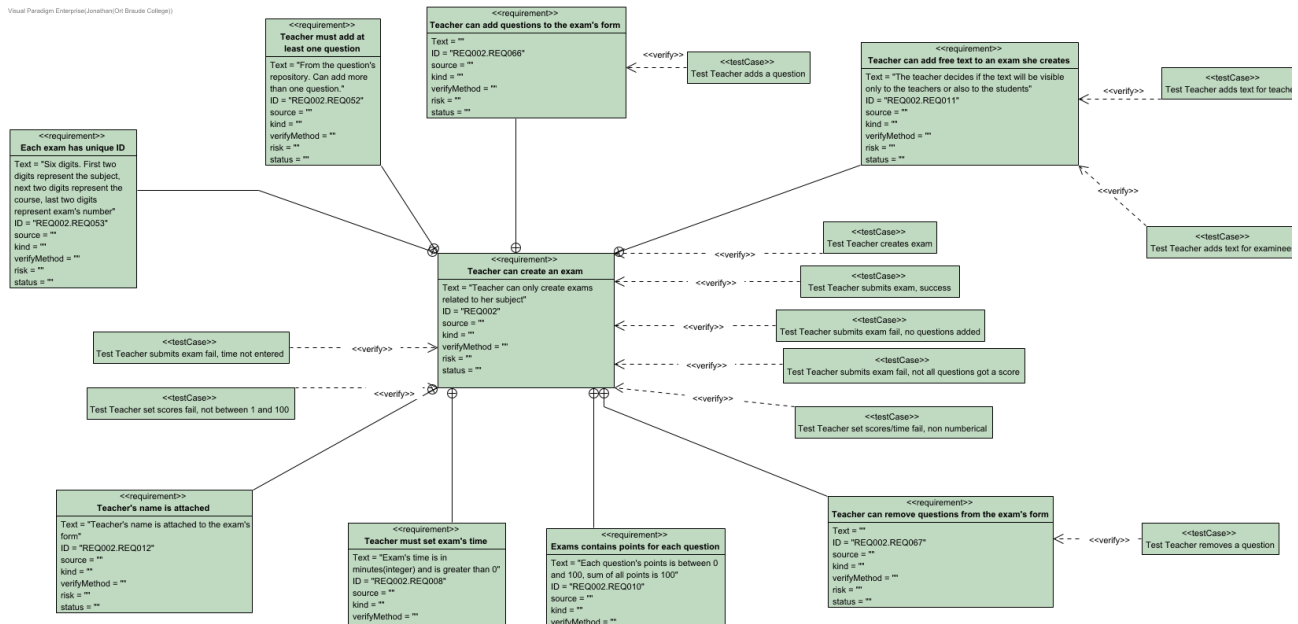


## קבוצה 6

יהונתן גבאי – [jgabbay@gmail.com](mailto:jgabbay@gmail.com)  
אלון דויטש – [alon9510@gmail.com](mailto:alon9510@gmail.com)  
ענבל קטראריו – [inbalos22@gmail.com](mailto:inbalos22@gmail.com)  
בת אל קוק - [batel571992@gmail.com](mailto:batel571992@gmail.com)

תאריך הגשה: 24.4.2018

# 1. Exams' creation



## 2. Exams contains points for each question

ID: REQ002.REQ010

Each question's points is between 0 and 100, sum of all points is 100

## 3. Test Teacher set scores fail, not between 1 and 100

### 3.1. Test Plans

Steps	Procedures	Expected Results
1. Teachers decides scores for a question	Teacher fills a text box, near to a question, with a integer value greater then 100.	Only the 2 most recently typed digits are shown

### 3.2. Relationships




Relationship	From	To
unnamed	<a href="#">Test Teacher set scores fail, not between 1 and 100</a>	Teacher can create an exam

## 4. Test Teacher set scores/time fail, non numerical

### 4.1. Test Plans

Steps	Procedures	Expected Results
1. Teachers decides scores for a question	Teacher fills a text box, near to a question, with -40	The "-" sign is not shown, only the 40

### 4.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test Teacher set scores/time fail, non numerical</a>	 Teacher can create an exam

## 5. Test Teacher submits exam fail, not all questions got a score

### 5.1. Test Plans

Steps	Procedures	Expected Results
1. Teacher doesn't assign a score for all the exam's questions	Teacher fills a text box, near to each question, with a number(0-100, sum=100)	Numbers are shown near the questions
2. Teacher sets exam's time	Teacher fills a text box with a number(210 minutes)	Number is shown
3. Teacher submits	Teacher presses "submit"	System sends a "Please allocate points to all questions" notification and returns to exam's form window.

### 5.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Teacher submits exam fail, not all questions got a score</a>	 Teacher can create an exam

## 6. Teacher can add free text to an exam she creates

ID: REQ002.REQ011




The teacher decides if the text will be visible only to the teachers or also to the students

## 7. Test Teacher adds text for examinees

### 7.1. Test Plans

Steps	Procedures	Expected Results
1. Teacher adds free text	Teacher presses "Add text" button	System prompts the user to choose between "for examinee" and "for teacher"
2. Teacher selects for students	Teacher presses for students	System enables text boxes for editing
3. Teacher chooses where to add text	Teacher clicks on a text box	System shows a cursor at the end of the already written text
4. Teacher writes	Teacher types text	Text is shown where the cursor is located
5. Teacher saves	Teacher presses the save-button	The text is saved in the current form in green color

### 7.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test Teacher adds text for examinees</a>	 Teacher can add free text to an exam she creates

## 8. Test Teacher adds text for teachers

### 8.1. Test Plans

Steps	Procedures	Expected Results
1. Teacher adds free text	Teacher presses "Add text" button	System prompts the user to choose between "for examinee" and "for teacher"
2. Teacher selects "for teacher"	Teacher presses "for teacher" button	System enables text boxes for editing
3. Teacher chooses where to add text	Teacher clicks on a text box	System shows a cursor at the end of the already written text
4. Teacher writes	Teacher types text	Text is shown where the cursor is located
5. Teacher saves	Teacher presses the save-button	The text is saved in the current form in red color

### 8.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Teacher adds text for teachers</a>	 Teacher can add free text to an exam she creates

## 9. Teacher can add questions to the exam's form




ID: REQ002.REQ066

## 10. Test Teacher adds a question

### 10.1. Test Plans

Steps	Procedures	Expected Results
1. Teacher adds a question	Teacher presses "add a question"	System shows list of questions from the repository
2. Teacher chooses a question	Teacher selects a question from the list.	System enables the "ok" button
3. Teacher confirms	Teacher presses the "ok" button	System adds the question to the exam's form and returns to the exam's form

