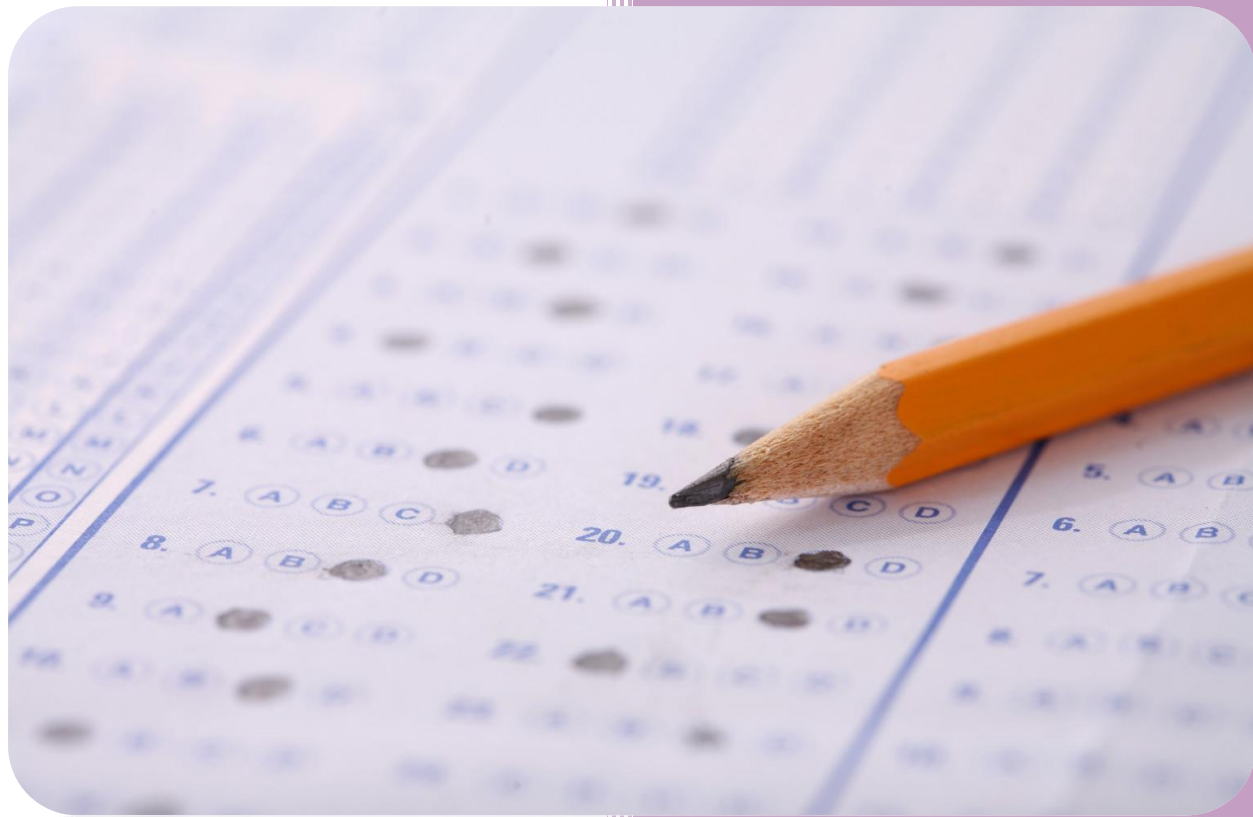


2015

Newdle System - Requirement specification



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Table of Contents

Glossary	2
Business rules	4
Constraints Rules	4
Operation Constraint Rules	4
Structure Constraint Rules	4
Stimulus and Response Rules	4
Derivation Rules	5
Inference Rules	5
Computation Rules	5
Domain model	6
Use Case Diagram	7
Use Case Specifications:	8
Report Effects Achievements	8
Manage Course Effect	9
Manage Test	10
Manage Question	12
Define course effect	14
Manage Test	16
Manage Question	18
Report Effects	20

