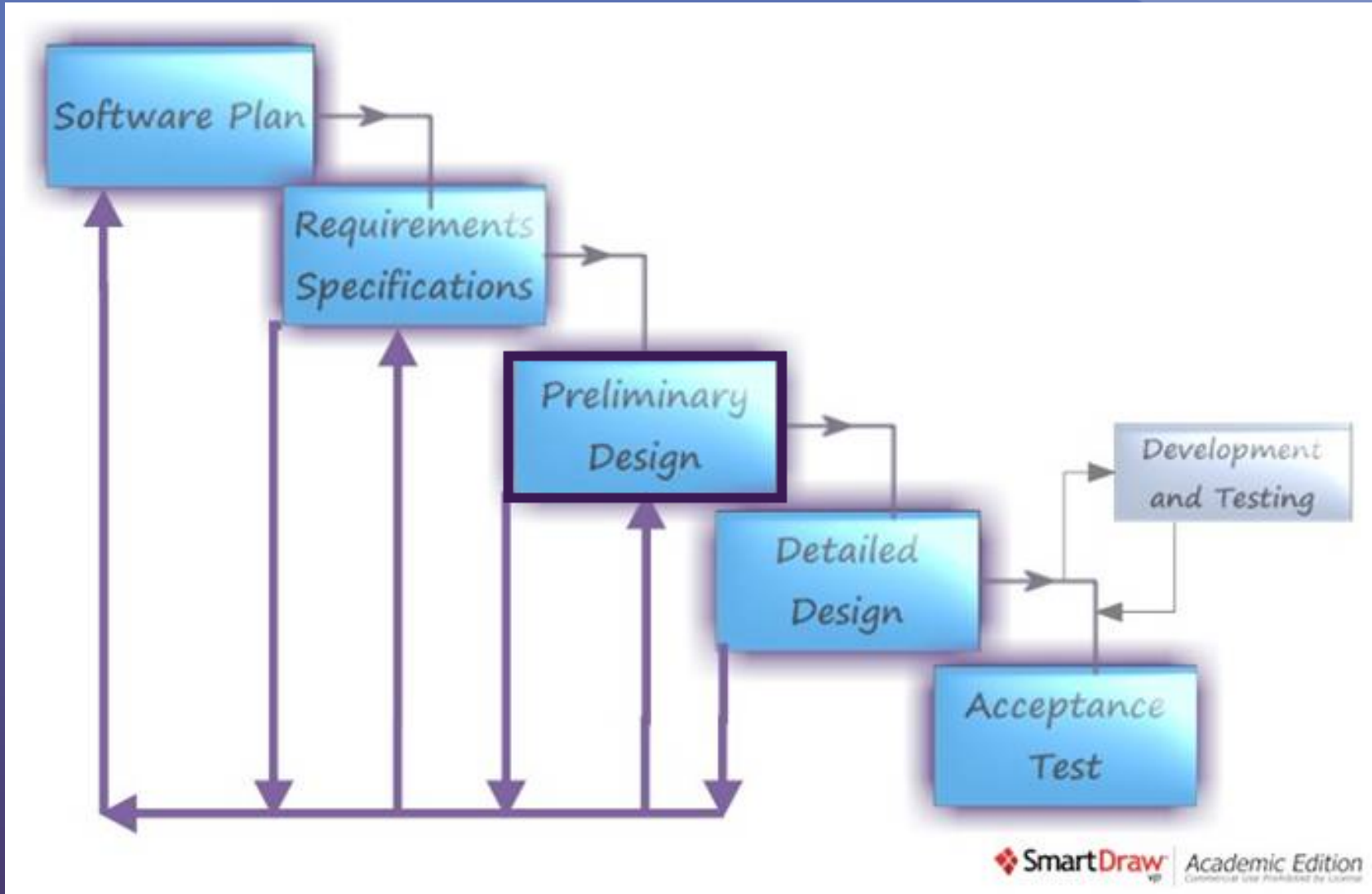
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# Waterfall Model



SmartDraw Academic Edition  
Commercial use prohibited by license



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# Requirements Inventory

- Will run on all major browsers
- Administrator Privileges
  - Secure Login
  - Create and view IATs
  - View Results from deployed IATs
  - Export IATs
  - Log out
- Participant Privileges
  - Take IAT
  - View calculated bias (if allowed by administrator)



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# User Case Narratives

- Tells a story about each user
- What does the story include?
  - Brief description of the user
  - What options SAS gives the user
  - Steps user takes to accomplish goals
  - Interaction between user and SAS
- Two users: Administrator & Participant



# Administrator

- Our Client Dr. Eric Breimer
  - Log in via username and password
  - Create an IAT (survey and test)
  - View existing IAT data
  - Log out



# Participant

- Anyone who chooses to take an IAT via visiting URL
  - First takes demographic survey
  - Takes test
  - Is thanked for participating



