

TR/RADCON/2007.6/Nada.3

Prepared By

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1 System Overview

1.1 System Architecture

1.1.1 Physical Architecture

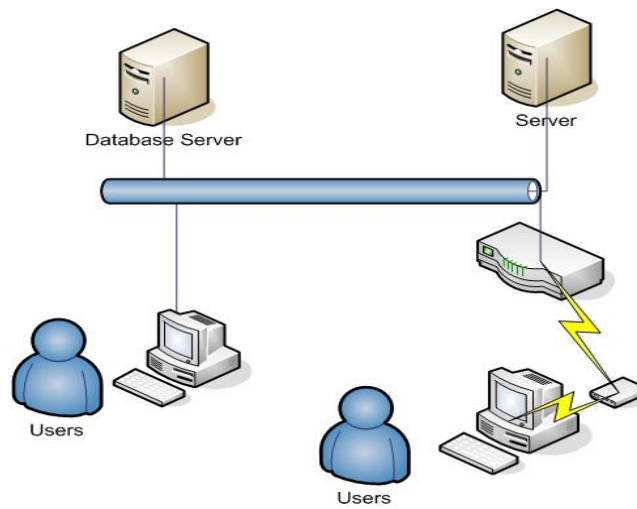


Figure 1 the Physical Architecture

The system is web based and it can be accessed from any place in the world. The application will be put on the server and the database will be in another server.

1.1.2 High Level Logical Architecture

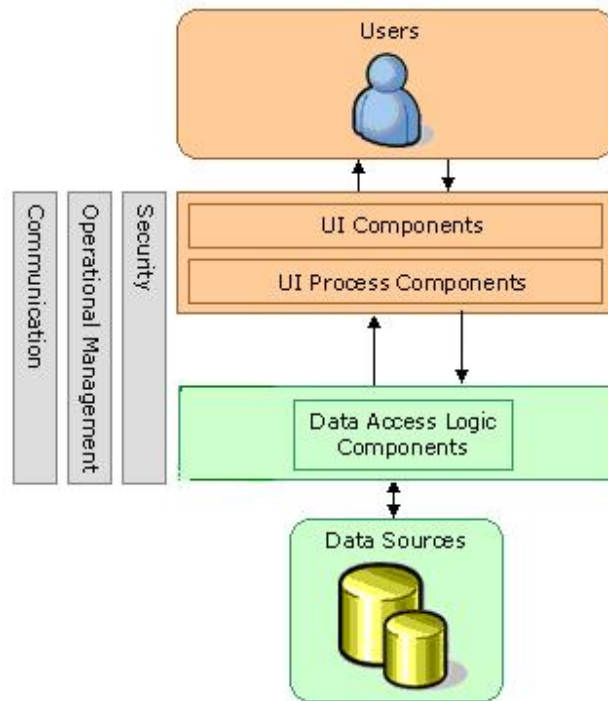


Figure 1 the High level logical architecture

Users will interact with the system through user interface component. We will have two types of users: backend users and front-end users. The backend users have the responsibility for managing the content of the web site. The front-end users include all site visitors.

User interface process component will have the responsibility to check user privileges and to communicate with the database through data access logic component

1.1.3 Domain Object Model/Class Diagram

Class diagram for towards an environment Module

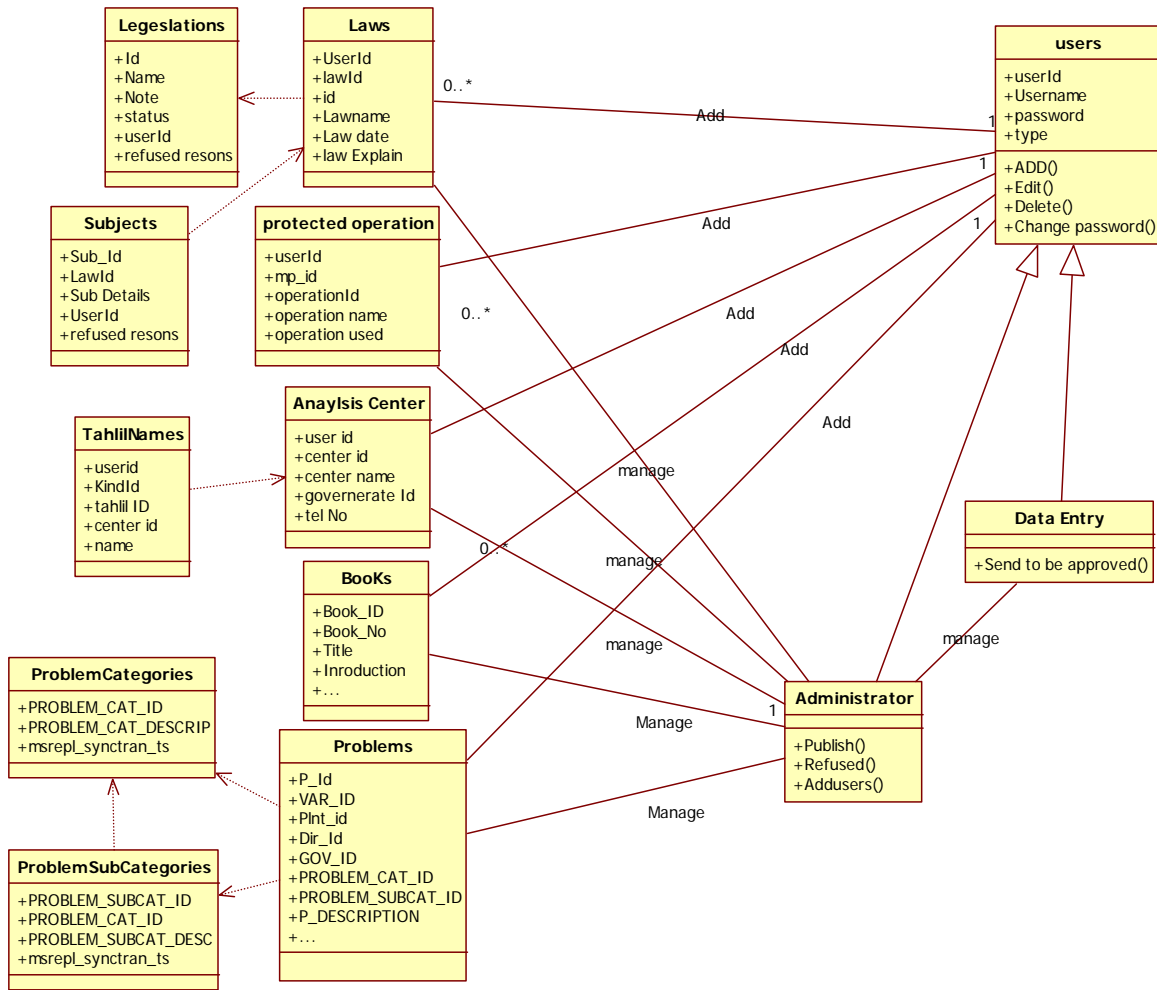


Figure 3 the Class diagram

1.1.4 Towards a clean Environment system Database

The database (DB) for Environment system module .Figure (1) shows Entity relationship diagram for the database

