























Trivial_i1a Documentation: Final Deliverable

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Development of the trivial game

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DEVELOPMENT OF THE TRIVIAL GAME

Proposal of the problem

This time, what we want is to make the Trivial game online. That is, it should support multiuser and let the users store their punctuation. The architecture must be scalable and offer good answer times to the actions of the connected users.

Identification of the stakeholders

Trivial Development team:

They are the ones in charge of creating the trivial game and develop the architecture in order to facilitate the creation of future trivia games.

Some of their objectives are:

- Develop the Trivial game in an efficient way, controlling the costs and following the standards of usability thinking in the final user.
- Create a reusable architecture that can be implemented in other games based on question/answer mechanisms.

People in charge of NoGame:

These are the directors of the corporation, in charge of the budget, from which they allocate funds for the project and administrating the different games developed.

Some of their objectives are:

- The duration of the project should be short and the costs as minimum as possible.
- Get the maximum Profit.
- Get an application whose architecture can be used in other variants of the game.

Development team of NoGame:

They are the ones in charge of developing future trivia game that will use the architecture developed by Trivial Development team as a help in the process.

Some of their objectives are:

- Use that architecture to facilitate the development of new versions of the game.
- Finding the best technological alternatives to implement the game, and communicating them to the Trivial Development team.

Players of the Game:

The final users of the product, they want to play the game in an easy and intuitive way.

Some of their objectives are:

- Playing the game in an easy way without having to spend too much time trying to understand how the application works.

Identification of the quality attributes

Availability

- The system must have available all the functionality 24-7(every day at any time).

Modifiability

- Scalability of the system, we probably may do changes in the program.
- Facility to change the parser system, the questions and answers files format.
- Facility to change the connection with the database if in the future we want to change the database administrator program.

Performance

- We have to make sure that our systems responds to the user in a reasonable amount of time.
- Latency should be as low as possible in order to provide the user a good experience within the application.
- Throughput (number of events that take place within a given amount of time) should be as high as possible.

Security

- We have to ensure the security and strength of the system.
- We have to provide a good architecture in order to avoid non-ethical attack against our system that try to break into the server or that try to mislead the system.
- The system should be able to avoid DDoS attacks (very important in an application like this one).

Usability

- The system must be the most intuitive as possible, in order to help the user to understand its functioning.
- A manual must be available for any user that doesn't understand how to use the system.

Adaptability

- The system must work for any web browser.

Time to market

- Short development cycle

Cost-Benefit

- Null development cost

First approach to the solution

First approach

Once we have analyzed the requirements of the system, we have arrived to a possible solution based on a Web application. This is because we need the application to manage several players playing at the same time. Due to that the game interface will be implemented to work in a web browser, but logic and database are expected to have a minimum amount of changes compared to the desktop version.

Risks related to the solution

1. Guarantee of the database integrity in case of erroneous data introduce.
2. Protection against the introduction of not valid data both the parser and the database.

To avoid the problems caused by the risks mentioned, the following solutions are proposed:

1. Creating a backup of the database.
2. Creating a series of preconditions and exceptions that controls the flow of data that enters the system.

Quality attributes and stakeholders

Stakeholders vs Attributes	ST-01	ST-02	ST-03
AT001		X	
AT002	X		X
AT003	X		X
AT004			X
AT005		X	X
AT006		X	X
AT007		X	X
AT008	X	X	X
AT009	X	X	X
AT010	X	X	X
AT011		X	X
AT012			X
AT013			X
AT014	X	X	
AT015	X	X	

Business description of the solution

In our application we will have 3 differentiated systems

Graphical user interface:

This section of the system will be the one in charge of showing the game board and the questions, making possible to interact with the Trivial Game. To do this, Html and CSS will be used. Events will be programmed using JavaScript and the navigability will be implemented with Scala.

Logic:

This part of the application performs all the operations related to the functionality of the game, it mainly get the questions, manage the players, the position of the player along the track...

Database:

Composed of text documents: one for the questions and another one for the users and all the information related to the login and the punctuation.