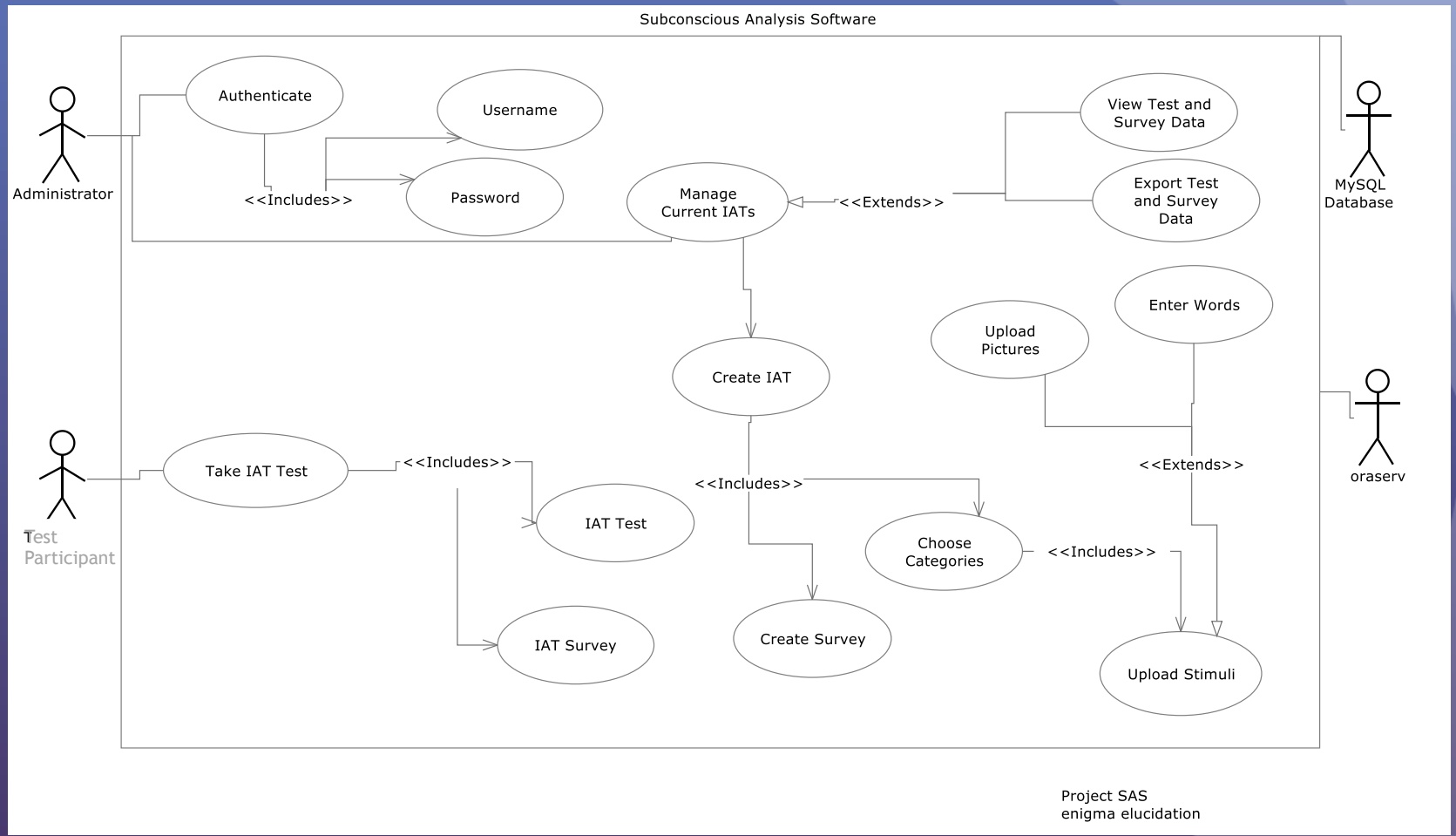
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# Use Case Diagram

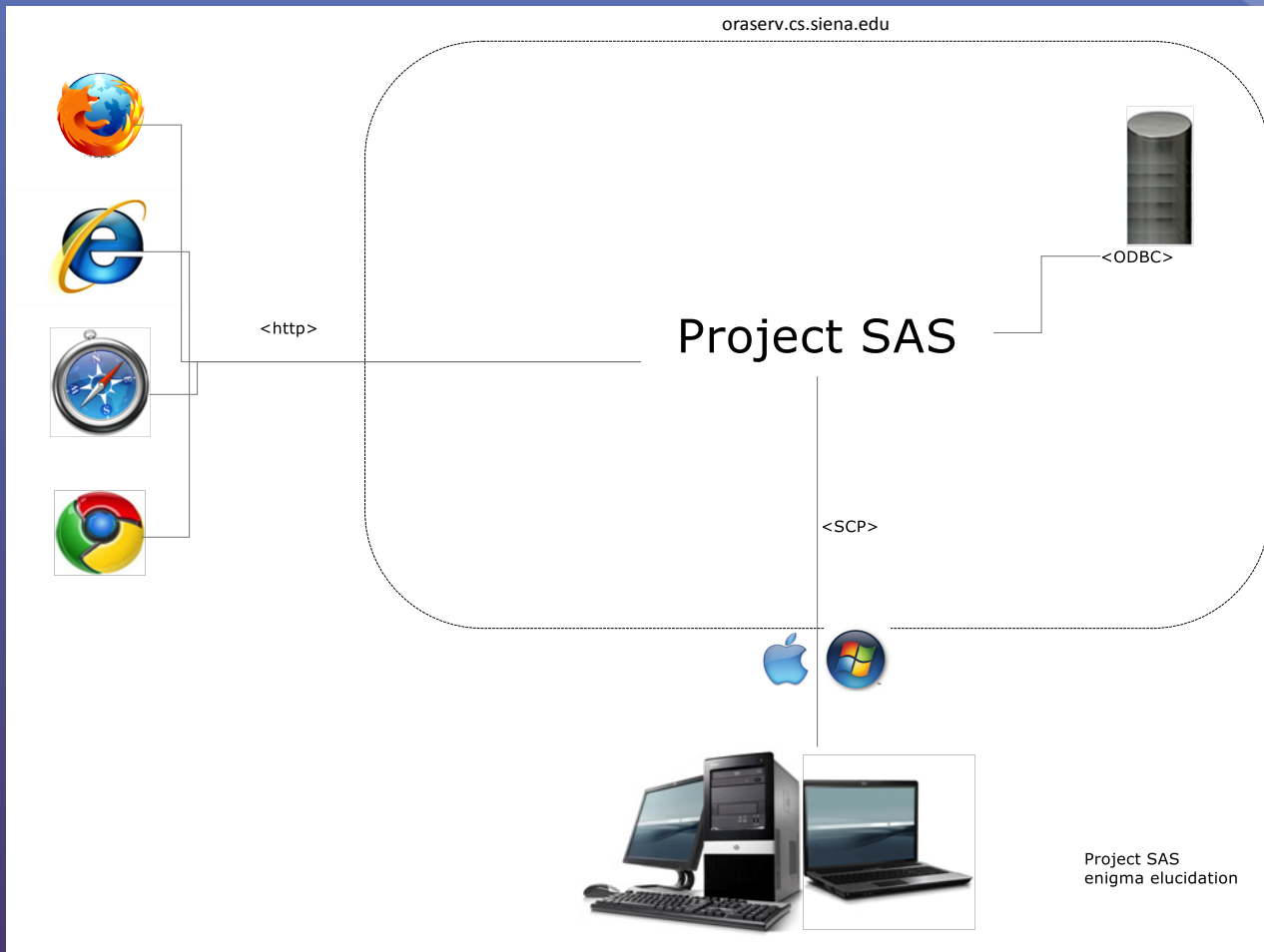


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# Deployment Diagram



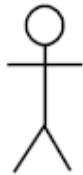
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# Website Map