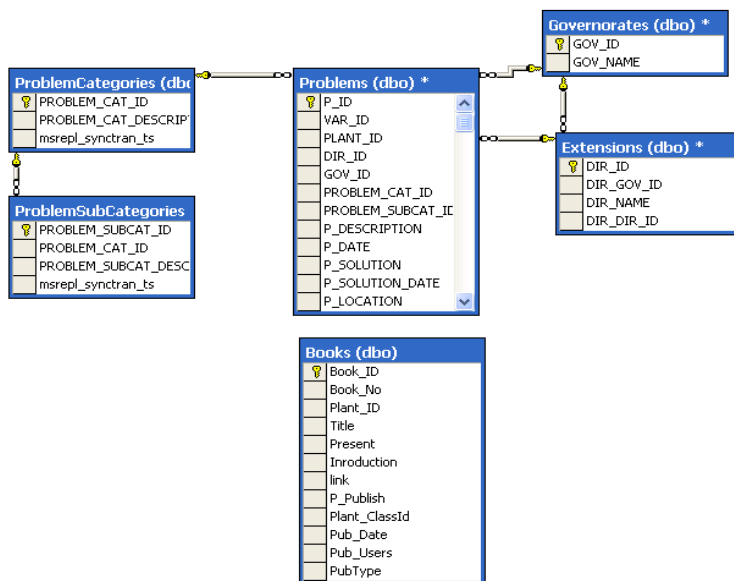
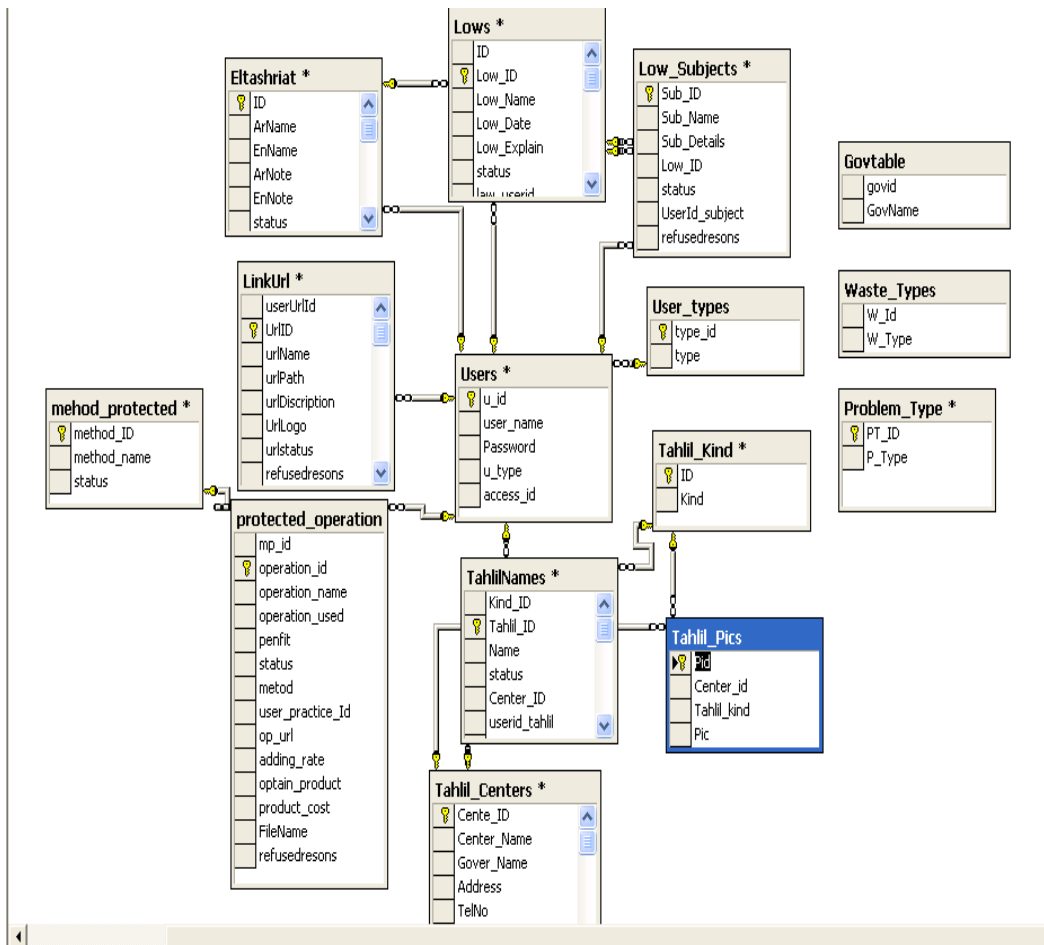


Figure 2 Entity relationship diagram for Environment database design

1.1.5 Data Diagram

1.2 System State & Configuration

1.2.1 System Configuration

```
<appSettings>
  <add key="Env_UploadFolder" value Upload/EnvImages" />
</appSettings>
<connectionStrings>
<add name="EnvironmentConnectionString" connectionString=" Data Source=192.168.1.40;Initial
Catalog=environment;User ID=envuser;Password=envpass" providerName="System.Data.SqlClient"/>
<add name="VerconConnectionString" connectionString=" Data Source=192.168.1.40;Initial
Catalog=GlobalVerconDBSQL;User ID=verconuser;Password=claes2002"
providerName="System.Data.SqlClient"/>
</connectionStrings>
  <system.web>
    <pages styleSheetTheme="SkinFile" theme="SkinFile"></pages>
```

1.2.2 External Inputs

- In our module we use VERCON website in uploading the full text of the environment extension document. The following link is used to upload environment pollution and recycle wastes as an environment extension document <http://www.vercon.sci.eg/aindexui/indexdocayman.asp>
- In our module we use VERCON backend for adding environment problems and follow up these problem to be solved and published to my module http://www.vercon.sci.eg/farm_entryNew/main.asp