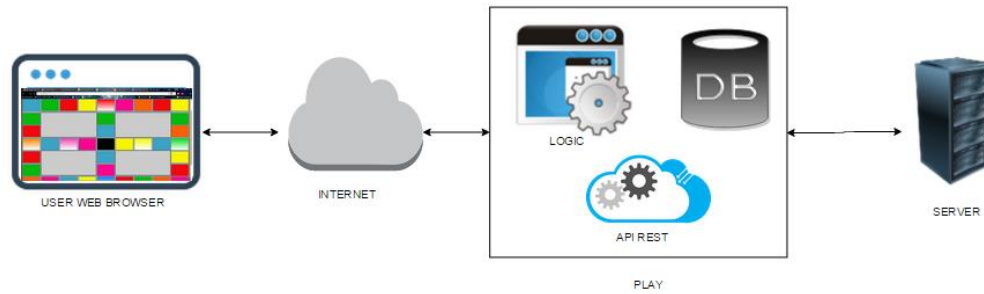
API REST:

REST is a software architectural style for distributed hypermedia systems. It is used to describe any simple web interface that uses XML and HTTP, without the additional abstractions of the message interchange pattern-based protocol.

We used the API REST for the maintenance of users. It is used to obtain information about the users and showing it.

But we could also have used it for obtaining the questions of the trivial and showing them during the game.

Scheme representation of the problem:



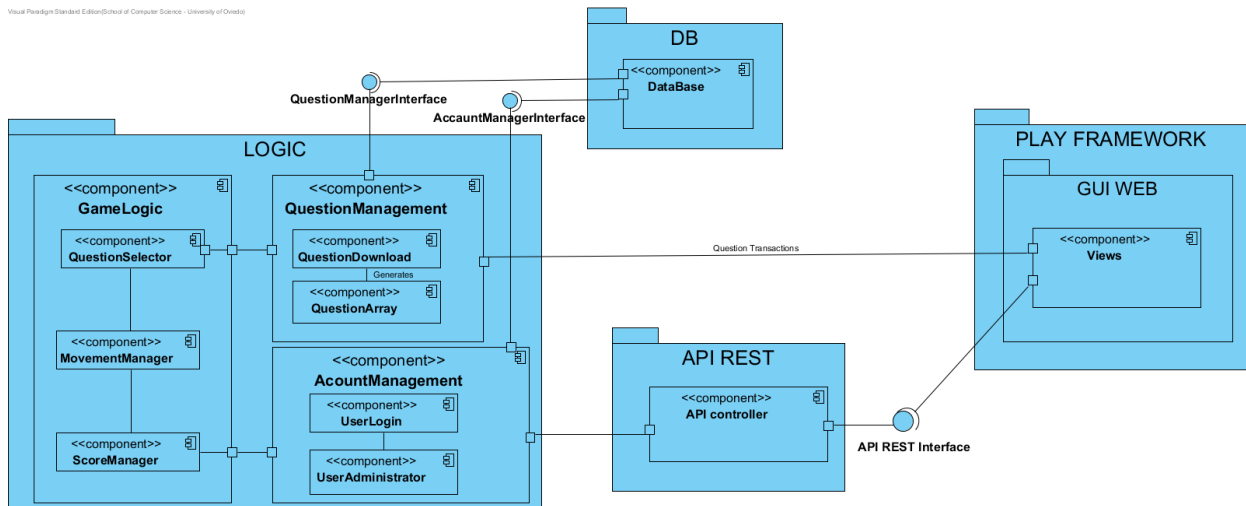
Quality scenarios

Scenario Number	Source of the stimulus	Stimulus	Environment	Artifact	Response	Response Measure	Affected quality attribute
1	Process the file questions	Data Processing	Exploitation	Parser	Effective process time	Effective time > 90%	AT001
2	Modify the way the question is processed	Change the questions processing system.	Exploitation	Parser	Substitute the algorithm without altering other parts of the system	Other parts of the system altered = 0	AT002
3	Change the lexical analyzer	Substitute the lexical analyzer of the questions	Development	Parser	Substitute the parser without altering other parts of the system	Parts of the system altered = 0	AT003
4	Change the target database	Introduce a new database system	Communication with the database. Development	Database system	Substitute the database without altering other parts of the system	Parts apart from the database altered = 0	AT004
5	Access to the Database processed data	Taking a question/answer from the database	Communication with the database	Database system	The answer/question is given from the database	Amount of data lost < 1%	AT005
6	Access to the Database processed data	Perform the communication among the parser, the I/O and the database	Communication with the database	Database system	The requested data is given to the other parts of the application	Request time < 5 s	AT006
7	Illegal access to the database	A user request data from the database without permissions	Communication with the database	Database system	Restriction is raised to avoid this access	Successful illegal accesses < 1%	AT007
8	Access to the raw documents	A user request data from the question/answer storage with no permissions	Illegal Exploitation	Questions storage system	Restriction is raised to avoid this access	Successful illegal accesses < 1%	AT008
9	Excess of access solicitude	A big amount of users request data from the database.	Communication with the database	Database system	Find the origin of the massive access and look it	Maximum number of allowed access attempts per user = 10	AT009
10	Introducing "help" in command line	Writing the string "help" in the command line	Exploitation	Command line	The help is shown in the command line	Availability = 100%	AT010
11	Changes in the system setup of the development team.	The operating system is changed.	Development	Development systems and teams	Substitute the operating system without altering other parts of the system	Capabilities lost after the operating system changed = 0%	AT011
12	System in development	End of the development	Development	Development systems and teams	Low development time	Development time < 3 weeks	AT012
13	System in development	Cost of the development	Development	Development systems and teams	Low development cost	Total cost = 0	AT013

Component Diagram

Trivial_i1a-ThirdDeliverable





















Visual Paradigm Standard Edition (School of Computer Science - University of Quebec)




Name	Value
Name	Trivial_i1a-ThirdDeliverable
Author	Trivial_i1a
Create Date Time	07-may-2015 9:25:23
Last Modified	10-may-2015 21:24:58
Teamwork Create Date Time	0
Show Component Attributes	false
Show Component Operations	false

Summary

Name	Description
------	-------------

 DB	Database package
 DataBase	Database component
 QuestionManagerInterface	
 AccountManagerInterface	
 PLAY FRAMEWORK	Play environment
 LOGIC	Logic package including all the components related to the management of questions, the score, users...
 GUI WEB	Package in charge of storing all the graphical user interface stuff
 GameLogic	Component in charge of selecting questions, managing the movement and the score of every user.
 QuestionManagement	Component that manages questions and answers
 Views	Component including all the views of the application.
 QuestionSelector	Component in charge of selecting the right questions
 QuestionDownloader	Component in charge of extracting the questions.
 QuestionArray	This component stores the questions/answers
 API REST	API Rest package
 MovementManager	Movement component manager.
 AccountManagement	Component that works with the accounts
 API controller	API Rest controller
 UserLogin	Manages the user verification to log in
 API REST Interface	API Rest interface
 ScoreManager	Component in charge of managing the scores


 UserAdministrator	Manages the log in of the administrator
--	---

Details

DB

Name	Value	
Description	Database package	
Abstract	false	
Leaf	false	
Root	false	
Visibility	public	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 9:38:52
	Last Modified	10-may-2015 21:24:00

Children


Name	Description
 DataBase	Database component

DataBase

Name	Value
Description	Database component
Active	false
Business Key Mutable	true
Business Model	false
Visibility	public
Abstract	false
Leaf	false

Root	false	
Indirectly Instantiated	true	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 13:36:28
	Last Modified	10-may-2015 21:24:00

Relationships

Unnamed Usage		
To	 QuestionManagerInterface	
Visibility	Unspecified	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	09-may-2015 10:15:44
	Last Modified	09-may-2015 10:17:01





QuestionManagerInterface

Name	Value	
Active	false	
Business Key Mutable	true	
Business Model	false	
Visibility	public	
Leaf	false	
Root	false	
Stereotypes	Interface	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	09-may-2015 10:14:44
	Last Modified	09-may-2015 10:37:28