### 10.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Teacher adds a question</a>	 Teacher can add questions to the exam's form

## 11. Teacher can remove questions from the exam's form




ID: REQ002.REQ067

## 12. Test Teacher removes a question

### 12.1. Test Plans

Steps	Procedures	Expected Results
1. Teachers chooses what question to remove	Teacher selects questions from the exam's form	Questions are marked and "remove" button is enabled
2. Teacher removes a question	Teacher presses the "remove" button	System prompts the teacher with a confirmation window
3. Teacher confirms	Teacher presses the "yes" button	System removes the selected questions from the exam's form and returns to the exam's form

### 12.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Teacher removes a question</a>	 Teacher can remove questions from the exam's form

## 13. Teacher must add at least one question

ID: REQ002.REQ052




From the question's repository. Can add more than one question.

## 14. Test Teacher submits exam fail, no questions added

### 14.1. Test Plans

Steps	Procedures	Expected Results
1. Teacher sets exam's time	Teacher fills a text box with a number(210 minutes)	Number is shown
2. Teacher submits	Teacher presses "submit"	System sends a "no questions" notification to teacher and returns to exam's form window.

### 14.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Teacher submits exam fail, no questions added</a>	 Teacher can create an exam

## 15. Teacher must set exam's time

ID: REQ002.REQ008




Exam's time is in minutes(integer) and is greater than 0

## 16. Test Teacher set scores/time fail, non numerical

### 16.1. Test Plans

Steps	Procedures	Expected Results
1. Teachers decides scores for a question	Teacher fills a text box, near to a question, with -40	The "-" sign is not shown, only the 40

### 16.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Teacher set scores/time fail, non numerical</a>	 Teacher can create an exam




## 17. Test Teacher submits exam fail, time not entered

### 17.1. Test Plans

Steps	Procedures	Expected Results
1. Teachers decides scores for all the exam's questions	Teacher fills a text box, near to each question, with a number(0-100, sum=100)	Numbers are shown near the questions
2. Teacher submits	Teacher presses "submit"	System sends a "Time not

Steps	Procedures	Expected Results
		entered" notification to the user and returns to the exam's form

## 17.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Teacher submits exam fail, time not entered</a>	 Teacher can create an exam

## 18. Teacher can create an exam

ID: REQ002

Teacher can only create exams related to her subject

## 19. Each exam has unique ID

ID: REQ002.REQ053

Six digits. First two digits represent the subject, next two digits represent the course, last two digits represent exam's number

## 20. Teacher's name is attached

ID: REQ002.REQ012




Teacher's name is attached to the exam's form

## 21. Test Teacher submits exam, success

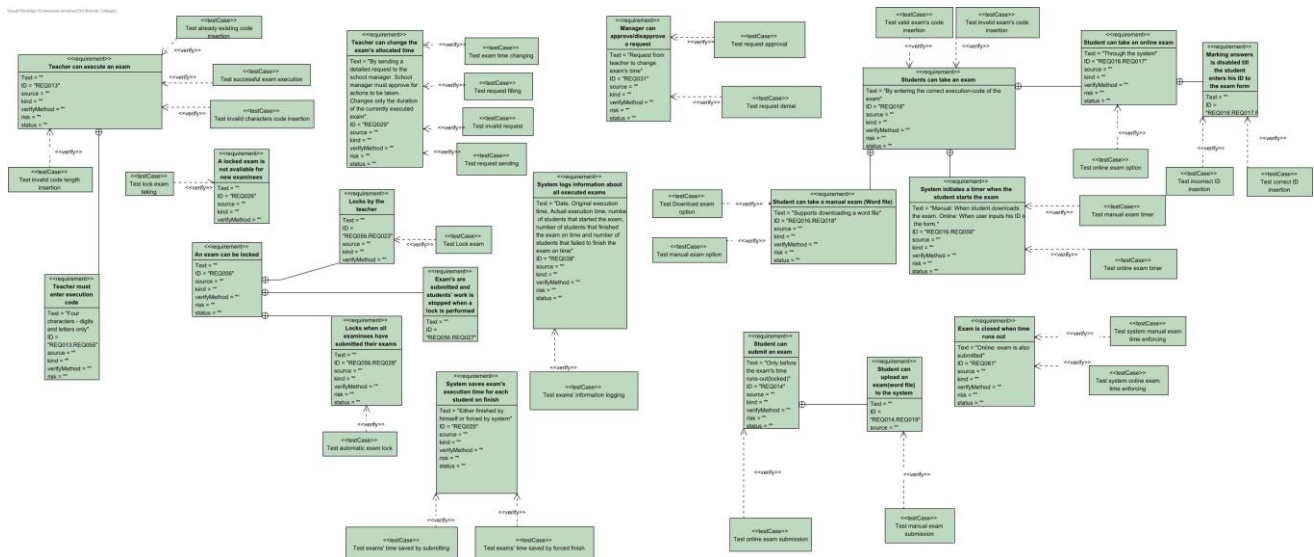
### 21.1. Test Plans

Steps	Procedures	Expected Results
1. Teachers decides scores for all the exam's questions	Teacher fills a text box, near to each question, with a number(0-100, sum=100)	Numbers are shown near the questions
2. Teacher sets exam's time	Teacher fills a text box with a number(210 minutes)	Number is shown
3. Teacher submits	Teacher presses "submit"	System saves the exam to database, adds the exam to the exam's repository, Generates a unique ID and attaches the name of the author to it. System sends a successful notification the the teacher and returns to exam's list window.

## 21.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Teacher submits exam, success</a>	 Teacher can create an exam

# 1. Exams' execution and control



## 2. A locked exam is not available for new examinees

ID: REQ026

## 3. Test lock exam taking

### 3.1. Test Plans

Steps	Procedures	Expected Results
1. Take exam	Press take exam with the exam code of a locked exam	Prompts code doesn't exist message

### 3.2. Relationships

Relationship	From	To
unnamed	<a href="#">Test lock exam taking</a>	A locked exam is not available for new examinees

## 4. An exam can be locked

ID: REQ056

## 5. Exam is closed when time runs out

ID: REQ061

Online: exam is also submitted






## 6. Test system manual exam time enforcing

### 6.1. Test Plans

Steps	Procedures	Expected Results
1. Automatically exam closing	Press take manual exam,download the exam, wait till exams' time runs out.	Exam window closes,exam is removed from the currently executed exams list.