1.3 State charts for the workflow

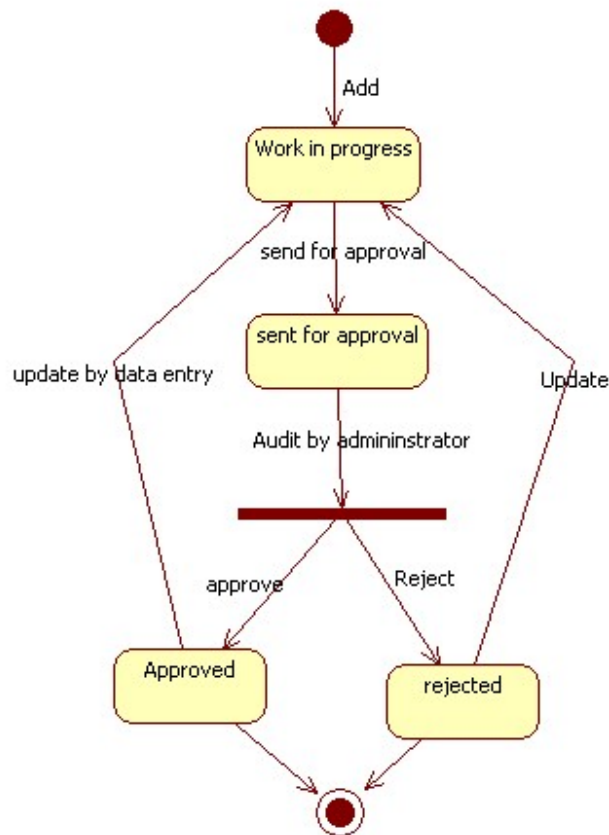


Figure 3 State chart diagram for the objects at environment module

This state chart diagram describes the work flow of the system. AT the first step the object for example **clean agriculture** will be added. After that the data entry will send the object to be approved then the state of the object will be **“sent for approval”**. The administrator will audit the object and then decide either to approve or reject the object. If the object has been approved by the administrator the state of it will be **“Approved”** else it will be **“Rejected”**.

2 Sub Module - Environment Extension Documents

Module Name	Environment extension documents
Module Description	This module contains two types of extension documents (environment pollutions ,recycle wastes)
Reuse	<input type="checkbox"/> Written from scratch <input type="checkbox"/> use external module
Notes	use external module at VERCON To upload the full document of Environment extension documents

2.1 Structure chart / Class diagram for Environment extension documents

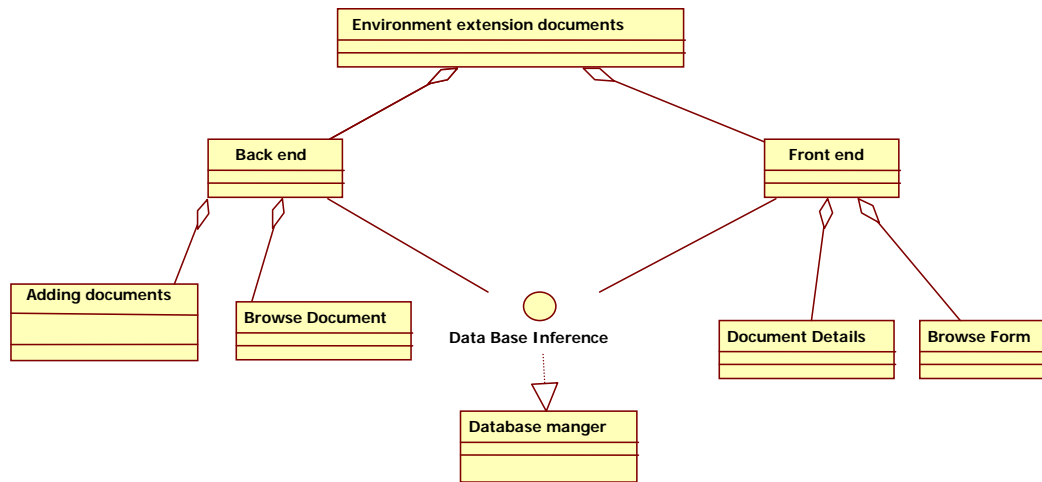


Figure 6 Structured Chart for Environment extension documents

2.2 Portlet: Browsing Environment extension documents form at backend

Portlet Name	Browsing Environment extension documents
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	no
Depends on Database Tables(VERCONDatadabase)	Yes, Books, Users, Status
Source File(s)	All_Nashrate.aspx
Notes	