AccountManagerInterface

Name	Value	
Active	false	
Business Key Mutable	true	
Business Model	false	
Visibility	public	
Leaf	false	
Root	false	
Stereotypes	Interface	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	09-may-2015 10:16:43
	Last Modified	09-may-2015 10:27:02


Relationships

Unnamed Realization		
To	 N/A	
Visibility	Unspecified	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	09-may-2015 10:18:04
	Last Modified	09-may-2015 10:27:02
Unnamed Usage		
From	 N/A	
Visibility	Unspecified	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	09-may-2015 10:18:09
	Last Modified	09-may-2015 10:27:02

PLAY FRAMEWORK

Name	Value	
Description	Play environment	
Abstract	false	
Leaf	false	
Root	false	
Visibility	public	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 9:43:38
	Last Modified	10-may-2015 21:24:00





Children

Name	Description
 GUI WEB	Package in charge of storing all the graphical user interface stuff

LOGIC

Name	Value	
Description	Logic package including all the components related to the management of questions, the score, users...	
Abstract	false	
Leaf	false	
Root	false	
Visibility	public	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 9:38:17
	Last Modified	10-may-2015 21:03:58


Children

Name	Description
 GameLogic	Component in charge of selecting questions, managing the movement and the score of every user.
 QuestionManagement	Component that manages questions and answers
 AccountManagement	Component that works with the accounts
 AccountManagement	


GUI WEB

Name	Value	
Description	Package in charge of storing all the graphical user interface stuff	
Abstract	false	
Leaf	false	
Root	false	
Visibility	public	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 9:39:25
	Last Modified	10-may-2015 21:24:00

Children

Name	Description
 Views	Component including all the views of the application.





Relationships


Unnamed Realization		
From	 QuestionManagerInterface	
Visibility	Unspecified	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	09-may-2015 10:16:10
	Last Modified	09-may-2015 10:17:01

GameLogic



Name	Value	
Description	Component in charge of selecting questions, managing the movement and the score of every user.	
Active	false	
Business Key Mutable	true	
Business Model	false	
Visibility	public	
Abstract	false	
Leaf	false	
Root	false	
Indirectly Instantiated	true	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	09-may-2015 10:06:27
	Last Modified	10-may-2015 21:03:58

Children




Name	Description
 QuestionSelector	Component in charge of selecting the right questions
 N/A	
 MovementManager	Movement component manager.
 ScoreManager	Component in charge of managing the scores

 N/A	
---	--

Ports

Name	Description
 N/A	
 N/A	



Resident Components

Name	Description
 ScoreManager	Component in charge of managing the scores
 QuestionSelector	Component in charge of selecting the right questions
 MovementManager	Movement component manager.

QuestionManagement

Name	Value	
Description	Component that manages questions and answers	
Active	false	
Business Key Mutable	true	
Business Model	false	
Visibility	public	
Abstract	false	
Leaf	false	
Root	false	
Indirectly Instantiated	true	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	09-may-2015 10:02:25
	Last Modified	10-may-2015 21:13:59

Resident Components

Name	Description
 QuestionDownload	Component in charge of extracting the questions.
 QuestionArray	This component stores the questions/answers


Views


Name	Value	
Description	Component including all the views of the application.	
Active	false	
Business Key Mutable	true	
Business Model	false	
Visibility	public	
Abstract	false	
Leaf	false	
Root	false	
Indirectly Instantiated	true	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 13:36:01
	Last Modified	09-may-2015 10:37:28

QuestionSelector

Name	Value	
Description	Component in charge of selecting the right questions	
Active	false	
Business Key Mutable	true	
Business Model	false	
Visibility	public	
Abstract	false	
Leaf	false	
Root	false	
Indirectly Instantiated	true	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 13:44:23
	Last Modified	10-may-2015 21:13:59

Relationships



Unnamed Association		
To	Name	Value
	End Model Element	 MovementManager
	Provide Property Getter Method	false
	Provide Property Setter Method	false
	Multiplicity	Unspecified
	Visibility	Unspecified
	Aggregation Kind	None
	Navigable	Navigable
	Derived	false
	Derived Union	false
	Read Only	false