## Website Map Legend



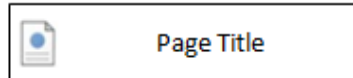
Actor/User



Link \*

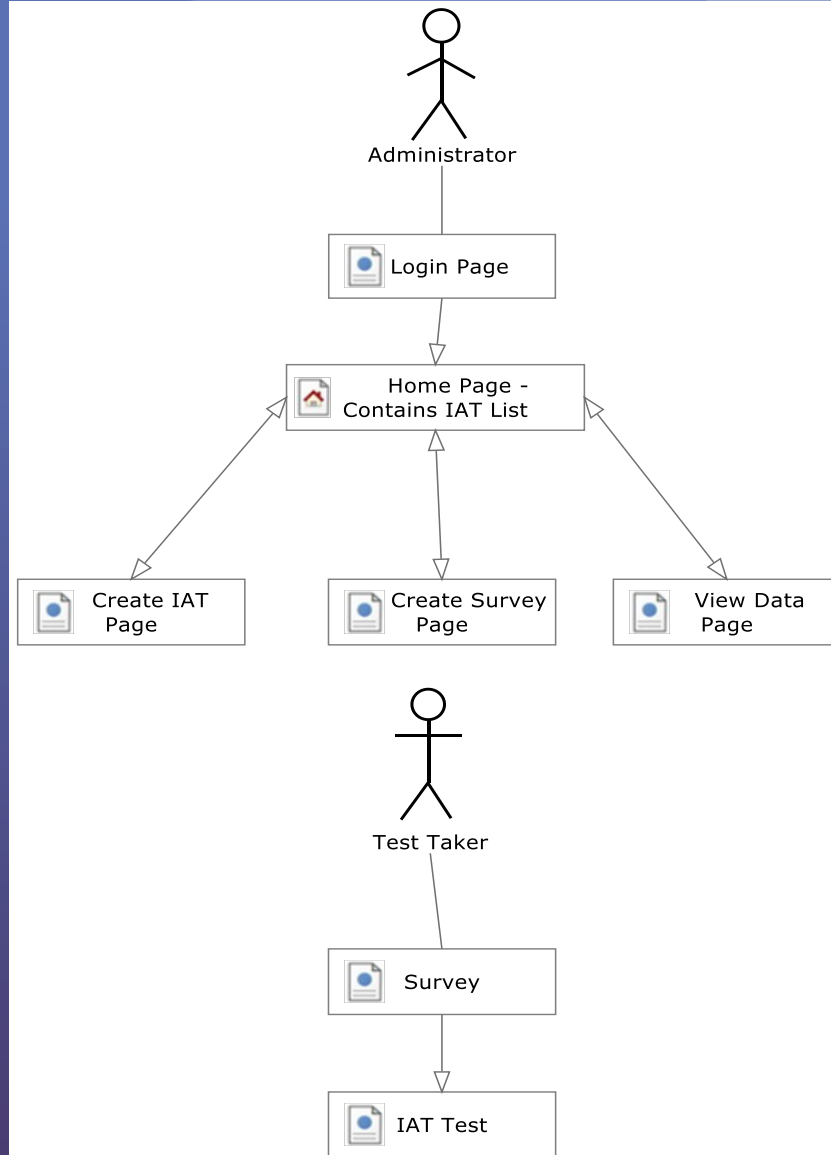


Home Page



HTMLFile

\*Double Arrows signify linked pages as being doubly linked.



Project SAS  
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# UML Activity Diagram



**Start/End** - Represents the start and end point of the process.



**Activity** - Describes the action being taken.



**Decision** - Describes a decision that causes the process to branch.



**Arrow** - Shows the direction of procedure from one activity to another.

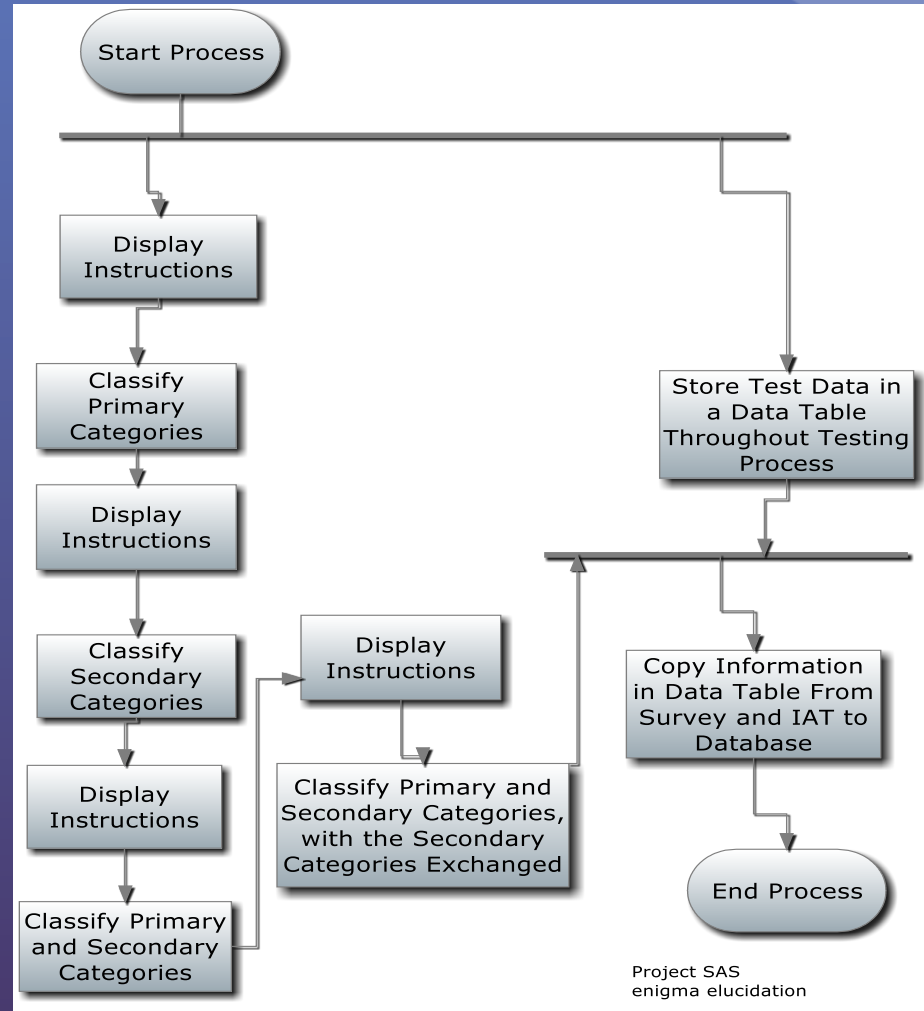


**Splitter** - Arrows directed away from the bolded line indicate that the processes they point to are performed simultaneously. Arrows that point towards the bolded line indicate that the procedures they point from must execute before the next step can occur.