Glossary

Name	Alias	Description
Administrative Stuff	Administrator, Admin	Person who manage all the information of the System: student's accounts teacher's accounts course's information
Answer		Is the solution of a question introduce for the student in a test,
attempts Test		Is the number times that a student does the test.
Close	Close question, Multiple choice question	Question with different options defined by the teacher, with only one right question
Course Effect		Describe a skill or set of skills that should be covered by all the questions that exist in the course.
Dean secretary		Person who work at the University.
Edmodo LMS		LMS whose helps connect all learners with the people and resources they need to reach their full potential.
Edukatja		Is the system that is working in the University of Wroclaw, used by student and teacher
Evaluation criteria		The evaluation criteria is/are in accordance with the objectives stated at the beginning.
Faculty	Department	Faculty is a division within a university comprising one subject area, or a number of related subject areas.
Faculty Effect		Describe a skill or set of skills that should be succeed by all students of that faculty independently of course which the student is enrolled.
Gap	Gap question	Question defined by the teacher, which the user have to fill up with text.
Moodle		Learning management system for online learning
Open	Open question	Question who the user already access and read
Program committee		Group of teachers who define faculty effect
Question	questions	Is all the part of the test
Rector		Responsible of all legal aspects
Right question	Right answer	Choice selects by the student, form part of the multiple choice question.
Score	mark	Performance on an examination or test, expressed by a number or other symbol.
Student		Person who is enrol in the subject
Subject	Asignature, Course	A branch of knowledge as a course of study that the teacher teach to the student

Teacher	Professor	Person who work at the University, Prepare the test, define the evaluation criteria and evaluate the test.
Test	examination	A series of questions or problems designed to test a specific skill or knowledge of the student
Test Template		The Exam contains only the questions.
University		Is the institution of higher education having authority to award bachelors' and higher degrees
User	Users	This term include both common clients of the application, teacher and student, which have common attributes.

Business rules

Constraints Rules

Operation Constraint Rules

- All Users (Student, teacher, Administrative stuff and program committee) must introduce correctly their email and password, to enter in the system.
- The differences between the start time and end time in the tests are defined by the teacher, and have to be between half hour and 5 hours.
- To add a course effect is necessary to have at least one course available in the system.
- To add a faculty effect is necessary to have at least one faculty available in the system.
- The students only could do tests of subjects that are enrolled.

Structure Constraint Rules

- The student has a unique id.
- Every course has a unique id.
- Every faculty has a different name.
- Every faculty has a different id.
- The users (Student, teacher, Administrative stuff and program committee) have a unique email.
- Every Course Effect has a unique name for each course.
- Every Faculty Effect has a unique name for each faculty.
- The teachers have a unique id.
- Every course has between 3 and 30 ECTS.
- The sizes of the name of the subjects have between 10 and 25 characters.
- The age of the students have to be more than 16 and less than 65.
- The teachers only could do test of the subject/s that are in their Faculty.
- A Test may have two types of the different questions, close and gap.

Stimulus and Response Rules

- When the Teacher selects generate report, the system creates automatically a report with the different statistics of course effects in the course selected.
- When a student access to one question in one test, it is marked as "open".
- When users login in the system, in redirect them automatically to their interface (Student, teacher, Administrative stuff or program committee interface).

Derivation Rules

Inference Rules

- If the percent of right answers of question in a test for a student is greater than 50% then the evaluation criteria is equal to pass
- If the percent of right answers of question in a test for a student is greater than 70% then the evaluation criteria is equal to great
- If the percent of right answers of question in a test for a student is lower than 50% then the evaluation criteria is equal to fail.
- If the question have just one right option and the student choose it, the subcriteria is "onehundred".
- If the question have two right option and the student choose them, the subcriteria is "onehundred".
- If the question have two right option and the student choose one of them, the subcriteria is "fifty".
- If the question have one or two right option and the student don't choose all or choose any wrong answer, the subcriteria is "zero".