2.2.1 Component diagram for browsing Environment extension documents

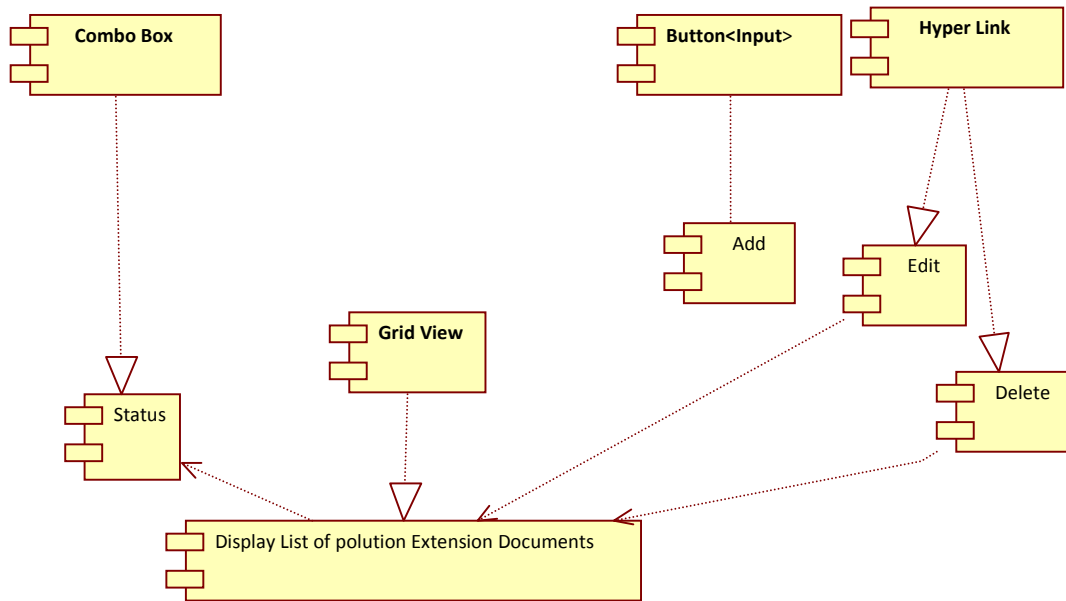


Figure 7 Browse Environment extension documents at backend

2.2.2 Interaction diagram for browsing Environment extension documents

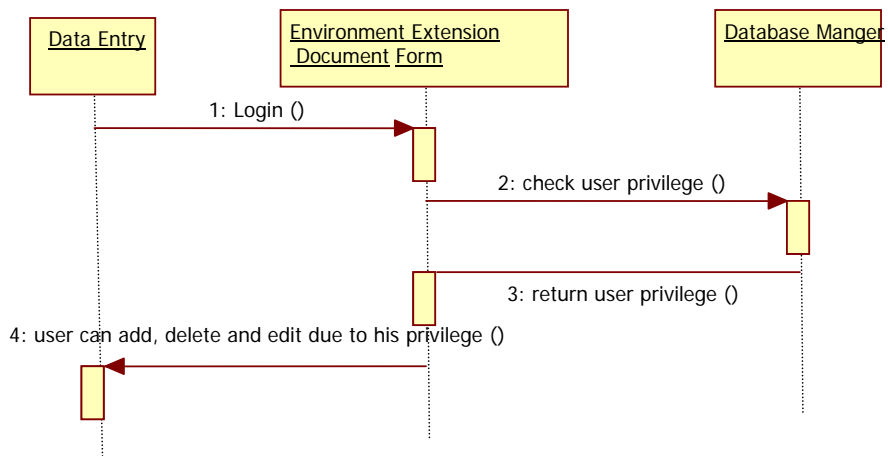


Figure 8 Sequence diagram for browsing Environment extension documents

2.2.3 Graphical user interface

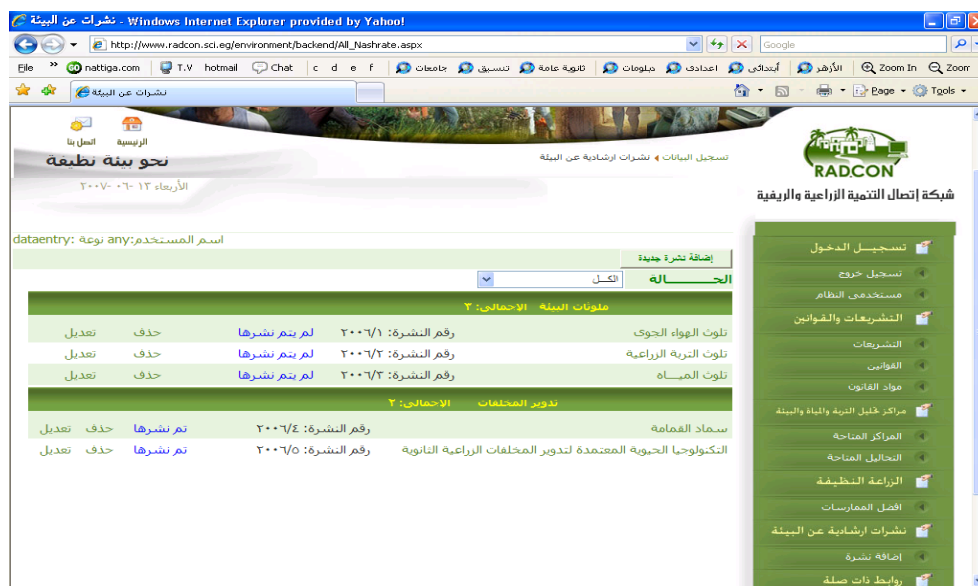


Figure 9 snapshot of search environment extension document

2.2.4 Unit tests

Name	Test Cases
Display Environment extension documents that has status "لم يتم نشرها"	<ol style="list-style-type: none"> 1. Log on the web application 2. Click on "نشرات ارشادية" link 3. Select status "لم يتم نشرها" <p>Expected output: the page should display all Environment extension documents that has been entered and which has not been published yet:</p>
Search for Environment extension documents	<ol style="list-style-type: none"> 1. Log on the web application 2. Click on "نشرات ارشادية" link <p>Expected output: the page should display all Environment extension documents which name contains the search term</p>

2.3 Portlet: Add environment Document Form

Portlet Name	Add new Environment extension documents
Portlet Function	
Reuse	<input type="checkbox"/> Depends on VERCON extension document Module
Depends on other Portlets?	Yes, Browsing Environment extension documents form at backend
Depends on Database Tables	Yes, Books,
Source File(s)	http://www.vercon.sci.eg/aindexui/indexdocayman.asp
Notes	Update VERCON extension document Module for adding Environment extension documents