	Static	false	
	Leaf	false	
	Type	 MovementManager	
	Project Management	Name	Value
		Author	Trivial_i1a
		Create Date Time	09-may-2015 10:48:23
Abstract	false		
Leaf	false		
Visibility	Unspecified		
Derived	false		
Project Management	Name	Value	
	Author	Trivial_i1a	
	Create Date Time	09-may-2015 10:48:23	
	Last Modified	09-may-2015 10:51:55	


QuestionDownload

Name	Value	
Description	Component in charge of extracting the questions.	
Active	false	
Business Key Mutable	true	
Business Model	false	
Visibility	public	
Abstract	false	
Leaf	false	
Root	false	
Indirectly Instantiated	true	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 13:42:06
	Last Modified	10-may-2015 21:13:59

Relationships

Generates : Association				
To	Name	Value		
	End Model Element	 QuestionArray		
	Provide Property Getter Method	false		
	Provide Property Setter Method	false		
	Multiplicity	Unspecified		
	Visibility	Unspecified		
	Aggregation Kind	None		
	Navigable	Navigable		
	Derived	false		
	Derived Union	false		
	Read Only	false		
	Static	false		
	Leaf	false		
	Type	 QuestionArray		
	Project Management	Name	Value	
		Author	Trivial_i1a	
Create Date Time		09-may-2015 10:42:08		
Abstract	false			
Leaf	false			
Visibility	Unspecified			
Derived	false			
Project Management	Name		Value	
	Author		Trivial_i1a	
	Create Date Time		09-may-2015 10:42:08	
	Last Modified		09-may-2015 10:47:29	

Relationships



Unnamed Usage		
To	 API REST Interface	
Visibility	Unspecified	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	09-may-2015 10:10:34
	Last Modified	09-may-2015 10:17:01

QuestionArray

Name	Value	
Description	This component stores the questions/answers	
Active	false	
Business Key Mutable	true	
Business Model	false	
Visibility	public	
Abstract	false	
Leaf	false	
Root	false	
Indirectly Instantiated	true	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 13:42:50
	Last Modified	10-may-2015 21:15:09

Relationships

Generates : Association		
From	Name	Value


	End Model Element	 QuestionDownload	
	Provide Property Getter Method	false	
	Provide Property Setter Method	false	
	Multiplicity	Unspecified	
	Visibility	Unspecified	
	Aggregation Kind	None	
	Navigable	Navigable	
	Derived	false	
	Derived Union	false	
	Read Only	false	
	Static	false	
	Leaf	false	
	Type	 QuestionDownload	
	Project Management	Name	Value
		Author	Trivial_j1a
		Create Date Time	09-may-2015 10:42:08
Abstract	false		
Leaf	false		
Visibility	Unspecified		
Derived	false		
Project Management	Name		Value
	Author		Trivial_j1a
	Create Date Time		09-may-2015 10:42:08
	Last Modified		09-may-2015 10:47:29

API REST

Name	Value
Description	API Rest package
Abstract	false
Leaf	false
Root	false
Visibility	public

Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 13:35:14
	Last Modified	10-may-2015 21:24:00


Children


Name	Description
 API controller	API Rest controller


MovementManager


Name	Value	
Description	Movement component manager.	
Active	false	
Business Key Mutable	true	
Business Model	false	
Visibility	public	
Abstract	false	
Leaf	false	
Root	false	
Indirectly Instantiated	true	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 13:45:18
	Last Modified	10-may-2015 21:13:59

Relationships

Unnamed Association		
From	Name	Value
	End Model Element	 QuestionSelector
	Provide Property Getter Method	false
	Provide Property Setter	false