Computation Rules

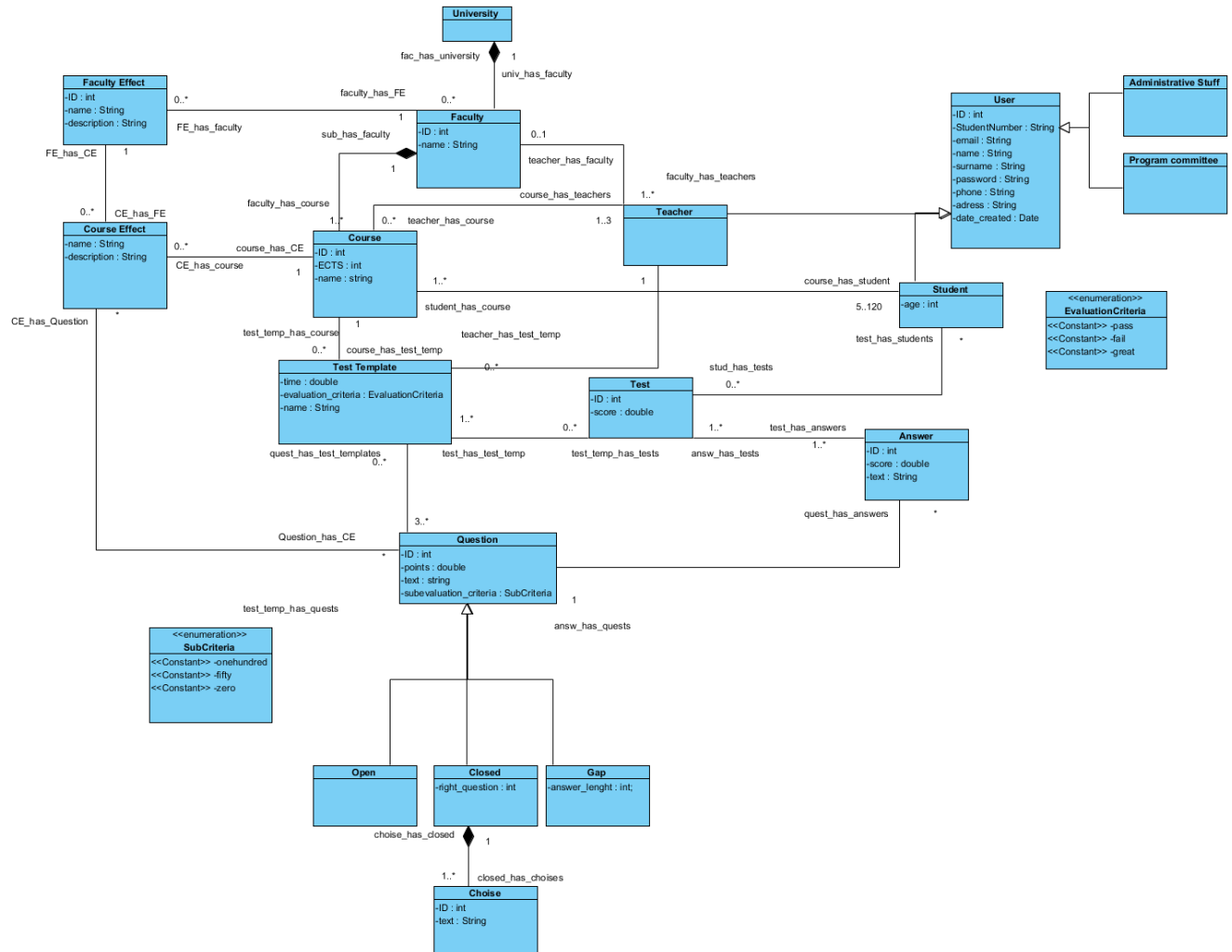
- The evaluation criteria of one test of the student is calculated as the sum of every score of every question.
- The subcriteria of a question in one test is calculated as the sum of every point of every right option minus the sum of every point of every wrong option.

BASED ON:

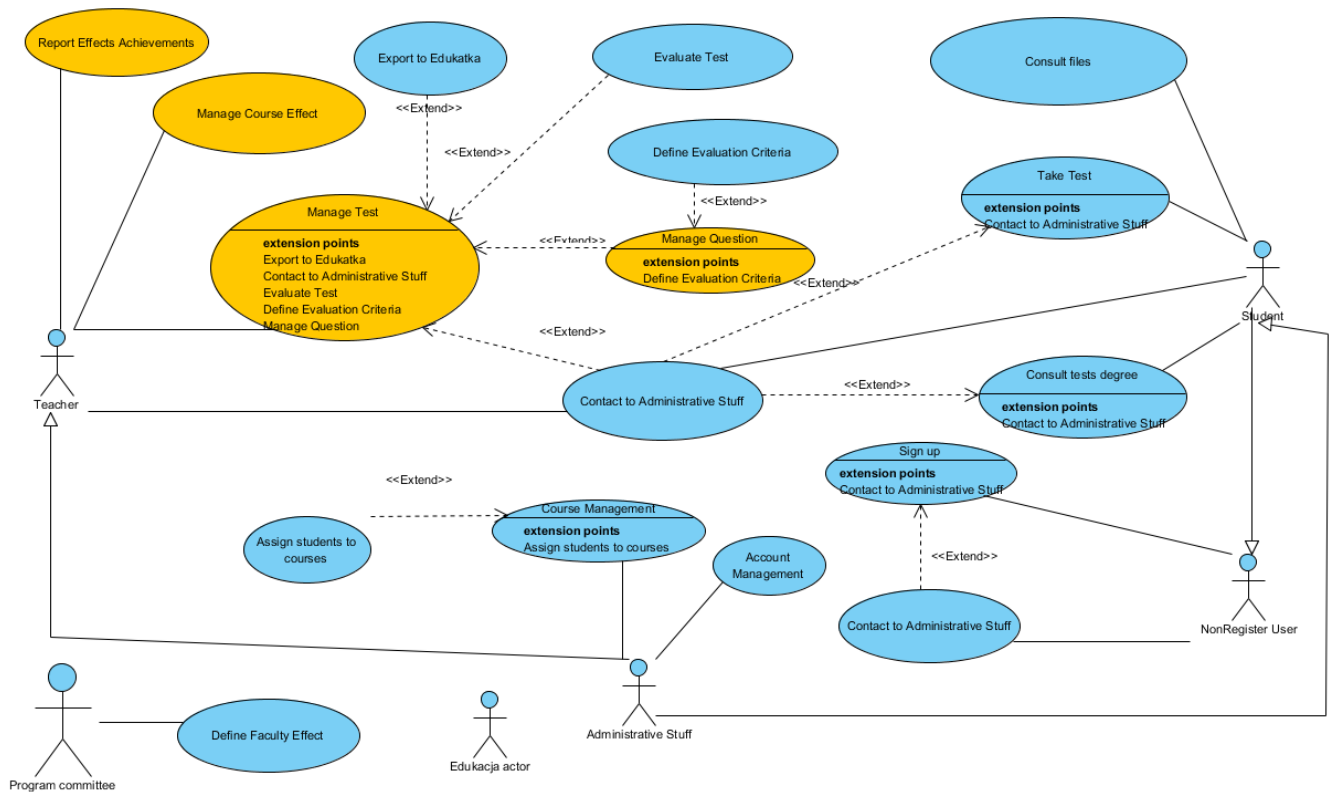
ODELL, JAMES J. **ADVANCED OBJECT-ORIENTED ANALYSIS AND DESIGN USING UML**. CAMBRIDGE: CAMBRIDGE UP, 1998. PRINT. [Link](#)

RATIONAL SOFTWARE CORP. "GUIDELINES: BUSINESS RULES." **GUIDELINES: BUSINESS RULES**. RATIONAL SOFTWARE CORP., N.D. WEB. 26 APR. 2015. [Link](#)

Domain model



Use Case Diagram



Use Case Specifications:

Report Effects Achievements

Use Case ID	UC-9: Report Effects Achievements	
Primary Actor	Teacher	
Secondary Actor(s)		
Brief Description	Allow to the teacher generates a report in order to check the suces effects by students in one course.	
Preconditions	PRE-1. Teacher is logged on the system.	
Flow of Events	Actor Input 1 Teacher selects generate report 2 3 Teacher selects course 4	System Response System allow the action, and ask which course showing a list of them System presents the report to the teacher
Post-conditions	POST-1 The new report is created in the system	
Source		
Author	juampi	
Date	20-abr-2015 11:32:40	

Manage Course Effect

Use Case ID	Use Case ID UC-5: Define Course Effect																
Primary Actor	Teacher																
Secondary Actor(s)																	
Brief Description	Teachers create a short description/definition about the different course effects which the students have to complete to pass.																
Preconditions	PRE-1. Teacher is logged on the system.																
Flow of Events	<table><thead><tr><th></th><th>Actor Input</th><th>System Response</th></tr></thead><tbody><tr><td>1</td><td>Teacher selects create new course effect</td><td></td></tr><tr><td>2</td><td></td><td>System asks course_effects _details</td></tr><tr><td>3</td><td>Teacher provide the information and save it</td><td></td></tr><tr><td>4</td><td></td><td>System validate and save the information</td></tr></tbody></table>			Actor Input	System Response	1	Teacher selects create new course effect		2		System asks course_effects _details	3	Teacher provide the information and save it		4		System validate and save the information
	Actor Input	System Response															
1	Teacher selects create new course effect																
2		System asks course_effects _details															
3	Teacher provide the information and save it																
4		System validate and save the information															
Post-conditions	POST-1 The new course effect is created in the system																
Alternative flows and exceptions	Alternative flows: 4.1 Teacher make a mistake in the format of the course_effects_details information. 5. System shows an error advice. 6. Return to step 2																
Author	juampi																
Date	20-abr-2015 11:43:49																
Data Package	course_effects _details: - name: String updatable. Max lenght 200 chars - description: String updatable. Max lenght 200 chars - course: String updatable. Max lenght 200 chars.																