# Take IAT Activity Diagram



# Agenda

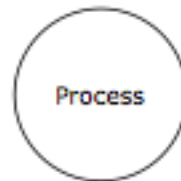
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# Legend



Entity/Source/Sink- People, machines, organizations, etc, which contribute data or information to the system.



Process - Actions that are performed by the system.

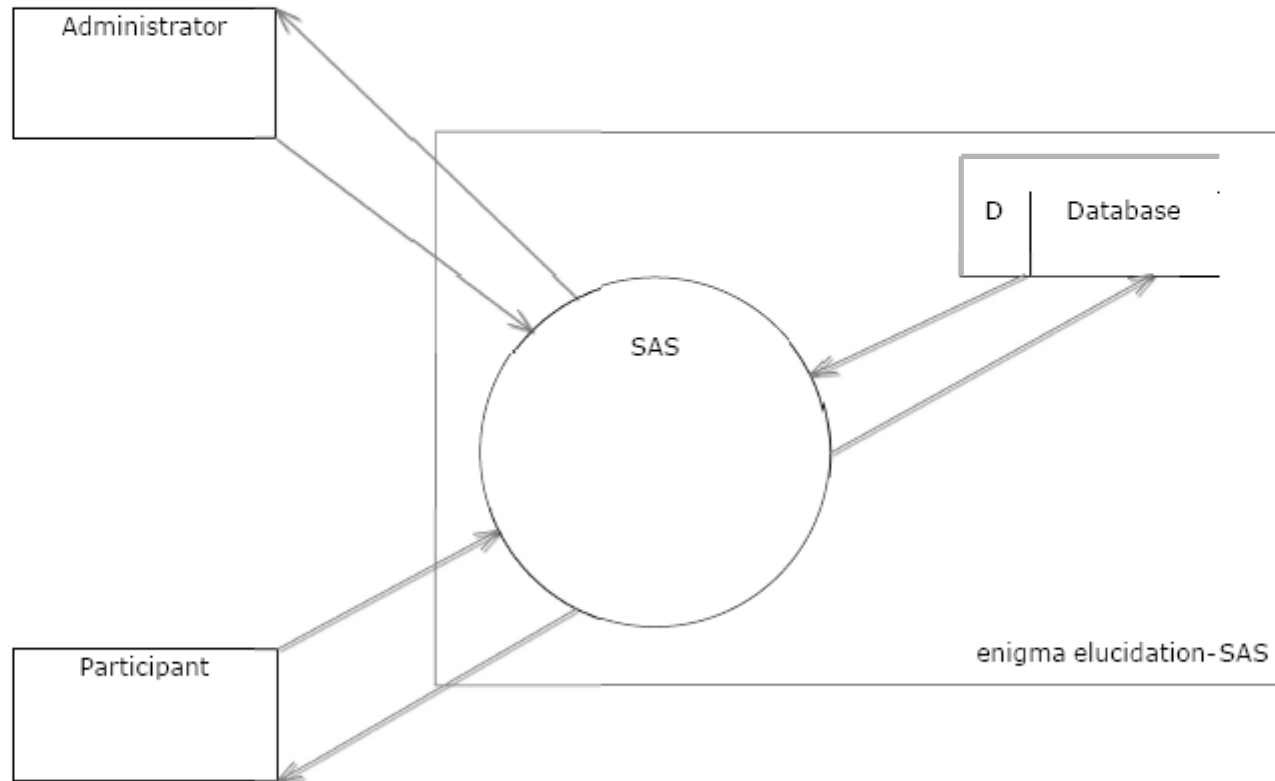


Datastore- Represents where data is stored on the system.