### 6.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test system manual exam time enforcing</a>	 Exam is closed when time runs out

## 7. Test system online exam time enforcing

### 7.1. Test Plans

Steps	Procedures	Expected Results
1. Automatically exam closing	Press take online exam, wait till exams' time runs out.	Exam is being submitted automatically, exam window closes,exam is removed from the currently executed exams list.

### 7.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test system online exam time enforcing</a>	 Exam is closed when time runs out

## 8. Exam's are submitted and students' work is stopped when a lock is performed

ID: REQ056.REQ027

## 9. Locks by the teacher

ID: REQ056.REQ023

## 10. Test Lock exam

### 10.1. Test Plans

Steps	Procedures	Expected Results
-------	------------	------------------

Steps	Procedures	Expected Results
1. Exam's lock	Select an exam from the currently executed exams' list and press lock	All currently executed exams with the corresponding ID are saved and locked, all students that were doing the exam receives notification, exam is removed from the currently executed exams' list, prompts a successful lock message.

## 10.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Lock exam</a>	 Locks by the teacher

## 11. Locks when all examinees have submitted their exams


ID: REQ056.REQ028

## 12. Test automatic exam lock

### 12.1. Test Plans

Steps	Procedures	Expected Results
1. Exam lock by the system	Submit the last currently executed exam	Exam is removed from the currently executed exams list(no new examinees can take the exam).

## 12.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test automatic exam lock</a>	 Locks when all examinees have submitted their exams

## 13. Manager can approve/disapprove a request

ID: REQ031

Request from teacher to change exam's time

## 14. Test request denial

### 14.1. Test Plans

Steps	Procedures	Expected Results
1. Deny request	Select a request from the requests queue and press deny	Teacher who sent the request receives notification of denial, the corresponding exam time stays

Steps	Procedures	Expected Results
		the same.

## 14.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test request denial</a>	 Manager can approve/disapprove a request

## 15. Test request approval

### 15.1. Test Plans

Steps	Procedures	Expected Results
1. Approve request	Select a request from the requests queue and press approve	Teacher who sent the request receives notification of approval, the corresponding exam time is changed to the requested amount.

## 15.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test request approval</a>	 Manager can approve/disapprove a request

## 16. Marking answers is disabled till the student enters his ID to the exam form

ID: REQ016.REQ017.REQ021

## 17. Test incorrect ID insertion

### 17.1. Test Plans

Steps	Procedures	Expected Results
1. Take online exam	Press take exam,insert exam's code,press online exam,insert an incorrect student ID.	Marking answers option is disabled.
2. Take online exam	Press take exam,insert exam's code,press online exam,don't insert anything at the ID field.	Marking answers option is disabled.

## 17.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test incorrect ID insertion</a>	 Marking answers is disabled till the student enters his ID to the exam form

## 18. Test correct ID insertion

### 18.1. Test Plans

Steps	Procedures	Expected Results
1. Take online exam	Press take exam,insert exam's code,press online exam,insert a correct student ID.	Marking answers option is enabled.

### 18.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test correct ID insertion</a>	 Marking answers is disabled till the student enters his ID to the exam form

## 19. Student can submit an exam

ID: REQ014




Only before the exam's time runs-out(locked)

## 20. Test online exam submission

### 20.1. Test Plans

Steps	Procedures	Expected Results
1. Submit an online exam	Press take exam, insert exam's code, press submit exam	The exam is saved in the system data base,prompt notification of successfully submitted exam,system returns back to main window.

### 20.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test online exam submission</a>	 Student can submit an exam

## 21. Student can take a manual exam (Word file)

ID: REQ016.REQ018

Supports downloading a word file




## 22. Test manual exam option

### 22.1. Test Plans

Steps	Procedures	Expected Results
1. Take manual exam	Press take exam,insert exams'	prompt a window with two buttons

Steps	Procedures	Expected Results
	code,press manual exam.	download and submit

## 22.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test manual exam option</a>	 Student can take a manual exam (Word file)

## 23. Test Download exam option

### 23.1. Test Plans

Steps	Procedures	Expected Results
1. Download exam	Press take exam,insert exam code,press manual exam,press download exam,choose where to save the exam,press save.	The exam's word file is saved in the specified location.

## 23.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Download exam option</a>	 Student can take a manual exam (Word file)

## 24. Student can take an online exam




ID: REQ016.REQ017  
Through the system

## 25. Test online exam option

### 25.1. Test Plans

Steps	Procedures	Expected Results
1. Take online exam	Press take exam,insert exam's code,press online exam	Shows the exam form on read only mode and a submit exam button .

## 25.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test online exam option</a>	 Student can take an online exam

## 26. Student can upload an exam(word file) to the system


ID: REQ014.REQ019

## 27. Test manual exam submission

### 27.1. Test Plans

Steps	Procedures	Expected Results
1. Submit a manual exam	Press take exam, insert exam's code,press download exam and save the word file, press submit exam, choose the downloaded exam and press ok ,press submit.	The exam is saved in the system data base,prompt notification of successfully submitted exam,system returns back to main window.

### 27.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test manual exam submission</a>	 Student can upload an exam(word file) to the system

## 28. Students can take an exam

ID: REQ016

By entering the correct execution-code of the exam

## 29. Test invalid exam's code insertion

### 29.1. Test Plans

Steps	Procedures	Expected Results
1. Insert a incorrect code	Press take exam,insert an incorrect code	Prompt a invalid code message, system still shows the code insertion window.

### 29.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test invalid exam's code insertion</a>	 Students can take an exam

## 30. Test valid exam's code insertion

### 30.1. Test Plans

Steps	Procedures	Expected Results
1. Insert a correct code	press take exam, insert a correct exam code	prompt a window with two buttons, manual and online options.

### 30.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test valid exam's code insertion</a>	 Students can take an exam

## 31. System initiates a timer when the student starts the exam

ID: REQ016.REQ058




Manual: When student downloads the exam. Online: When user inputs his ID in the form.

## 32. Test manual exam timer

### 32.1. Test Plans

Steps	Procedures	Expected Results
1. Take a manual exam	Press take exam,insert exam code,press manual exam,press download exam,choose where to save the exam and press save.	exam's timer starts on download.

### 32.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test manual exam timer</a>	 System initiates a timer when the student starts the exam

## 33. Test online exam timer

### 33.1. Test Plans

Steps	Procedures	Expected Results
1. Take online exam	Press take exam,insert exam code,press online exam,insert a correct student ID.	exam's timer starts after ID insertion.