Manage Test

Use Case ID	UC-2: Manage Test Details	
Primary Actor	Teacher	
Secondary Actor(s)		
Brief Description	Teacher create/delete/update a new test in one of the subjects.	
Preconditions	PRE-1. Teacher is logged into the system.	
Flow of Events	<div> <div>Actor Input</div> <div>System Response</div> </div> <ol style="list-style-type: none"> Teacher selects Manage Test. Teacher selects the subject to do the test. Teacher selects create test. Teacher saves the test. 	<ol style="list-style-type: none"> System displays his subjects. System displays the options to manage the test. System call to Use Case Manage Question, to create the questions of the test. System validates all the changes and save it.
Post-conditions	POST-1. The new Test is created in the System.	
Alternative flows and exceptions	<p>Alternative Flows:</p> <p>5.1. Evaluate Test</p> <ol style="list-style-type: none"> Teacher selects the option to evaluate test. System displays the list of test the students (Use Case Evaluate Test). <p>5.2. Delete Test</p> <ol style="list-style-type: none"> Teacher selects delete test System displays the list of tests that exists. Teacher selects the test to be removed. 	

	<p>4. System remove selected test.</p> <p>5.3. Manage Question</p> <p>1. Teacher selects the option to manage question.</p> <p>2. System displays the form to create the questions (Use Case Manage Question).</p> <p>5.4. Update Test</p> <p>1. Teacher selects update test</p> <p>2. System displays the list of tests that exists.</p> <p>3. Teacher selects the test to be updated.</p> <p>4. System asks information_Test_Details</p> <p>5. Teacher provide the information and save it.</p> <p>6. System validate and save the information.</p>
Author	Juampi
Date	28-nov-2014 1:39:38
Data Package	<p>Information Test Detail:</p> <ul style="list-style-type: none"> - nameTest: String updatable. Max lenght 200 chars - time: double updatable. - questions[] : String updatable. Max lenght 200 chars