2.3.1 Component diagram for Environment extension documents form

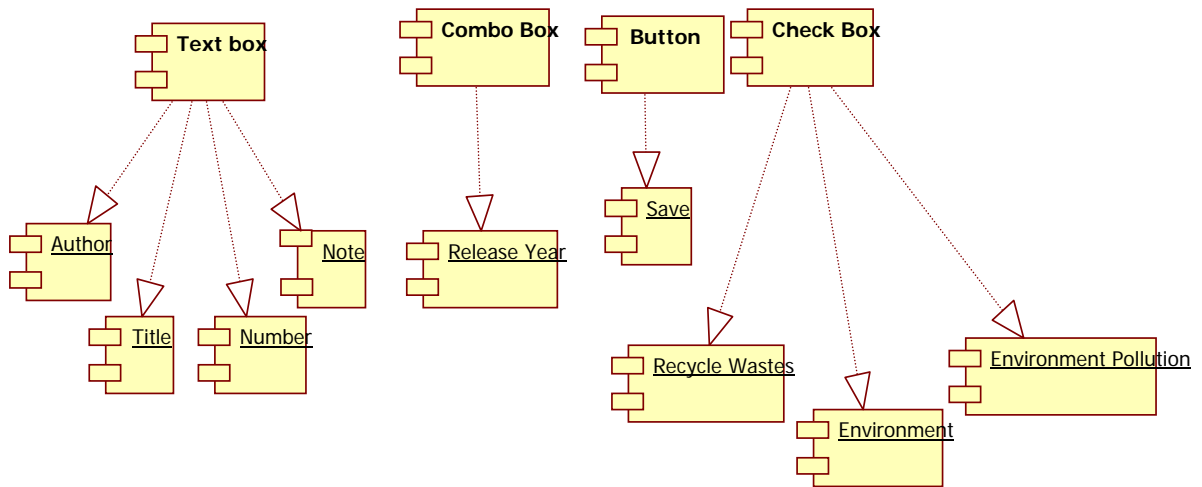


Figure 10 Component diagram for Environment extension documents form

2.3.2 Interaction Diagram

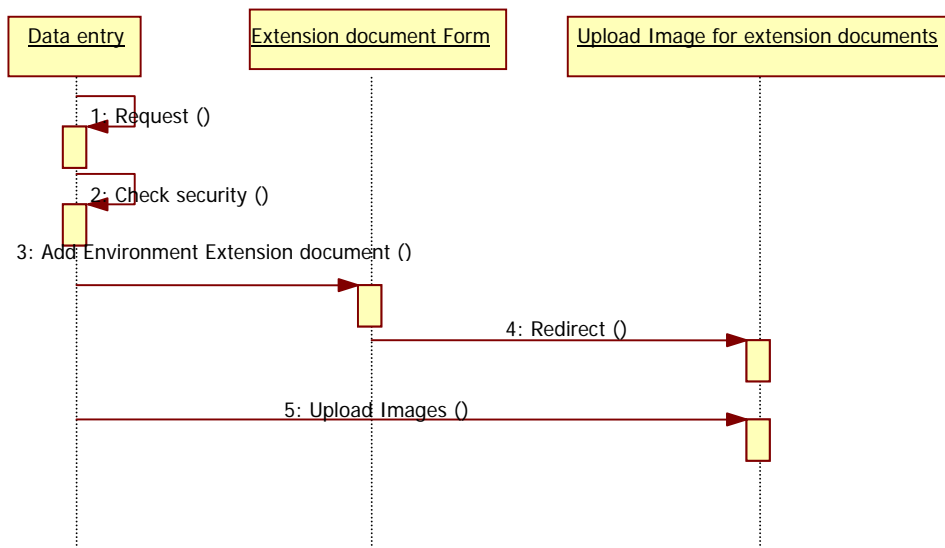


Figure 11 Sequence diagram for adding Environment extension documents

2.3.3 Graphical user interface

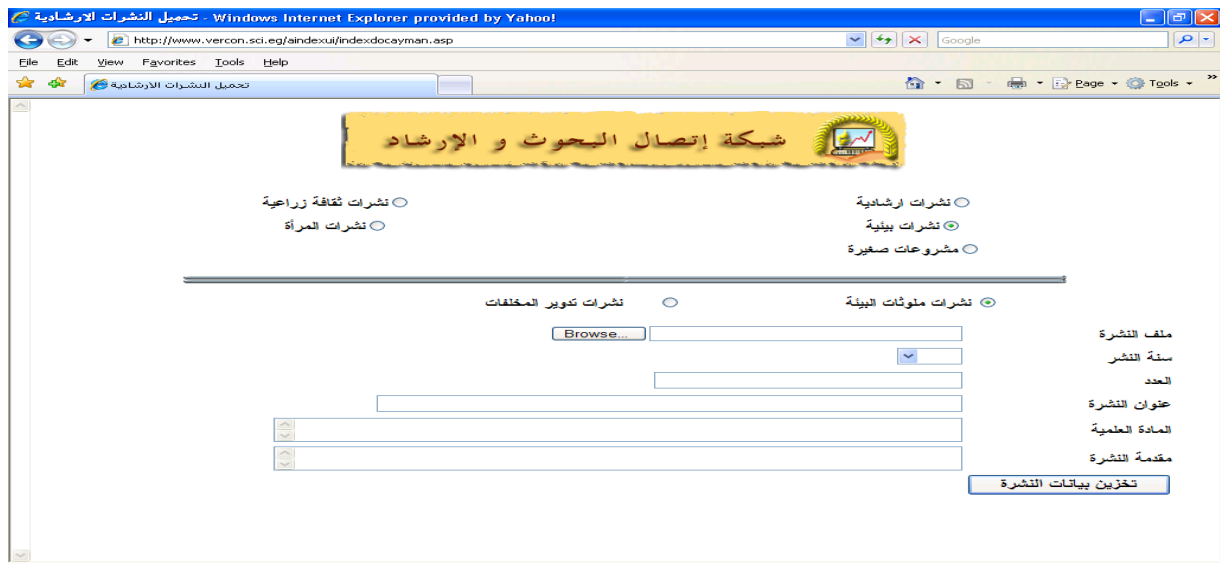


Figure 12 Snapshot for adding new Environment extension documents

2.4 Portlet - Browsing Environment extension documents at Front-End

Portlet Name	Browsing Environment extension documents
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Books, Status
Source File(s)	
Notes	Only the Environment extension documents that has been published will be displayed by this portlet

2.4.1 Component diagram for browsing Environment extension documents

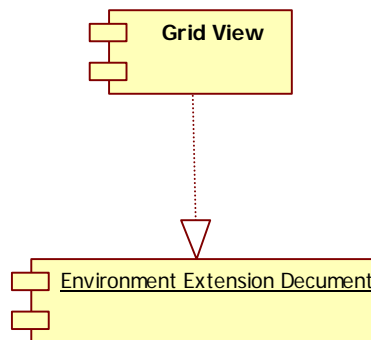


Figure 4 browse Environment extension documents at front-end

2.4.2 Graphical User Interface for browsing Environment extension documents



Figure 5 GUI for browsing Environment extension documents at front-end

2.4.3 Unit tests

Name	Test Cases
Browse published Environment extension documents	<ol style="list-style-type: none"> 1. Add Environment extension documents 2. publish it 3. Got to "نشرات ارشادية للبيئة" page at front end <p>Expected output: progress indication bar appears until processing finishes, then you're directed to the result page</p>

3 Sub Module - Clean Agriculture

Module Name	Clean Agriculture
Module Description	This module contains the best practice which the farmer perform on his field to get a clean and increasing production
Reuse	<input type="checkbox"/> Written from scratch
Notes	

3.1 Structure chart / Class diagram for Clean Agriculture

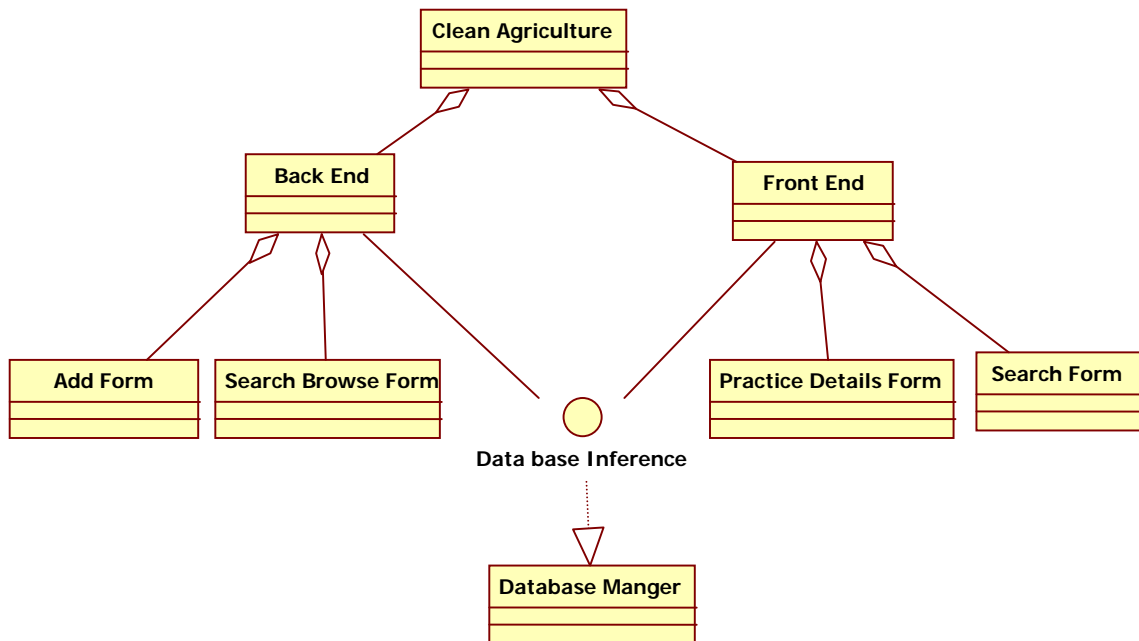


Figure 15 Structured Chart for Clean Agriculture

3.2 Portlet: Browsing Clean Agriculture form at backend

Portlet Name	Browsing Clean Agriculture
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, protected_operation, Users, User_types
Source File(s)	All_Practice.aspx
Notes	