### 33.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test online exam timer</a>	 System initiates a timer when the student starts the exam

## 34. System logs information about all executed exams

ID: REQ038




Date, Original execution time, Actual execution time, number of students that started the exam, number of students that finished the exam on time and number of students that failed to finish the exam on time

## 35. Test exams' information logging

### 35.1. Test Plans

Steps	Procedures	Expected Results
1. Exams' information logging	take X exams of the same exam and submit Y of them while $Y < X$ , the others will submit automatically when exams' time is over, also change exams' time to Z.	Information logged about the exam: Date=exam execution date, Original execution time=allocated exam's time, Actual execution time=Z, number of students that started the exam =X, number of students that finished the exam on time=Y and number of students that failed to finish the exam on time= X-Y

### 35.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test exams' information logging</a>	 System logs information about all executed exams

## 36. System saves exam's execution time for each student on finish

ID: REQ025




Either finished by himself or forced by system

## 37. Test exams' time saved by forced finish

### 37.1. Test Plans

Steps	Procedures	Expected Results
1. Take exam and don't submit	Press take exam and wait till exams' time runs out.	Student exams' time is saved and is equal to the exams' allocated time.

### 37.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test exams' time saved by forced finish</a>	 System saves exam's execution time for each student on finish

## 38. Test exams' time saved by submitting




### 38.1. Test Plans

Steps	Procedures	Expected Results
-------	------------	------------------



Steps	Procedures	Expected Results
1. Take exam and submit	Press take exam and after X time submit the exam.	Student exams' time is saved and equal to X.

## 38.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test exams' time saved by submitting</a>	 System saves exam's execution time for each student on finish

## 39. Teacher can change the exam's allocated time

ID: REQ029




By sending a detailed request to the school manager. School manager must approve for actions to be taken. Changes only the duration of the currently executed exam

## 40. Test exam time changing

### 40.1. Test Plans

Steps	Procedures	Expected Results
1. Change executed exam time	Select an exam from the currently executed exam list and press "Change exam time"	Prompts a window with text area and a disabled "send" button.

### 40.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test exam time changing</a>	 Teacher can change the exam's allocated time

## 41. Test request filling

### 41.1. Test Plans

Steps	Procedures	Expected Results
1. Fill request	Write something in the request text area	Send button is enabled

### 41.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test request filling</a>	 Teacher can change the exam's allocated time

## 42. Test invalid request

### 42.1. Test Plans

Steps	Procedures	Expected Results
1. Fill request	Write something in the request text area and then delete all	Send button is disabled

### 42.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test invalid request</a>	 Teacher can change the exam's allocated time

## 43. Test request sending

### 43.1. Test Plans

Steps	Procedures	Expected Results
1. Send request	Fill the request form and press send	School manager receives the request

### 43.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test request sending</a>	 Teacher can change the exam's allocated time

## 44. Teacher can execute an exam

ID: REQ013

## 45. Teacher must enter execution code

ID: REQ013.REQ055




Four characters - digits and letters only

## 46. Test already existing code insertion

### 46.1. Test Plans

Steps	Procedures	Expected Results
1. Execute an exam	Press Manage exams from repository and choose an exam from the list and press execute	prompts the teacher with a code insertion window
2. Insert code	Insert a code which is allocated to a current executed exam.	Prompt code is already in use message, returns back to the exams list window.

## 46.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test already existing code insertion</a>	 Teacher can execute an exam

## 47. Test successful exam execution

### 47.1. Test Plans

Steps	Procedures	Expected Results
1. Execute an exam	Press Manage exams from repository and choose an exam from the list and press execute	prompts the teacher with a code insertion window
2. Code insertion	Insert Four characters - digits and letters only and press ok.	Adds the selected exam to the currently executed exams list, Teacher receives notification of successful execution of exam, system returns back to the exams list window.

### 47.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test successful exam execution</a>	 Teacher can execute an exam

## 48. Test invalid characters code insertion

### 48.1. Test Plans

Steps	Procedures	Expected Results
1. Execute an exam	Press Manage exams from repository and choose an exam from the list and press execute	prompts the teacher with a code insertion window
2. Insert code	Insert a code which contains other characters then only letters and digits.	Prompt invalid code, returns back to the exams list window.

### 48.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test invalid characters code insertion</a>	 Teacher can execute an exam

## 49. Test invalid code length insertion

### 49.1. Test Plans

Steps	Procedures	Expected Results
1. Execute an exam	Press Manage exams from repository and choose an exam from the list and press execute	prompts the teacher with a code insertion window

## Steps

2. Insert code

## Procedures

Insert more or less than four characters - digits and letters only and press ok.

## Expected Results

Prompt invalid code, returns back to the exams list window.