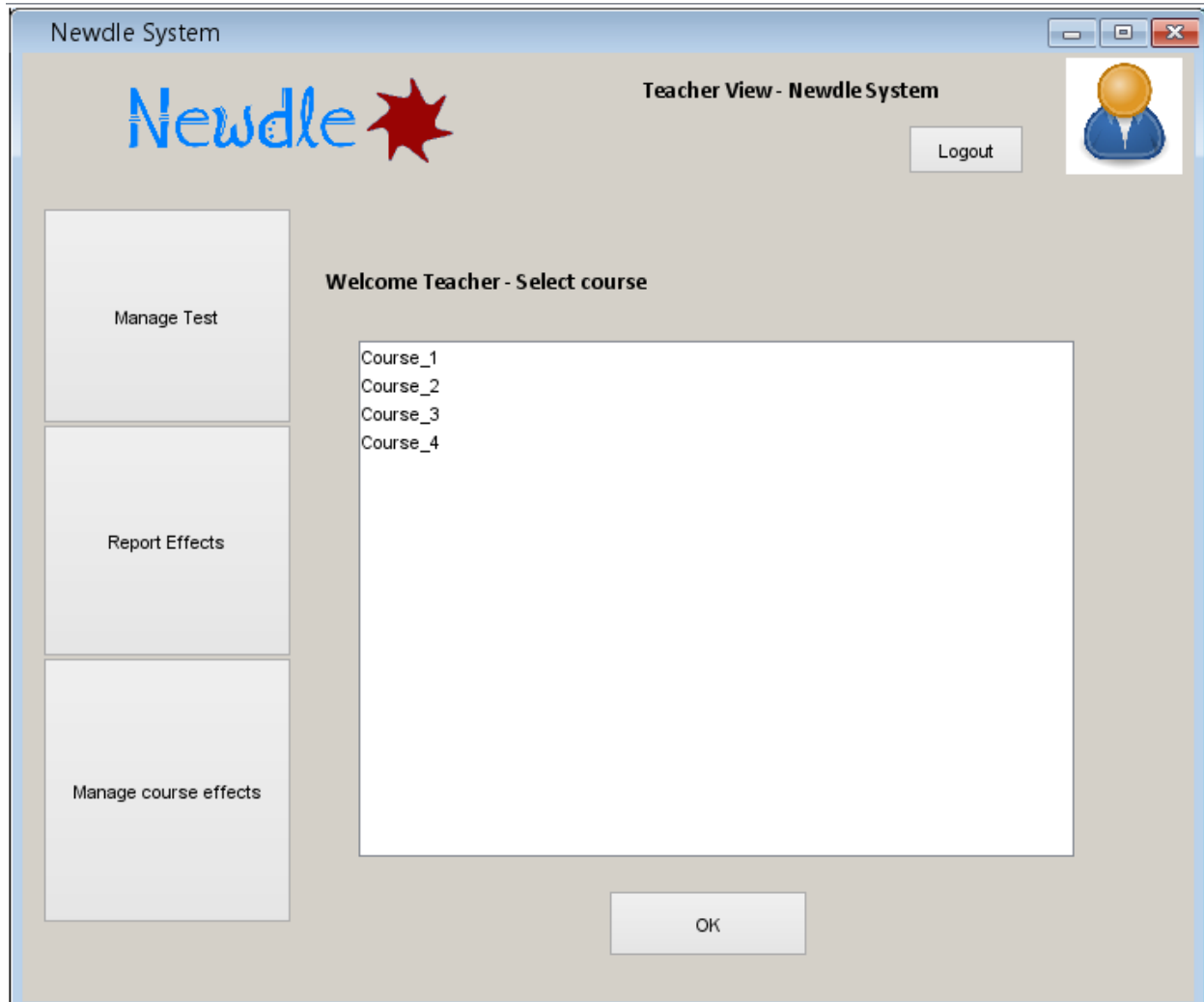
Manage Question

Use Case ID	Use Case ID UC-3: Manage Question	
Primary Actor	Teacher	
Secondary Actor(s)		
Brief Description	Teacher access to the System, select create new question, and fill the information about it.	
Preconditions	PRE-1. Teacher is logged on the system.	
Flow of Events	Actor Input	System Response
	1 Teacher selects Manage Question	
	2	System allow the action, and show the list of options
	3 Teacher selects create new question	
	4	System asks for the question type
	5 Teacher selects close question and the number of answers	
	6	System asks for the close_question_details
	7 Teacher provide the information and save it	
	8	System validate and shows a list of the course effects that exist
	9 Teacher selects one or more course effects	
	10	System validate and save the information
Post-conditions	POST-1 The new question is created in the system	
Alternative flows and exceptions	Alternative flows: 1.1 Create Gap Question 5 Teacher select gap question 6. System asks for the gap_question_details 7. Return to step 7 of normal flow 1.2 Edit Question	

	<p>3. Teacher selects edit a question</p> <p>4. System allow the action, and ask for the updated information (close_question_details or gap_question_details) depends on the type.</p> <p>5. Return to step 7 of normal flow</p> <p>1.3 Delete Question</p> <p>3. Teacher selects a question to delete, and confirm it.</p> <p>4. System process the request, and update the model.</p>
Author	juampi
Date	28-nov-2014 1:37:49
Data package	<p>close question details:</p> <ul style="list-style-type: none"> - question: String updatable. Max length 200 chars - answers: String[] updatable. Max length 200 chars - right_answer: int updatable; - points: double updatable. Max length 200 chars - course_effect_assigned: String[] updatable. Max lenght 200 chars <p>gap question details:</p> <ul style="list-style-type: none"> - question: String updatable. Max length 200 chars - answer_lenght: int updatable. - course_effect_assigned: String[] updatable. Max length 200 chars