3.2.1 Component diagram for browsing Clean Agriculture at Backend

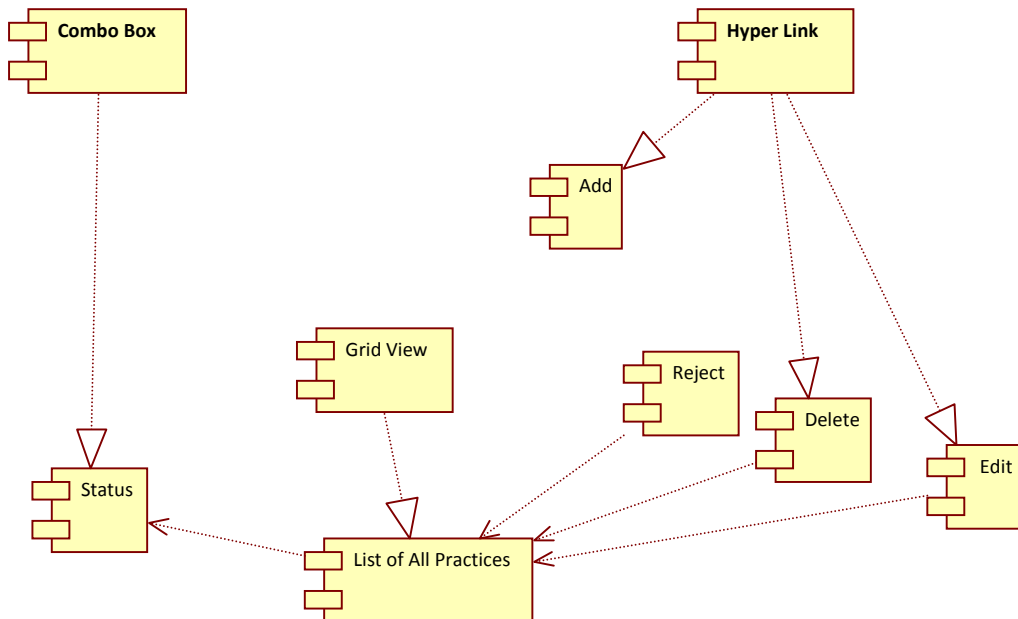


Figure 16 Browse Clean Agriculture at backend

3.2.2 Interaction diagram for browsing Clean Agriculture

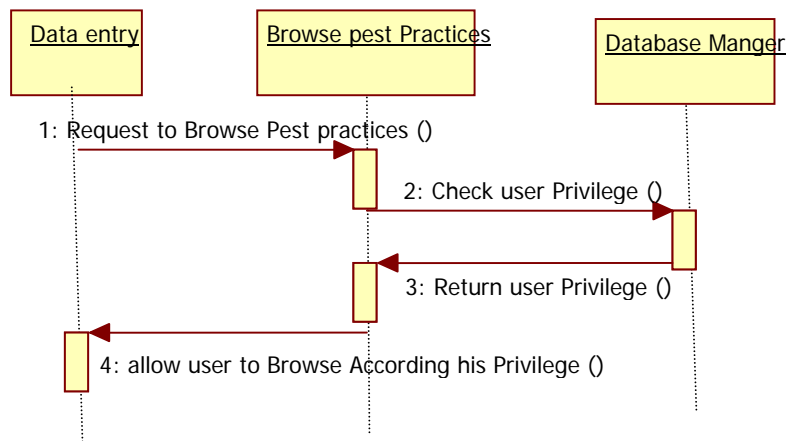


Figure 17 Sequence diagram for browsing Clean Agriculture

3.2.3 Graphical user interface



Figure 18 GUI for browsing Clean Agriculture at front-end

3.2.4 Unit tests

Name	Test Cases
Display Clean Agriculture that has status "لم يتم نشرها"	<ol style="list-style-type: none"> 1. Log on the web application 2. Click on "أفضل الممارسات" link 3. Select status "لم يتم نشرها" <p>Expected output: the page should display all Pest Practices that has been entered and which has not been published yet:</p>
Search for Clean Agriculture	<ol style="list-style-type: none"> 1. Log on the web application 2. Click on "أفضل الممارسات" link <p>Expected output: the page should display Pest Practices which name contains the search term</p>

3.3 Portlet: Add Pest Practice form at backend

Portlet Name	Add Pest Practice
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	Yes, Browse Clean Agriculture at backend
Depends on Database Tables	Yes, protected_operation, mehod_protected, Users, User_types
Source File(s)	Add_Protect_Opr.aspx
Notes	