# 49.2. Relationships

## Relationship

unnamed

## From

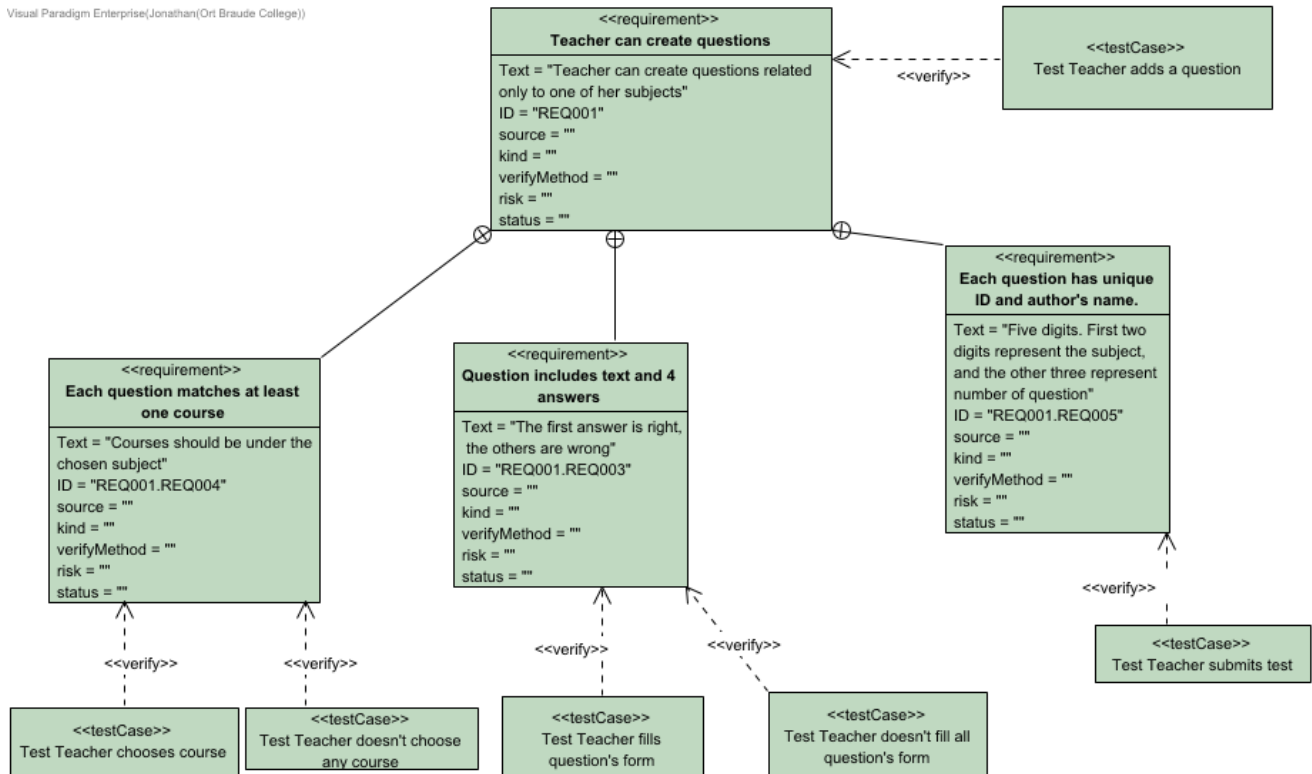
[Test invalid code length insertion](#)

## To

Teacher can execute an exam

# 1. Questions' creation

Visual Paradigm Enterprise(Jonathan(Ort Braude College))



## 2. Each question has unique ID and author's name.

ID: REQ001.REQ005

Five digits. First two digits represent the subject, and the other three represent number of question

## 3. Test Teacher submits test

### 3.1. Test Plans

## Steps

1. Teacher submits the question's form

## Procedures

Teacher presses submit after all form is filled

## Expected Results

System generates unique ID to the question and adds the question to the database. System attaches the teacher's name to the question.

Steps	Procedures	Expected Results
		System sends a successful notification to the teacher

## 3.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Teacher submits test</a>	 Each question has unique ID and author's name.

## 4. Each question matches at least one course

ID: REQ001.REQ004

Courses should be under the chosen subject

## 5. Test Teacher chooses course

### 5.1. Test Plans

Steps	Procedures	Expected Results
1. Teacher chooses at least one course	Teacher selects at least one of the shown courses	The selected courses are marked. System enables the question and answers' field.

### 5.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Teacher chooses course</a>	 Each question matches at least one course

## 6. Test Teacher doesn't choose any course

### 6.1. Test Plans

Steps	Procedures	Expected Results
1. Teacher doesn't choose any course	Teacher doesn't select course or de-selects all selected courses	System disables the question and answers' fields

### 6.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Teacher doesn't choose any course</a>	 Each question matches at least one course

## 7. Question includes text and 4 answers

ID: REQ001.REQ003




The first answer is right, the others are wrong

## 8. Test Teacher doesn't fill all question's form

### 8.1. Test Plans

Steps	Procedures	Expected Results
1. Teacher doesn't fill question's form completely	Teacher doesn't write question, doesn't write 4 answers or deletes one of his previously written question/answers	System disables the submit button

### 8.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test Teacher doesn't fill all question's form</a>	 Question includes text and 4 answers

## 9. Test Teacher fills question's form

### 9.1. Test Plans

Steps	Procedures	Expected Results
1. Teacher fills question form	Teacher writes a question and 4 answers	System enables the submit button

### 9.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Teacher fills question's form</a>	 Question includes text and 4 answers

## 10. Teacher can create questions

ID: REQ001

Teacher can create questions related only to one of her subjects

## 11. Test Teacher adds a question

### 11.1. Test Plans


Steps	Procedures	Expected Results
1. Teacher adds a question	Teacher presses add new question	System shows new question form with 5 disabled text fields and a disabled submit button
2. Teacher chooses a subject	Teacher presses choose subject	System shows a windows with all of the teacher's subjects
3. Teacher chooses one of his subject	Teacher selects one of his shown subjects	System shows all courses under the chosen subject

## 11.2. Relationships


Relationship

unnamed

From

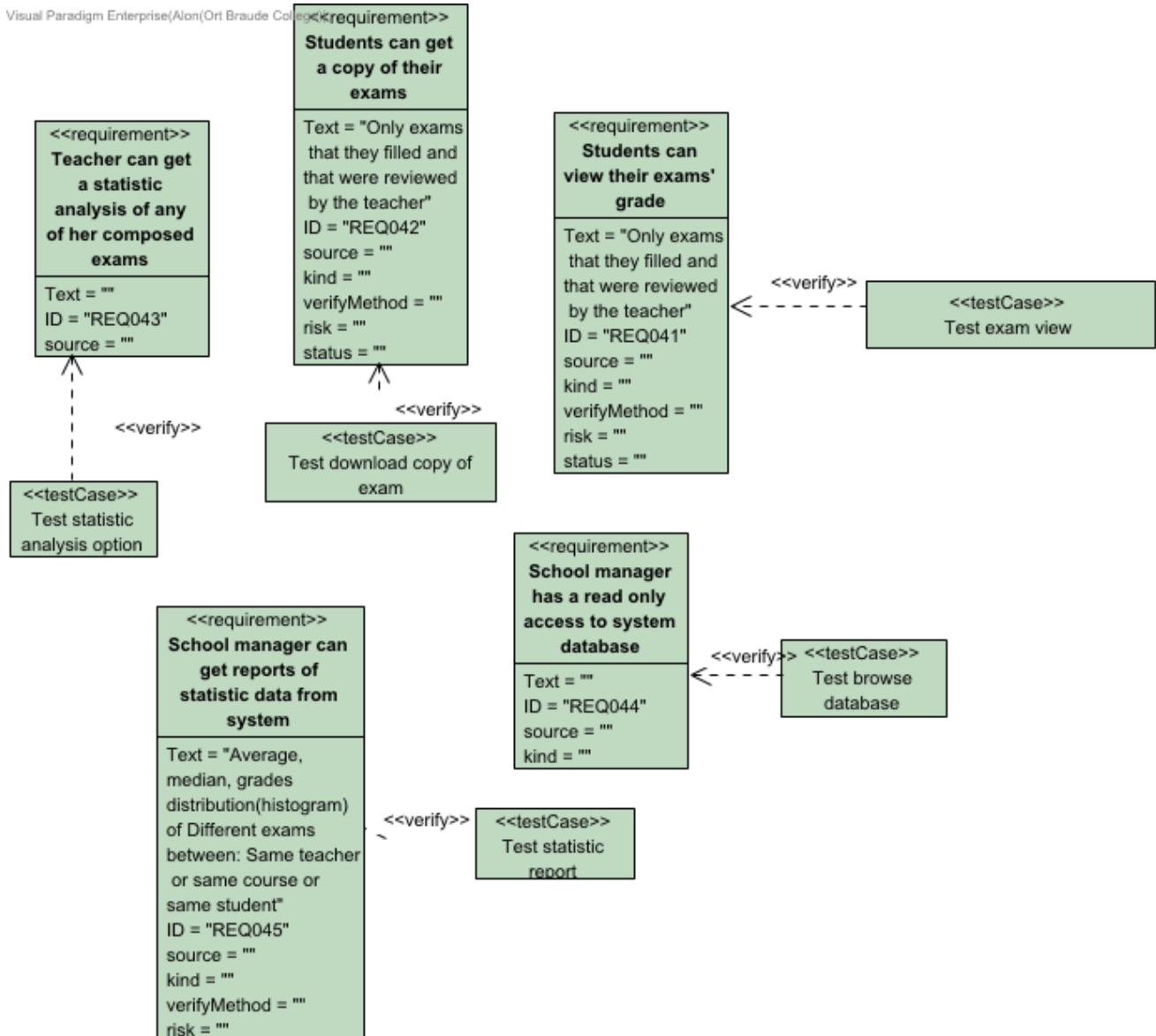
 [Test Teacher adds a question](#)