	Method		
	Multiplicity	Unspecified	
	Visibility	Unspecified	
	Aggregation Kind	None	
	Navigable	Navigable	
	Derived	false	
	Derived Union	false	
	Read Only	false	
	Static	false	
	Leaf	false	
	Type	 QuestionSelector	
	Project Management	Name	Value
		Author	Trivial_i1a
		Create Date Time	09-may-2015 10:48:23
Abstract	false		
Leaf	false		
Visibility	Unspecified		
Derived	false		
Project Management	Name	Value	
	Author	Trivial_i1a	
	Create Date Time	09-may-2015 10:48:23	
	Last Modified	09-may-2015 10:51:55	

Unnamed Association		
From	Name	Value
	End Model Element	 ScoreManager
	Provide Property Getter Method	false
	Provide Property Setter Method	false
	Multiplicity	Unspecified
	Visibility	Unspecified
	Aggregation Kind	None
	Navigable	Navigable
	Derived	false


	Derived Union	false	
	Read Only	false	
	Static	false	
	Leaf	false	
	Type	 ScoreManager	
	Project Management	Name	Value
		Author	Trivial_i1a
		Create Date Time	09-may-2015 10:48:32
Abstract	false		
Leaf	false		
Visibility	Unspecified		
Derived	false		
Project Management	Name	Value	
	Author	Trivial_i1a	
	Create Date Time	09-may-2015 10:48:32	
	Last Modified	09-may-2015 10:51:55	

 **N/A**

Name	Value	
Service	true	
Behavior	false	
Conjugated	false	
Derived	false	
Is ID	false	
Derived Union	false	
Aggregation	Unspecified	
Multiplicity	Unspecified	
Read Only	false	
Static	false	
Leaf	false	
Visibility	public	
Project Management	Name	Value
	Author	Trivial_i1a

	Create Date Time	09-may-2015 10:16:34
	Last Modified	09-may-2015 10:27:02



Relationships

Unnamed Realization		
From	 AccountManagerInterface	
Visibility	Unspecified	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	09-may-2015 10:18:04
	Last Modified	09-may-2015 10:27:02



AccountManagement

Name	Value	
Description	Component that works with the accounts	
Active	false	
Business Key Mutable	true	
Business Model	false	
Visibility	public	
Abstract	false	
Leaf	false	
Root	false	
Indirectly Instantiated	true	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	09-may-2015 10:04:25
	Last Modified	10-may-2015 21:24:00

Children

Name	Description
 UserLogin	Manages the user verification to log in
 UserAdministrator	Manages the log in of the administrator

Resident Components

Name	Description
 UserLogin	Manages the user verification to log in
 UserAdministrator	Manages the log in of the administrator

API controller



Name	Value	
Description	API Rest controller	
Active	false	
Business Key Mutable	true	
Business Model	false	
Visibility	public	
Abstract	false	
Leaf	false	
Root	false	
Indirectly Instantiated	true	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 13:35:31
	Last Modified	10-may-2015 21:24:00

UserLogin

Name	Value
Description	Manages the user verification to log in
Active	false

Business Key Mutable	true	
Business Model	false	
Visibility	public	
Abstract	false	
Leaf	false	
Root	false	
Indirectly Instantiated	true	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 13:45:50
	Last Modified	10-may-2015 21:24:00

Relationships

Unnamed Association		
To	Name	Value
	End Model Element	 UserAdministrator
	Provide Property Getter Method	false
	Provide Property Setter Method	false
	Multiplicity	Unspecified
	Visibility	Unspecified
	Aggregation Kind	None
	Navigable	Navigable
	Derived	false
	Derived Union	false
	Read Only	false
	Static	false
	Leaf	false
	Type	 UserAdministrator
	Project Management	Name
		Value
		Author
		Trivial_i1a
		Create Date Time
		09-may-2015 10:47:43
Abstract	false	

Leaf	false	
Visibility	Unspecified	
Derived	false	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	09-may-2015 10:47:43
	Last Modified	09-may-2015 10:51:55

API REST Interface



Name	Value	
Description	API Rest interface	
Active	false	
Business Key Mutable	true	
Business Model	false	
Visibility	public	
Leaf	false	
Root	false	
Stereotypes	Interface	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 13:40:36
	Last Modified	09-may-2015 10:17:01