User-interface prototype

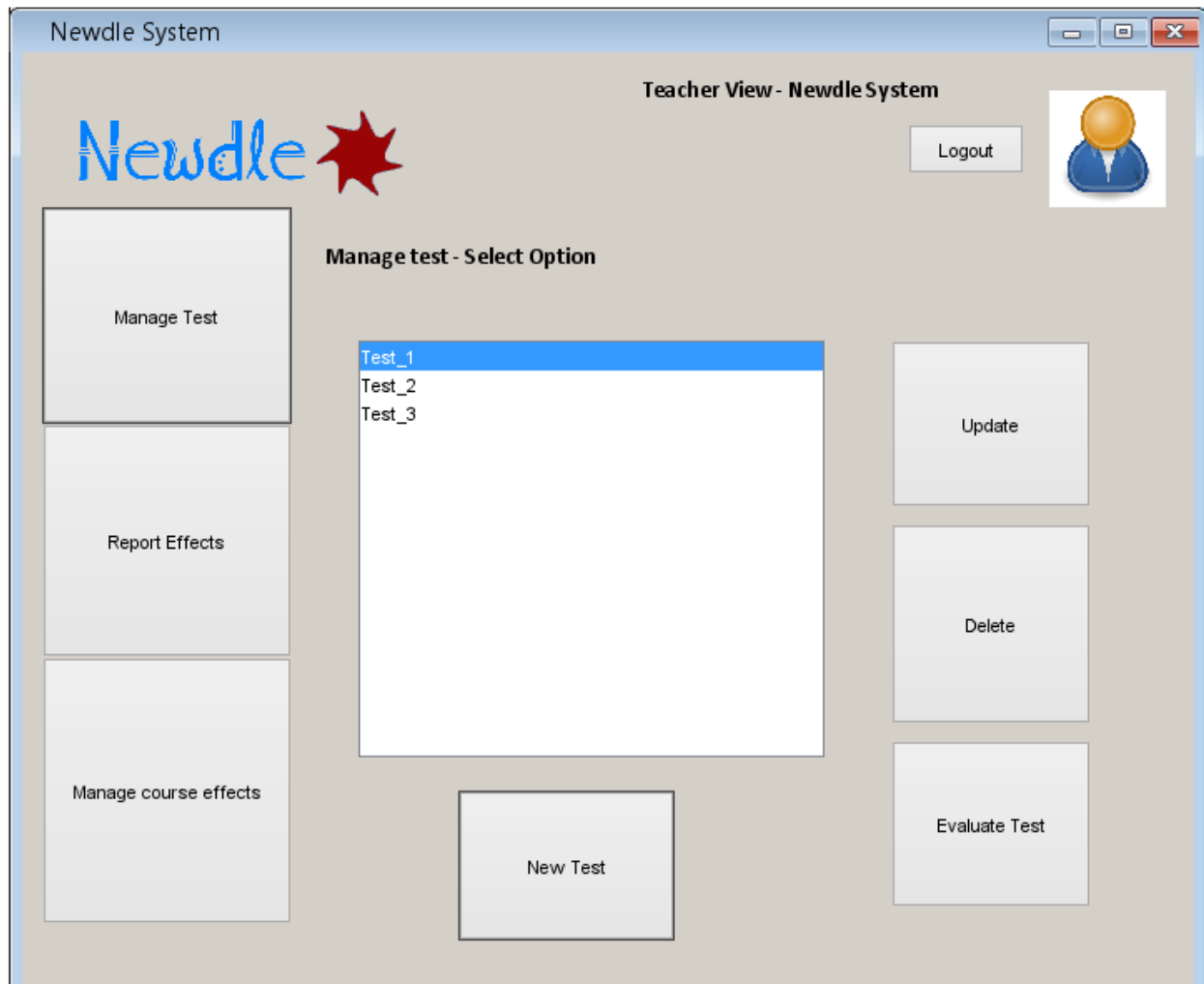
Define course effect



The screenshot shows a web application window titled "Newdle System". The header area includes the "Newdle" logo with a red star icon, the text "Teacher View - Newdle System", a "Logout" button, and a user profile icon. A left sidebar contains three buttons: "Manage Test", "Report Effects", and "Manage course effects". The main content area is titled "Define Course Effect Details" and contains two input fields: "Name:" with the value "Name 1" and "Description:" with the value "description 1". A "Submit" button is located below these fields.

The screenshot shows an "Alert" dialog box with a light blue header. The main text area displays the message "Course Effect submit succeed." in bold. At the bottom center, there is an "OK" button.