To

 Teacher can create questions

## 1. Data analysis

Visual Paradigm Enterprise(Alon(Ort Braude College



## 2. School manager can get reports of statistic data from system

ID: REQ045




Average, median, grades distribution(histogram) of Different exams between: Same teacher or same course or same student

## 3. Test statistic report

### 3.1. Test Plans

Steps	Procedures	Expected Results
1. Choose a report option	Manager presses "Get report" Button	Prompts the manager with a list of report options X. X=(Teacher,Course,Student)
2. Select an option	Manager selects an option X from the list and presses "ok"	System shows a list of all X
3. Get report	Select an element from the list and press "ok"	System creates a statistic analysis report between different exams of the chosen option and shows it to the manager.

### 3.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test statistic report</a>	 School manager can get reports of statistic data from system

## 4. School manager has a read only access to system database

ID: REQ044

## 5. Test browse database



### 5.1. Test Plans

Steps	Procedures	Expected Results
1. Browse database	Manager presses "Browse database" button	System shows the manager a list with categories that were entered into the database (e.g., Students, Teachers, Questions, Exams).
2. Choose a category	Select and category from the list and press "ok"	System shows a list of all items in the chosen category
3. Choose an item	Chooses an item from the list and presses "view"	Shows information about the selected item in view only mode. (no changes can be made)

### 5.2. Relationships

Relationship	From	To
--------------	------	----



Relationship	From	To
unnamed	 <a href="#">Test browse database</a>	 School manager has a read only access to system database

## 6. Teacher can get a statistic analysis of any of her composed exams



ID: REQ043

## 7. Test statistic analysis option

### 7.1. Test Plans

Steps	Procedures	Expected Results
1. Show statistic analysis	Press "show statistic analysis" button	Shows a list of all of her composed finished exams.
2. Select an exam from the list	Mark an exam from the list	System enables the "ok" button
3. Press ok	Press "ok" button	Shows a statistic analysis of the selected exam

### 7.2. Relationships

Relationship	From	To
unnamed	 <a href="#">Test statistic analysis option</a>	 Teacher can get a statistic analysis of any of her composed exams

## 8. Students can get a copy of their exams

ID: REQ042

Only exams that they filled and that were reviewed by the teacher




## 9. Test download copy of exam

### 9.1. Test Plans

Steps	Procedures	Expected Results
1. Student view his exams list	Press "My exams" button	System shows a list of all of the student's exams
2. Select an exam	Select an exam from the list	System enables the "Download copy" button
3. Download exam	Press "Download copy" button	Prompt the Student with a download window

Steps	Procedures	Expected Results
4. Chooses where to save	Choose where to save the file and press save	File is saved in the chosen location

## 9.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test download copy of exam</a>	 Students can get a copy of their exams