3.3.1 Component diagram for Add Pest Practice at Backend

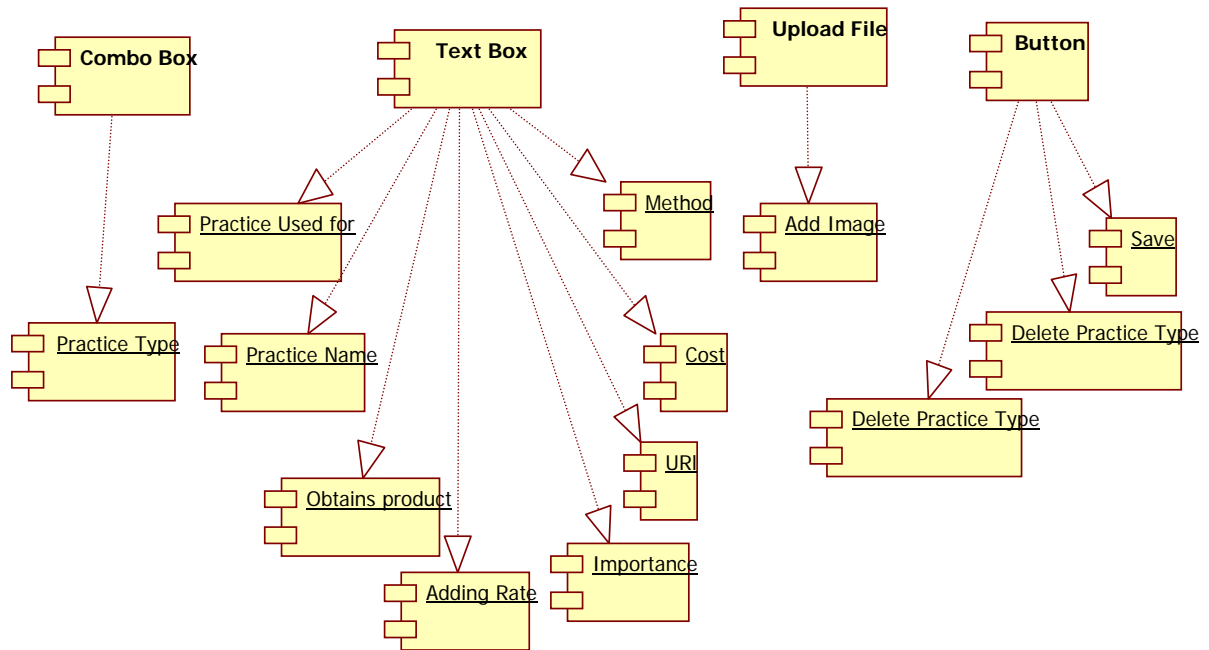


Figure 19 Add Pest Practice at backend

3.3.2 Interaction diagram for Adding Pest Practice

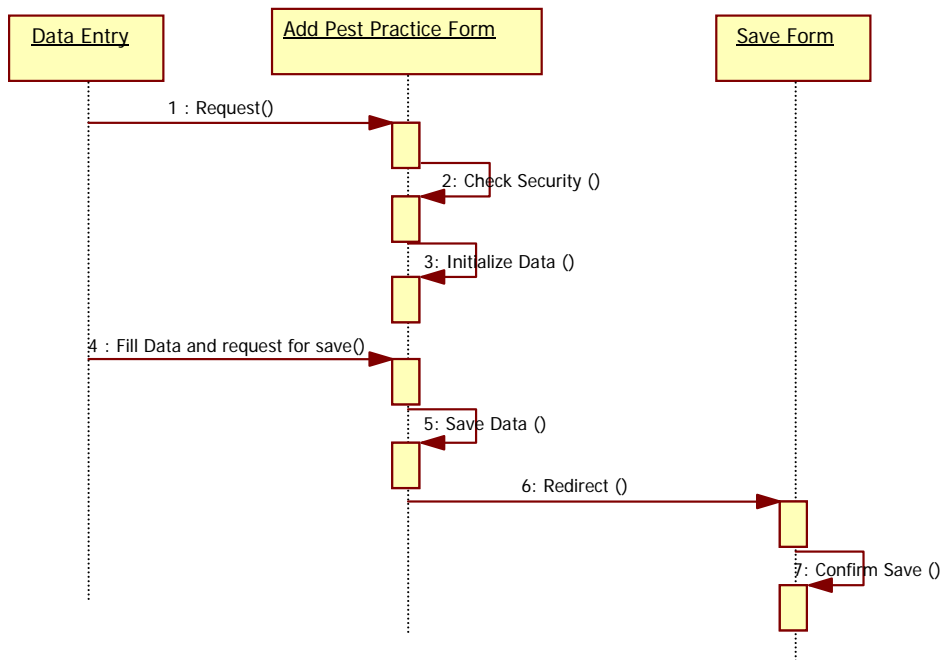


Figure 20 Sequence diagram for Adding Pest Practice

3.3.3 Graphical user interface

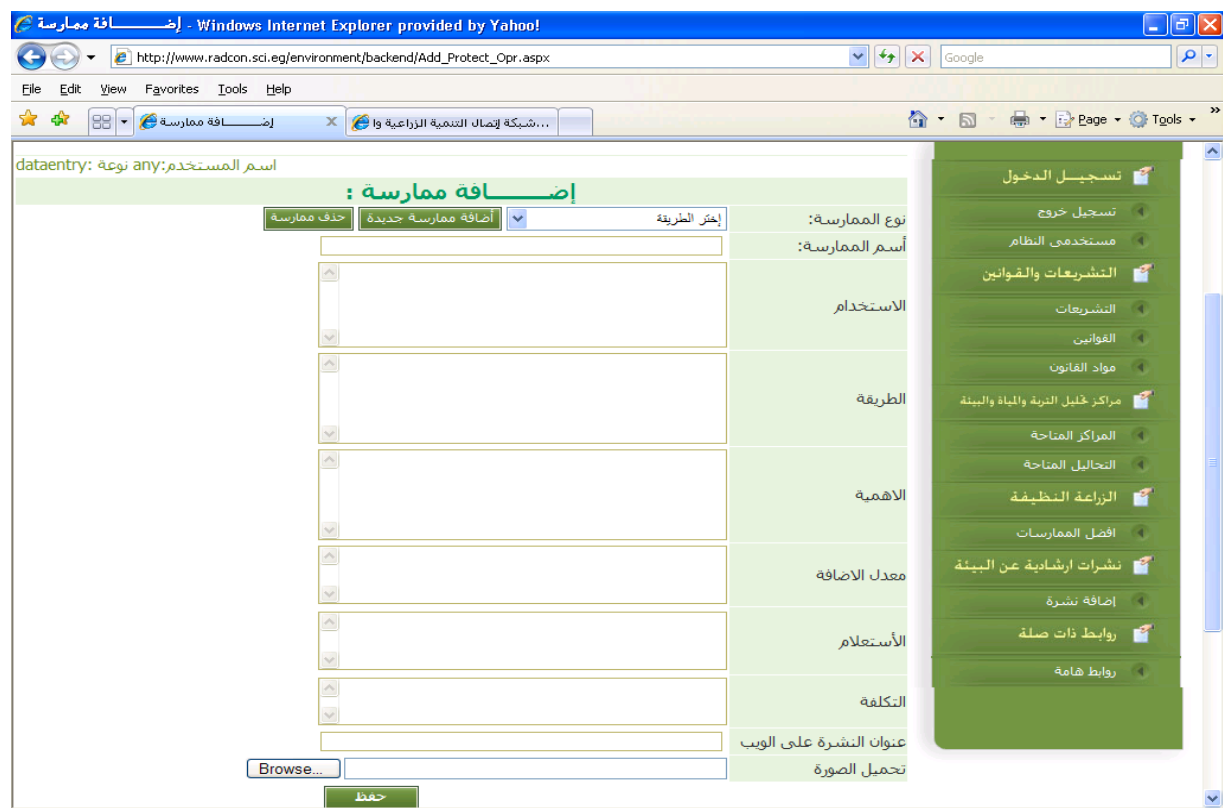


Figure 21 Snapshot for Adding Pest Practice at backend

3.3.4 Unit tests

Name	Test Cases
Adding Pest Practice	<ol style="list-style-type: none"> Log on the web application Click on “افضل الممارسات” link Click on “اضافة ممارسة جديدة” hyperlink Insert practice data <p>Expected output: progress indication bar appears until processing finishes, then you're directed to the “Pest practices” page</p>