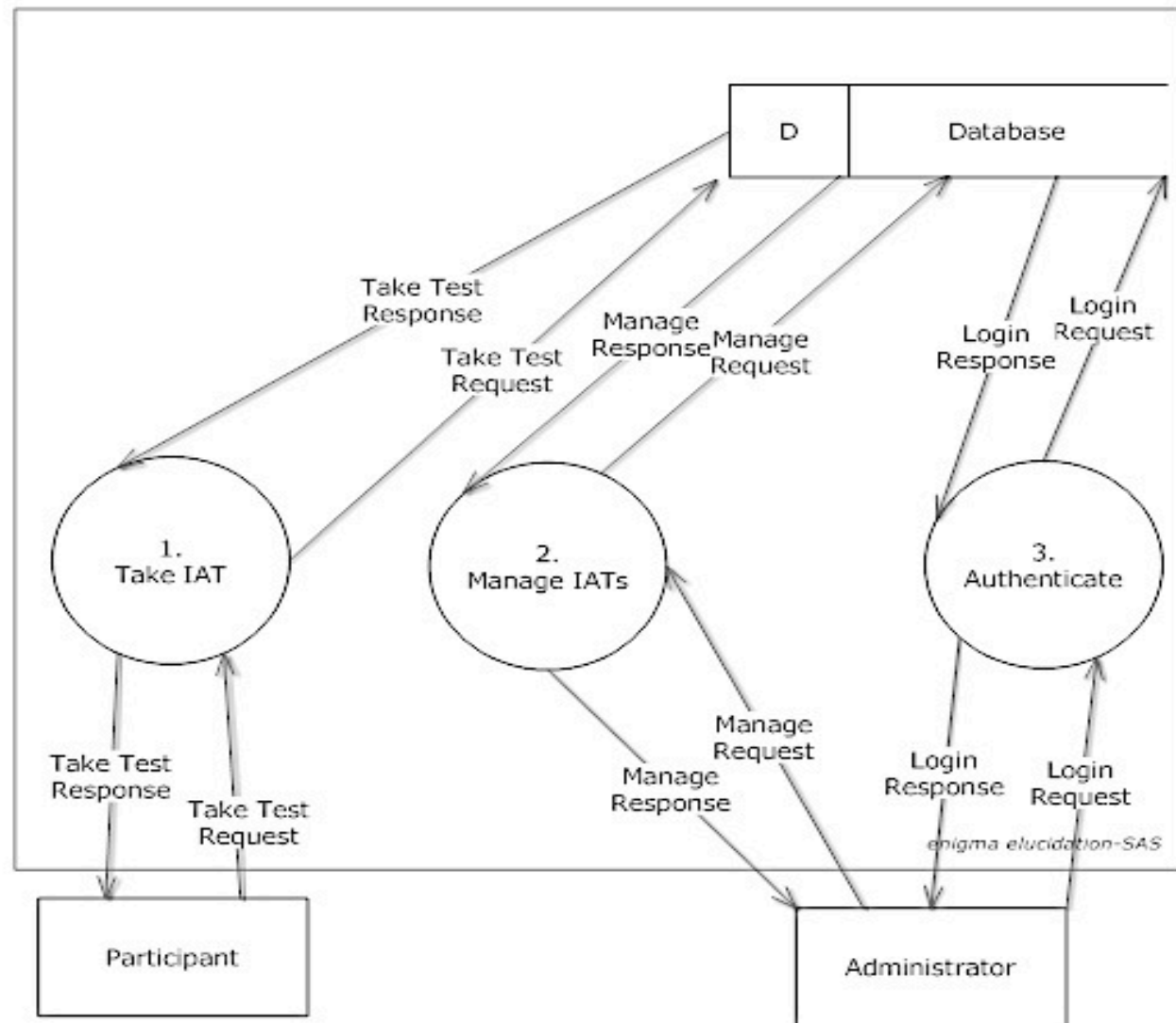


Dataflow - Represents the flow of data throughout the system

This context diagram depicts a broad representation of the interaction between SAS exogenous and endogenous agents

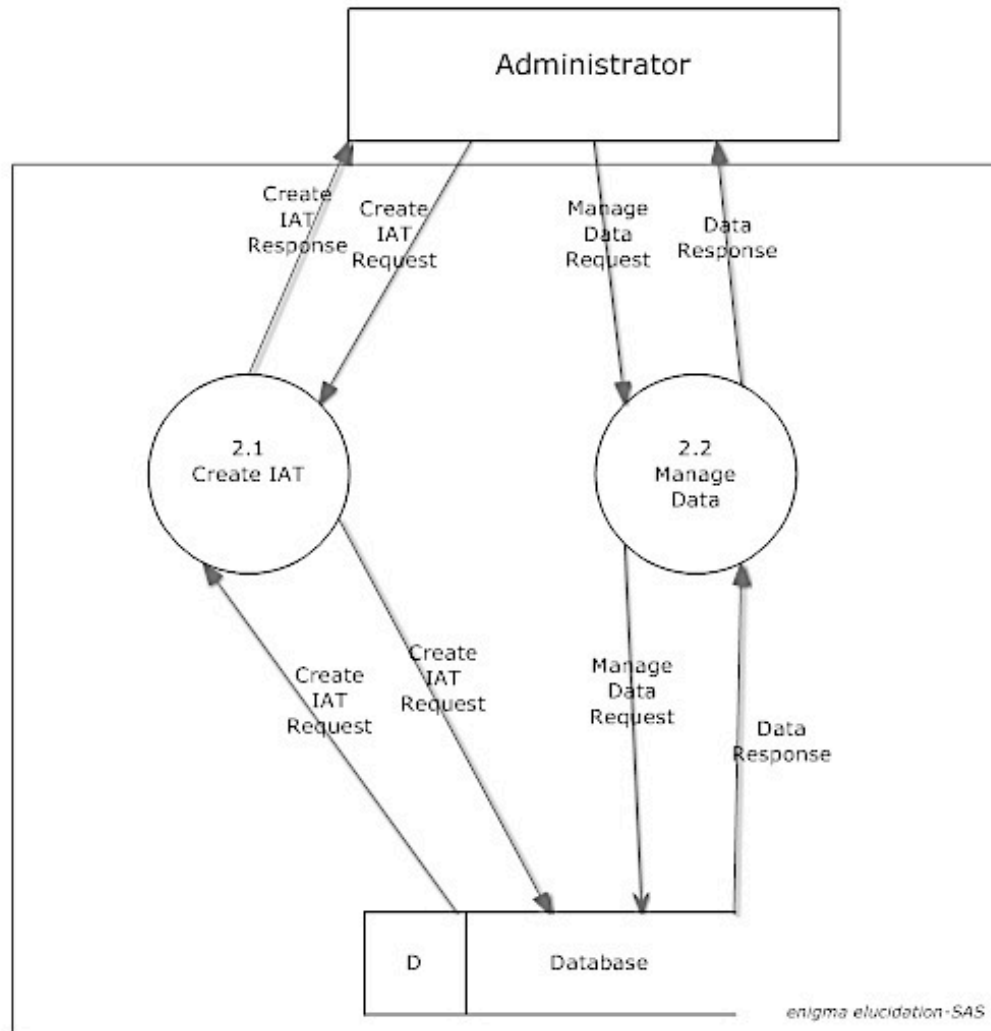


This Level 0 diagram shows the most basic processes of the system SAS. It also shows the interaction between the two users, processes, and the Database.



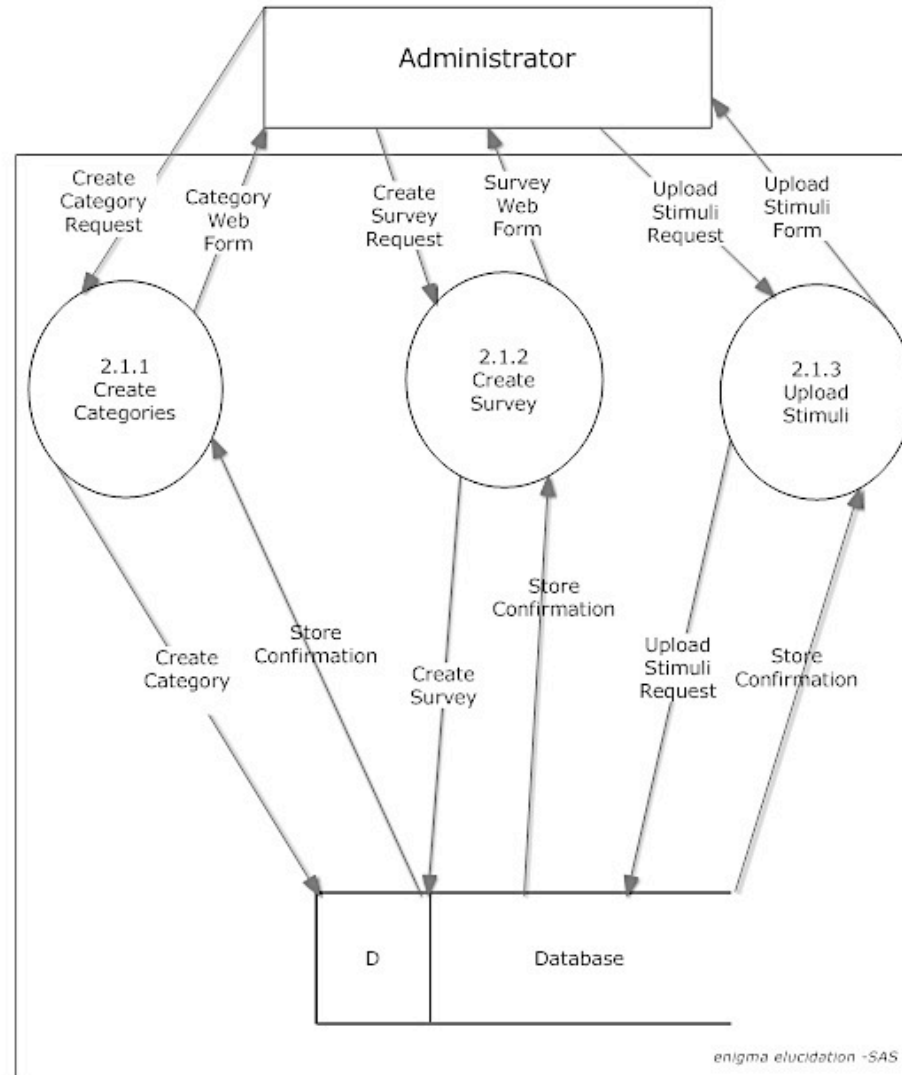
This level 1 diagram expands on the previous process Manage IAT. This diagram shows the interaction between the administrator, sub-processes of Manage IAT, and the Database.