## 10. Students can view their exams' grade

ID: REQ041




Only exams that they filled and that were reviewed by the teacher

## 11. Test exam view

### 11.1. Test Plans

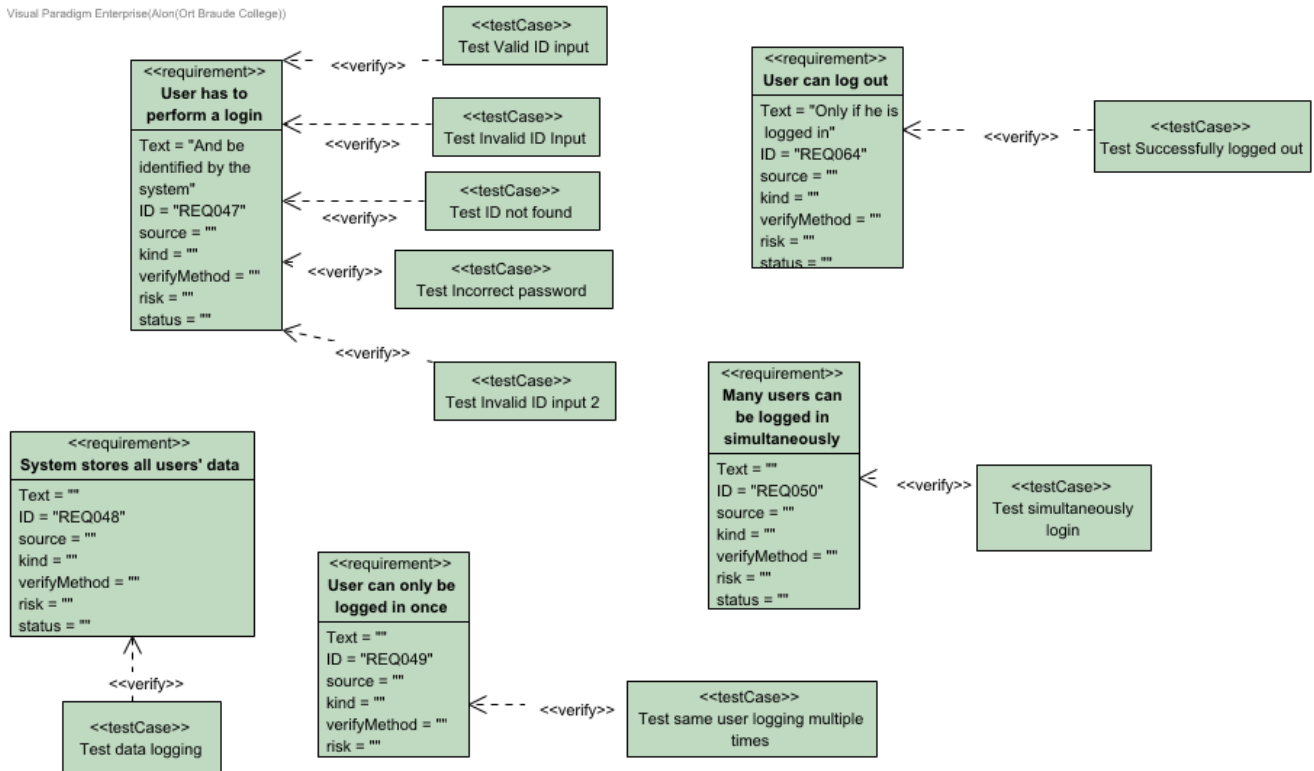
Steps	Procedures	Expected Results
1. Show exams' results	Student presses "Show exams' results" button	System shows a list of only the exams that were already reviewed by the teacher.

### 11.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test exam view</a>	 Students can view their exams' grade

# 1. User info

Visual Paradigm Enterprise(Alon(Ort Braude College))



## 2. User has to perform a login

ID: REQ047

And be identified by the system

## 3. Test Valid ID input

### 3.1. Test Plans

Steps	Procedures	Expected Results
1. Enter user information	Enter: -Username: 314134231 -Password: 123abc	Entered data appear in form
2. Submit the form	click the submit button	The user gets its home page

### 3.2. Relationships




Relationship	From	To
unnamed	<a href="#">Test Valid ID input</a>	User has to perform a login

## 4. Test Invalid ID Input

### 4.1. Test Plans

Steps	Procedures	Expected Results
1. Enter invalid information	Enter: -ID: 1029(not 9 digits ID) -Password: 123abc	Entered data appear in form
2. Submit the form	Click the submit button	Prompt: Invalid ID.

### 4.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test Invalid ID Input</a>	 User has to perform a login

## 5. Test ID not found

### 5.1. Test Plans

Steps	Procedures	Expected Results
1. Enter user information	Enter: -ID:123456789(ID not found in database) - Password:123abc	Entered data appear in form
2. Submit the form	Click the Submit button	Prompt: Incorrect info

### 5.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test ID not found</a>	 User has to perform a login







## 6. Test Incorrect password

### 6.1. Test Plans

Steps	Procedures	Expected Results
1. Enter user information	Enter: -ID:313756448 - Password:123abc(Incorrect password)	Entered data appear in form
2. Submit the form	Click the Submit button	Prompt: Incorrect info

### 6.2. Relationships

Relationship	From	To
--------------	------	----




Relationship	From	To
 unnamed	 <a href="#">Test Incorrect password</a>	 user h
 unnamed	 <a href="#">Test Incorrect password</a>	 User has to perform a login

## 7. Test Invalid ID input 2

### 7.1. Test Plans

Steps	Procedures	Expected Results
1. Enter invalid information	Enter: -ID: 1029dfds4(Not only digits) - Password: 123abc	Entered data appear in form(Non-digits characters doesn't appear in form)
2. Submit the form	Click the submit button	Prompt: Invalid ID.

### 7.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Invalid ID input 2</a>	 User has to perform a login

## 8. System stores all users' data




ID: REQ048

## 9. Test data logging

### 9.1. Test Plans

Steps	Procedures	Expected Results
1. View users' data	Manager presses browse database	System shows the manager a list with categories that were entered into the database (e.g., Students, Teachers, Questions, Exams).
2. Choose a user	Select student/teacher and press "ok"	Show a list of all the selected user type.

### 9.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test data logging</a>	 System stores all users' data

## 10. User can only be logged in once




ID: REQ049

## 11. Test same user logging multiple times

### 11.1. Test Plans

Steps	Procedures	Expected Results
1. Login in new client	User tries to login while he is still in the active user's list	Already logged in error message. Returns to login screen.

### 11.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test same user logging multiple times</a>	 User can only be logged in once

## 12. Many users can be logged in simultaneously




ID: REQ050

## 13. Test simultaneously login

### 13.1. Test Plans

Steps	Procedures	Expected Results
1. Login into the system with X users ( $X > 1$ )	Press login and insert username and password of a registered user	The use is Logged into the system

### 13.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test simultaneously login</a>	 Many users can be logged in simultaneously