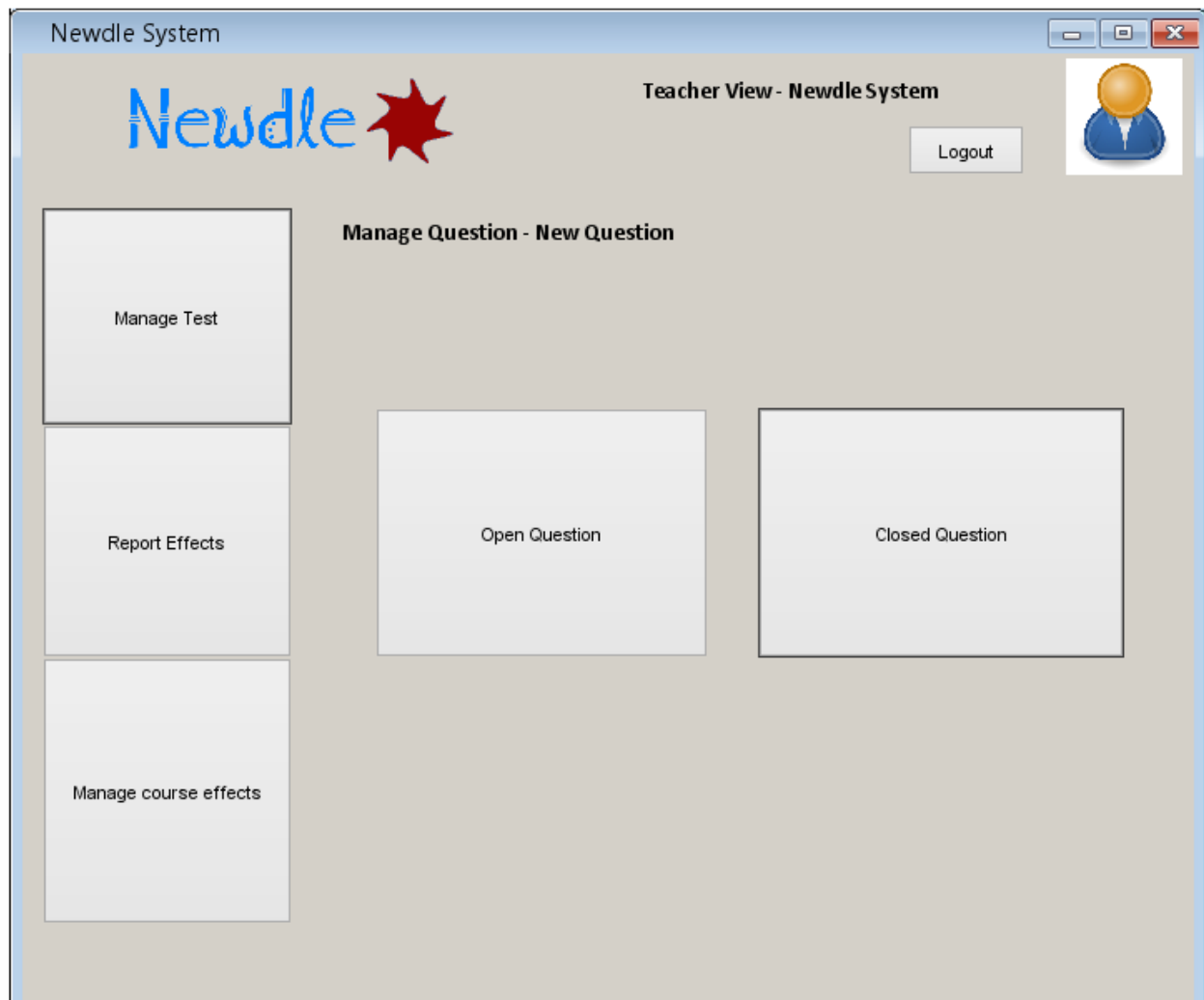
Manage Test



The screenshot shows the 'Teacher View - Newdle System' window. On the left is a sidebar with three buttons: 'Manage Test', 'Report Effects', and 'Manage course effects'. The main area is titled 'Manage Test - New Test' and contains a 'Name:' field with 'Name 1' and a 'Time:' field with '2:30'. Below these is a 'List of questions' section with a list box containing 'Question_1', 'Question_2', 'Question_3', 'Question_4', and 'Question_5'. To the right of the list box are 'Remove Question' and 'Edit Question' buttons. At the bottom left of the main area is a 'New Question' button, and at the bottom right is a 'Submit' button. A 'Logout' button and a user profile icon are in the top right corner. The Newdle logo is in the top left.

The screenshot shows an 'Alert' dialog box with a light gray background. It contains the text 'Test Submit Succeed !' in bold. Below the text is a single 'OK' button.

Manage Question




Manage Test


Report Effects

Manage course effects

Newdle System

Newdle

Teacher View - Newdle System



Logout

Manage Question - New Closed Question

Question_1 :

Example_of_question_1

Answers:

Answer_1
Answer_2
Answer_3
Answer_4

Right Answer:

Answer_2

Points:

Number_of_points

Course Effect Assigned:

CF_1
CF_2
CF_3

Submit

Report Effects