### 2.x ManageIAT



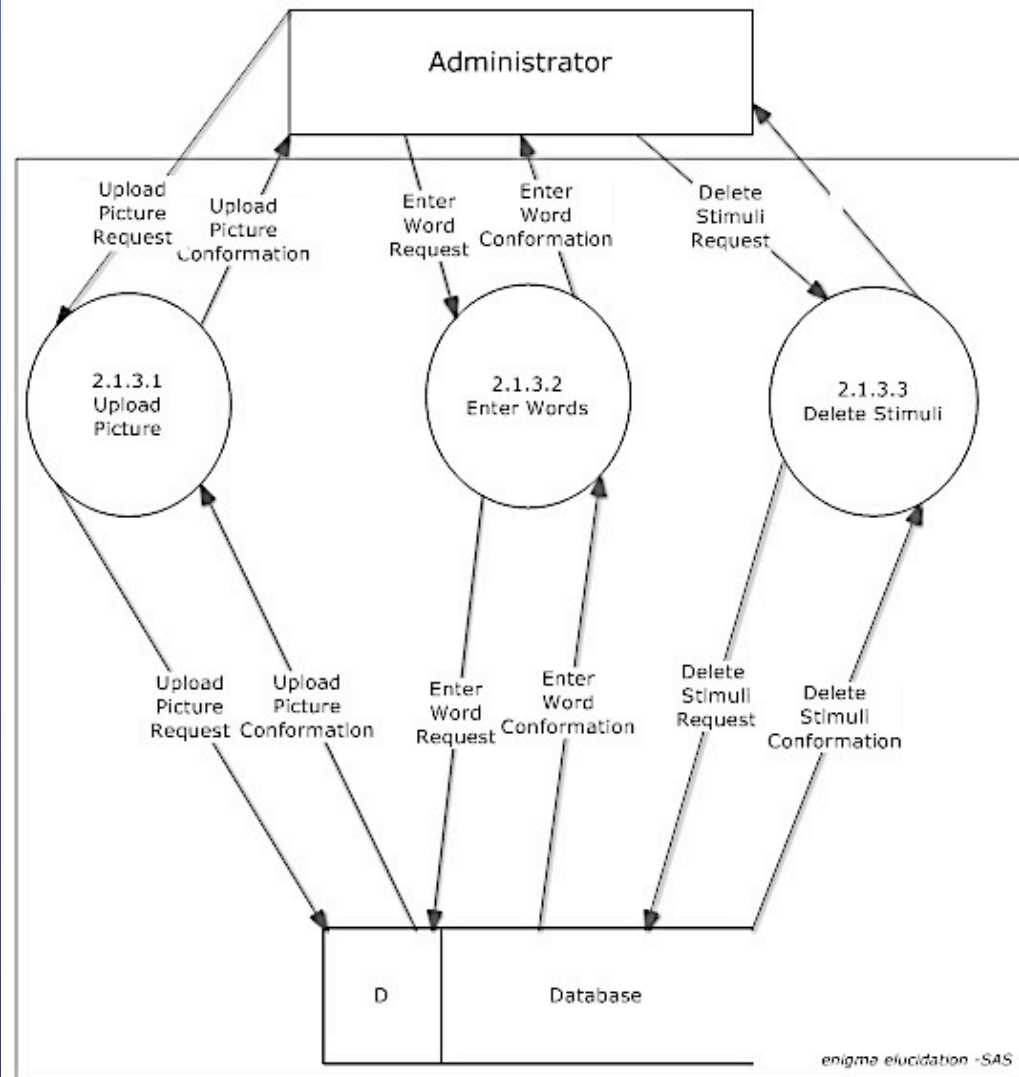
This level 2 diagram expands on the previous process Create IAT. This diagram shows the interaction between the administrator, sub-processes of Create IAT, and the Database.

### 2.1.x ManageIATs.CreateIAT



This level 3 diagram expands on the previous process Upload Stimuli. This diagram shows the interaction between the administrator, sub-processes of Upload Stimuli and the Database

### 2.1.3.x ManageIATs.CreateIAT.UploadStimuli





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# Data Dictionary

- Contains the data entities used
- Key:
  - Data name
  - Applicable to
  - Data Type
  - Description
  - Acceptable Input
  - Good Example
  - Bad Example
  - Notes