## 14. User can log out

ID: REQ064

Only if he is logged in

## 15. Test Successfully logged out

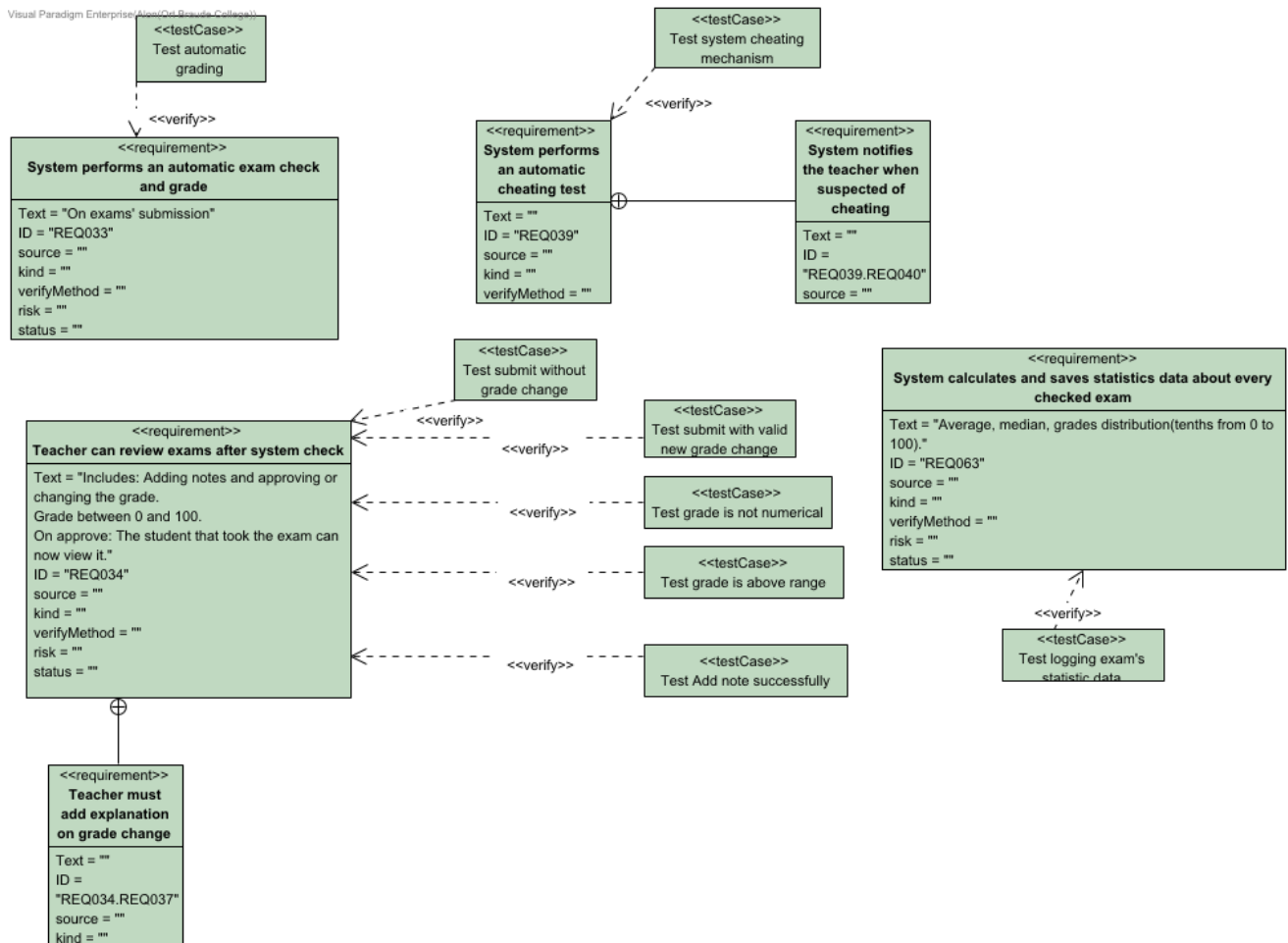
### 15.1. Test Plans

Steps	Procedures	Expected Results
1. User log out	User presses log out	User is logged out - removed from active user's list and returns to login screen

### 15.2. Relationships

Relationship	From	To
unnamed	<a href="#">Test Successfully logged out</a>	User can log out

## 1. Exams' check



## 2. System performs an automatic cheating test




ID: REQ039

## 3. Test automatic grading

### 3.1. Test Plans

Steps	Procedures	Expected Results
1. Finish an exam	Student take an exam and submit it.	The exam is graded and added to the finished exam's list.

### 3.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test automatic grading</a>	 System performs an automatic exam check and grade

## 4. Teacher can review exams after system check

ID: REQ034

Includes: Adding notes and approving or changing the grade.

Grade between 0 and 100.

On approve: The student that took the exam can now view it.

## 5. Teacher must add explanation on grade change




ID: REQ034.REQ037

## 6. Test submit without grade change

### 6.1. Test Plans

Steps	Procedures	Expected Results
1. Submit the form	Click on the submit button	The system saves any changes that were made. Returns to finished exams' list. Prompt "changes were saved".

### 6.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test submit without grade change</a>	 Teacher can review exams after system check






## 7. Test submit with valid new grade change

### 7.1. Test Plans

Steps	Procedures	Expected Results
1. Enter new grade	Enter: 80 -new grade:	Entered data appears in form
2. Submit the form	Click on the submit button	Prompt the teacher with a text field for note
3. Insert note	Write a note in the text field and press ok	The system saves any changes that were made. Returns to finished exams' list. Prompt "changes were saved".

### 7.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test submit with valid new grade change</a>	 Teacher can review exams after system check

## 8. Test grade is not numerical

### 8.1. Test Plans

Steps	Procedures	Expected Results
1. Enter character which is not a digit.	Enter: 10 -new grade: - -note: Factor	Entered data appears in form without "-" sign.

### 8.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test grade is not numerical</a>	 Teacher can review exams after system check

## 9. Test grade is above range

### 9.1. Test Plans

Steps	Procedures	Expected Results
1. Enter new grade-above 100 - and note	Enter: grade:110 -new -note: Factor	Entered data that appears is 100.

## 9.2. Relationships




Relationship	From	To
 unnamed	 <a href="#">Test grade is above range</a>	 Teacher can review exams after system check

## 10. Test Add note successfully

### 10.1. Test Plans

Steps	Procedures	Expected Results
1. Teacher adds a note	Teacher presses add note button.	a text box to write in is enabled
2. Teacher writes the note	Write something in the text box	The test appears in the text box
3. Teacher saves the changes	press the "save" button	System temporarily save changes

### 10.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test Add note successfully</a>	 Teacher can review exams after system check

## 11. System calculates and saves statistics data about every checked exam

ID: REQ063




Average, median, grades distribution(tenths from 0 to 100).

## 12. Test logging exam's statistic data

### 12.1. Test Plans

Steps	Procedures	Expected Results
1. Teacher finished reviewing the exams and approved them.	take three online exams of the same exam. Press manage finished exams' list, and approve them.	The system logged Average, median, grades distribution(tenths from 0 to 100). for exams.

### 12.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test logging exam's statistic data</a>	 System calculates and saves statistics data about every checked exam

## 13. System performs an automatic cheating test

ID: REQ039

## 14. System notifies the teacher when suspected of cheating




ID: REQ039.REQ040

## 15. Test system cheating mechanism

### 15.1. Test Plans

Steps	Procedures	Expected Results
1. Take the same exam and fill and same answers(right or wrong)	Press take exam twice, fill the form with the same answers and the same mistakes,submit the form.	The teacher receives a cheating suspicion notification.

### 15.2. Relationships

Relationship	From	To
 unnamed	 <a href="#">Test system cheating mechanism</a>	 System performs an automatic cheating test