ScoreManager

Name	Value
Description	Component in charge of managing the scores
Active	false
Business Key Mutable	true
Business Model	false
Visibility	public
Abstract	false
Leaf	false



Root	false	
Indirectly Instantiated	true	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 13:45:30
	Last Modified	10-may-2015 21:13:59

Relationships

Unnamed Association		
To	Name	Value
	End Model Element	 MovementManager
	Provide Property Getter Method	false
	Provide Property Setter Method	false
	Multiplicity	Unspecified
	Visibility	Unspecified
	Aggregation Kind	None
	Navigable	Navigable
	Derived	false
	Derived Union	false
	Read Only	false
	Static	false
	Leaf	false
	Type	 MovementManager
	Project Management	Name
		Value
		Author
		Trivial_i1a
		Create Date Time
		09-may-2015 10:48:32
Abstract	false	
Leaf	false	
Visibility	Unspecified	
Derived	false	
Project Management	Name	Value

	Author	Trivial_j1a
	Create Date Time	09-may-2015 10:48:32
	Last Modified	09-may-2015 10:51:55

Relationships


Unnamed Association			
From	Name	Value	
	End Model Element	 ScoreManager	
	Provide Property Getter Method	false	
	Provide Property Setter Method	false	
	Multiplicity	Unspecified	
	Visibility	Unspecified	
	Aggregation Kind	None	
	Navigable	Navigable	
	Derived	false	
	Derived Union	false	
	Read Only	false	
	Static	false	
	Leaf	false	
	Type	 ScoreManager	
	Project Management	Name	Value
		Author	Trivial_j1a
		Create Date Time	09-may-2015 10:51:01
Abstract	false		
Leaf	false		
Visibility	Unspecified		
Derived	false		
Project Management	Name	Value	


	Author	Trivial_i1a
	Create Date Time	09-may-2015 10:51:01
	Last Modified	09-may-2015 10:51:55

UserAdministrator

Name	Value	
Description	Manages the log in of the administrator	
Active	false	
Business Key Mutable	true	
Business Model	false	
Visibility	public	
Abstract	false	
Leaf	false	
Root	false	
Indirectly Instantiated	true	
Project Management	Name	Value
	Author	Trivial_i1a
	Create Date Time	07-may-2015 13:46:16
	Last Modified	10-may-2015 21:24:00

Relationships

Unnamed Association		
From	Name	Value
	End Model Element	 UserLogin
	Provide Property Getter Method	false
	Provide Property Setter Method	false
	Multiplicity	Unspecified
	Visibility	Unspecified
	Aggregation Kind	None

	Navigable	Navigable	
	Derived	false	
	Derived Union	false	
	Read Only	false	
	Static	false	
	Leaf	false	
	Type	 UserLogin	
	Project Management	Name	Value
		Author	Trivial_j1a
		Create Date Time	09-may-2015 10:47:43
Abstract	false		
Leaf	false		
Visibility	Unspecified		
Derived	false		
Project Management	Name		Value
	Author		Trivial_j1a
	Create Date Time		09-may-2015 10:47:43
	Last Modified		09-may-2015 10:51:55

General functionality

This version of the application have a more visual interaction to the user and the program will be divided into several phases:

- At first a logging window will appear in which the user will use his username and password to differentiate between administrator or common user, this username and password will be compare in a txt document.
- Then the game begins, a squared board will appear in which the game will be played, a dice will appear and the available boxes will appear.
- Player chooses a square and a dialog with the question of that category is shown, in which you have to choose one answer, and the game will be elapsed in this way till you reach the center of the board.
- Finally when you reach the center one question of each theme, if you answer correctly the game finishes and you win.

The load of the questions file is done in a automatically way.

GIFT format

// text	Comment until end of line (optional)
::title::	Question title (optional)
text	Question text (becomes title if no title specified)
!theme!	Question Theme(optional)
{ ... =right ... }	Correct answer for multiple choice, (multiple answer? -- see page comments) or fill-in-the-blank
{ ... ~wrong ... }	Incorrect answer for multiple choice or multiple answer