# Data Dictionary

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Data Dictionary							
Data Name	Applicable To	Data Type	Description	Acceptable Input	Good Example	Bad Example	Notes
loginName	Login	String	Login name used by an administrator	A-Z, a-z, 1-9	eBreimer	oanfe@\$%	
Password	Login	String	Password used by an administrator	A-Z, a-z, 1-9	password123	p#as{}w^r\$	
testName	Create IAT, Take IAT	String	Specifies the name of an IAT	A-Z, a-z, 1-9	Test1	Test&	
testID	Create IAT, Take IAT	INT	A positive integer representing the ID of a created IAT	1-9	1, 4, 100	a, b, -1, 1.045	UNIQUE
testURL	Take IAT	String	URL generated when an IAT is created	A URL	<a href="http://oraserv.cs.siena.edu/RgAA/AAAsoZw/bHtyqQaOL%/2fP6xiQ9IBwAlfgIBF3fg/SIMwioQn4vEwAAAAyTHAA/">http://oraserv.cs.siena.edu/RgAA/AAAsoZw/bHtyqQaOL%/2fP6xiQ9IBwAlfgIBF3fg/SIMwioQn4vEwAAAAyTHAA/</a>	<a href="http://oraserv.cs.siena.edu/BreimersIATHome/page/number_7/">http://oraserv.cs.siena.edu/BreimersIATHome/page/number_7/</a>	
surveyID	Create IAT, Take IAT	INT	number of the survey linked with a specific IAT	0-9	18933	aeafe	UNIQUE
category	Create IAT	String	Category associated with an IAT	A-Z,a-z	Race, gender	category1, r^ce, g3nd3r	
stimuliImage	Create IAT, Take IAT	String	Images used in an IAT	a URL or file name of an image			must be an image file or URL to an image
stimuliText	Create IAT, Take IAT	String	Words used to describe stimuli	A-Z, a-z	good, bad, white, black	1, 2, g00d, b@d	
questionNumber	Create IAT, Take IAT	INT	The number of a question in an IAT	1-200	1, 2, 3, 100, 200	1.045, -7, 201	
questionTime	Take IAT	INT	amount of time it took a participant to categorize a stimuli	0-9	125, 256, 710	one minute, thirty seconds	in seconds or milliseconds?
participantID	Take IAT	INT	ID of a participant	A-Z, a-z, 0-9	participant1, p2, part4	p@rticip@nt1, p#4	
questionCorrect	Take IAT	boolean	Correctness of a participants answer to an IAT question	True, False	True, False	2,3,a,answer1, yes, no	True if categorized correctly, false if incorrect
stimuliID	Create IAT, Take IAT	INT	ID of a inputted stimuli	1-9	1, 2, 1000, 1245	1.7, -10, a, c	UNIQUE

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# Unit Tests

- Login
- Query the database
- Create IAT



# Login

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## Login Unit T

This unit test will explore all the variations of username and password combinations that may be inputted.

Test Cases						
Pass/Fail Status	Test Number	Description	Action to perform test (input)	Steps to be Executed	State Before Test	Expected result
N/A	3.001	Null username field	Leave username field blank	Click the login button	Blank username field	Output "invalid username"
N/A	3.002	Null password field	Leave password field blank	Click the login button	Blank password field	Output "please enter your password"
N/A	3.003	Incorrect password for identified username	Insert incorrect password for given username	Click the login button	Valid username, invalid password	Output "incorrect password"
N/A	3.004	Non existant user name	insert an invalid username	Click the login button	Invalid username	Output "invalid username"
N/A	3.005	Forgot password	Click on provided link	Click forgot password button	Blank form	Redirect to forgot password screen
N/A	3.006	Login	Insert valid username and corresponding password	Click the login button	Filled in form	User brought to their homepage
N/A	<b>= Unit Summary</b>		<b>0% passing</b>		<b>0</b>	<b>passed</b>
	<b>6</b>	<b>tests</b>			<b>0</b>	<b>failed</b>
		<a href="#">Directory Page</a>				



# Database

Pass/Fail Status	Test Cases		Action to perform test (input)	Steps to be Executed	State Before Test	Expected result
	Test Number	Description				
N/A	2.001	Check if table exists	Enter table name into name field	Runs a query using that table name	Table exists	Table appear with their data
N/A	2.002	Insert data into table	Input data into corresponding fields	Runs a query updating the table to contain the new data	Table exists	The table's data will be updated
N/A	2.003	Delete data from table	Enter table name and data to be deleted	Runs a query deleting the data from the sepcified table	Table and data exist	The specified data is deleted
N/A	2.004	Query database	Enter table name and data to be displayed	Runs a query returning desired data from specified table	Table and data exist	The specified data is displayed
N/A	2.005	Check for non-existant table	Enter table name	Run query looking for specified table	Table does not exist	Output "table does not exist"
N/A	2.006	Insert invalid data into table	Enter table name and data into corresponding field	Run query inserting new data in table	Table exists but inputted data is not in the right format or invalid	Output "Invalid data"
N/A	2.007	Delete nonexistant data from database	Enter table name and data to be deleted	Run query to delete data from table	Table exists but data does not	Output "Data does not exist in table"
N/A	2.008	Query database for nonexistant data	Enter table name and desired data	Run query to return desired data	Table exists but data does not	Output "Nonexistent data"
N/A	<b>= Unit Summary</b>		<b>0% passing</b>		<b>0 passed</b>	
	<b>8</b>	<b>tests</b>			<b>0 failed</b>	
	<a href="#">Directory Page</a>					



# Create IAT

Pass/Fail Status	Test Cases		Action to perform test (input)	Steps to be Executed	State Before Test	Expected result
	Test Number	Description				
N/A	1.001	Naming the IAT	Inputting the name of the test	Check that the name is valid	No IAT with this name	New test created
N/A	1.002	Uploading stimuli image	Inputting a URL or file name of desired image	Check that image is in a valid format	No image	Image is accepted and inputted to the database
N/A	1.003	Uploading stimuli text	Inputting desired text stimuli	Check that text is text	No text	Text is accepted and inputted to database
N/A	1.004	Selecting category	Inputting edesired category	Check that the category is valid	No category selected	Valid category is accepted
N/A	1.005	Invalid name for IAT	Inputting an invalid name for an IAT	Check that the name is valid	Invalid name in corresponding field	Output "Invalid IAT name"
N/A	1.006	Invalid stimuli input	Inputting invalid stimuli	Check that stimuli is in a valid format	Invalid stimuli input in uploading stimuli field	Output "Invalid stimuli"
N/A	1.007	Selecting an invalid category	Inputting an invalid category name	Check that category is valid	Invalid category in category field	Output "invalid category"
N/A	<b>= Unit Summary</b>		<b>0% passing</b>		<b>0 passed</b>	
	<b>7</b>	<b>tests</b>			<b>0 failed</b>	
	<a href="#">Directory Page</a>					





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# Subconscious Analysis Software

Create and Manage your own IATs

## Login to SAS:

User Name:

Password:

[Forgot my Password](#)

enig



# Subconscious Analysis Software

Create and Manage your own IATs

## Forgot your Password?

Please enter your registration email

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# Subconscious Analysis Software

Create and Manage your own IATs

## Welcome

Welcome to Subconscious Analysis Software here you will find the tools to Create and View your own Implicit Association Test.



Create a New IAT



View your IATs



Log Out of SAS

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# Subconscious Analysis Software

## Create your own IAT

### Create a New IAT Test

#### Step 1:

Create Survey

#### Step 2: Create Test

##### Choose Categories

	Primary	Opposite	
Pair 1:	<input type="text"/>	<input type="text"/>	
Pair 2:	<input type="text"/>	<input type="text"/>	<input type="button" value="Update"/>

Logout of SAS

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## LimeSurvey Demo

Administration -- Logged in as: **admin**



Surveys:



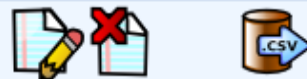
Survey new temporary survey (ID:57282)



Groups:



Group group 1 (ID:1925)



Questions:



### Add Question

Code:  Required

Question:

How do you feel about this question?

Help:

Type:

Validation:

Mandatory: Yes  No

Question Attributes:

OR

### Import Question

Select CSV File:  no file selected



# Subconscious Analysis Software

Create your own IAT

## Create a New IAT Test

### Step 1:

### Step 2: Create Test

#### Choose Categories

	Primary	Opposite	
Pair 1:	<input type="text" value="Technology"/>	<input type="text" value="Non-Technology"/>	
Pair 2:	<input type="text" value="Women"/>	<input type="text" value="Men"/>	<input type="button" value="Update"/>

#### Choose Stimuli

Word	Image	Technology	Non-Technology	Women	Men	
<input type="text"/>	<input type="button" value="Browse"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="button" value="Add"/>

[Logout of SAS](#)



# Subconscious Analysis Software

Create

## Create a New

### Step 1:

[Create Survey](#)

### Step 2: Create Test

#### Choose Categories

**Primary**

Pair 1:





Pair 2:

#### Choose Stimuli

Word  Image  Technology

[Logout of SAS](#)

### Added to Your Test:

Stimuli	Category	Delete
	Technology	<input type="button" value="X"/>
	Non- Technology	<input type="button" value="X"/>
Java	Technology	<input type="button" value="X"/>
	Women	<input type="button" value="X"/>
	Men	<input type="button" value="X"/>
Mom	Women	<input type="button" value="X"/>
Uncle	Men	<input type="button" value="X"/>

[Logout of SAS](#)



## Subconscious Analysis Software

Create your own IAT

### Your IAT Data:

Stimuli	Category
	Technology
Java	Technology
	Non-Technology
	Women
Mom	Women
	Men
Uncle	Men

Are you sure you are ready to create your IAT?

[Logout of SAS](#)





# Subconscious Analysis Software

View and Manage your IATs

## View your IAT Test Data:

Test Name	Bais	View
Women In Technology	-0.23	<a href="#">View Data</a>
Computer Science verse Other Sciences	-0.45	<a href="#">View Data</a>

Logout of SAS

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# Subconscious Analysis Software

View and Manage your IATs

## Your Participants:

Participant ID	Bias	View
123472943	0.78	<a href="#">View Data</a>
934792465	-0.98	<a href="#">View Data</a>
902735423	-0.15	<a href="#">View Data</a>

[Export Data](#)

[Logout of SAS](#)

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## Subconscious Analysis Software

Create and Manage your own IATs

**Are you sure you want to log out?**

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# Subconscious Analysis Software

## Take an IAT

### IAT Test- Women and Technology

Women and  
Technology



Men and  
Non-Technology

Sort the stimuli objects.



# Subconscious Analysis Software

## Take an IAT

### IAT Test- Women and Technology

Women and  
Technology



Men and  
Non-Technology

You have sorted the stimuli object into the wrong Category.  
Sort correctly to continue

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# Spring 2012 Timeline

Detailed Design:

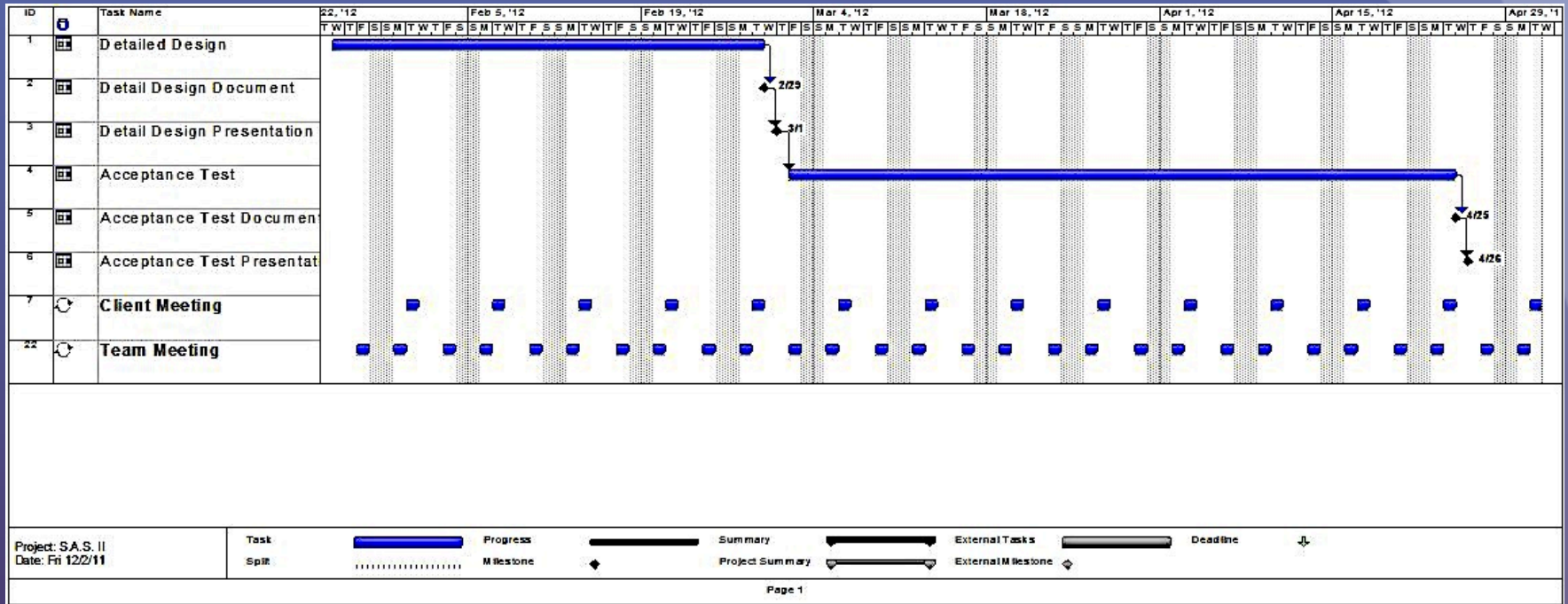
Document-2/29

Presentation-3/1

Acceptance Test:

Document-4/25

Presentation-4/26



# Questions?