3.4 Portlet – Search Clean Agriculture at Front-End

Portlet Name	Browsing Clean Agriculture
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, protected_operation, mehod_protected , Status
Source File(s)	claenagricultural.aspx
Notes	Only the Pest Practices that has been published will be displayed by this portlet

3.4.1 Component diagram for Search Clean Agriculture

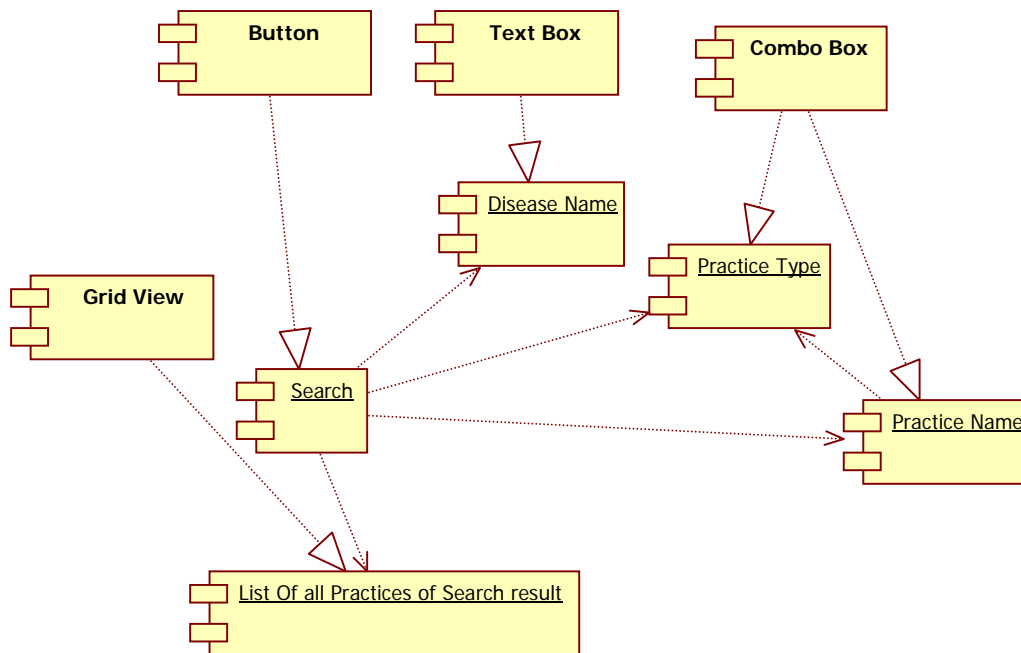


Figure 22 Search Clean Agriculture at front-end

3.4.2 Interaction diagram

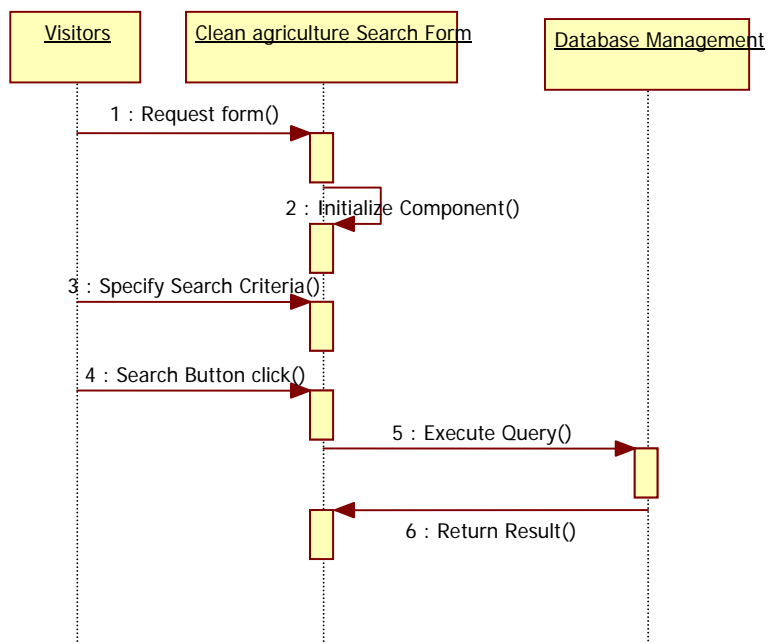


Figure 6 Sequence diagram for Search Clean Agriculture

3.4.3 Graphical User Interface for Search Clean Agriculture



Figure 7 snapshot Search Clean Agriculture

3.4.4 Unit tests

Name	Test Cases
Search Clean Agriculture	<ol style="list-style-type: none"> 1. Add Pest Practice 2. publish it 3. Go to "الزراعة النظيفة" page at front end 4. Select Practice type then click search button <p>Expected output: progress indication bar appears until processing finishes, then you're directed to the result page</p>
	<ol style="list-style-type: none"> 1. select "العمليات الزراعية" from practice type 2. click search button <p>Expected output: practices displayed are</p> <ul style="list-style-type: none"> • التبكير في الزراعة • العزيق • دفن الأخطاب • إزالة الحشائش المعمرة •
	<ol style="list-style-type: none"> 1. write "المن" in disease Name "اسم الآفة" 2. click search button <p>Expected output: practices displayed are</p> <ul style="list-style-type: none"> • التبكير في الزراعة • العزيق • إزالة الحشائش المعمرة • (الصابون المتعادل) بدائل المبيدات •

3.5 Portlet – Practice Details Form at Front-End

Portlet Name	Display Practice Details
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	Yes, Search Clean Agriculture
Depends on Database Tables	Yes, protected_operation, mehod_protected , Status
Source File(s)	claenagriculturalDetail.aspx?PracticId=14
Notes	Only the Pest Practices that has been Selected to displayed by this portlet

3.5.1 Component diagram for Practice Details Form

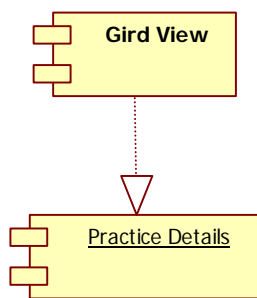


Figure 8 Practice Details Form at front-end

3.5.2 Interaction diagram

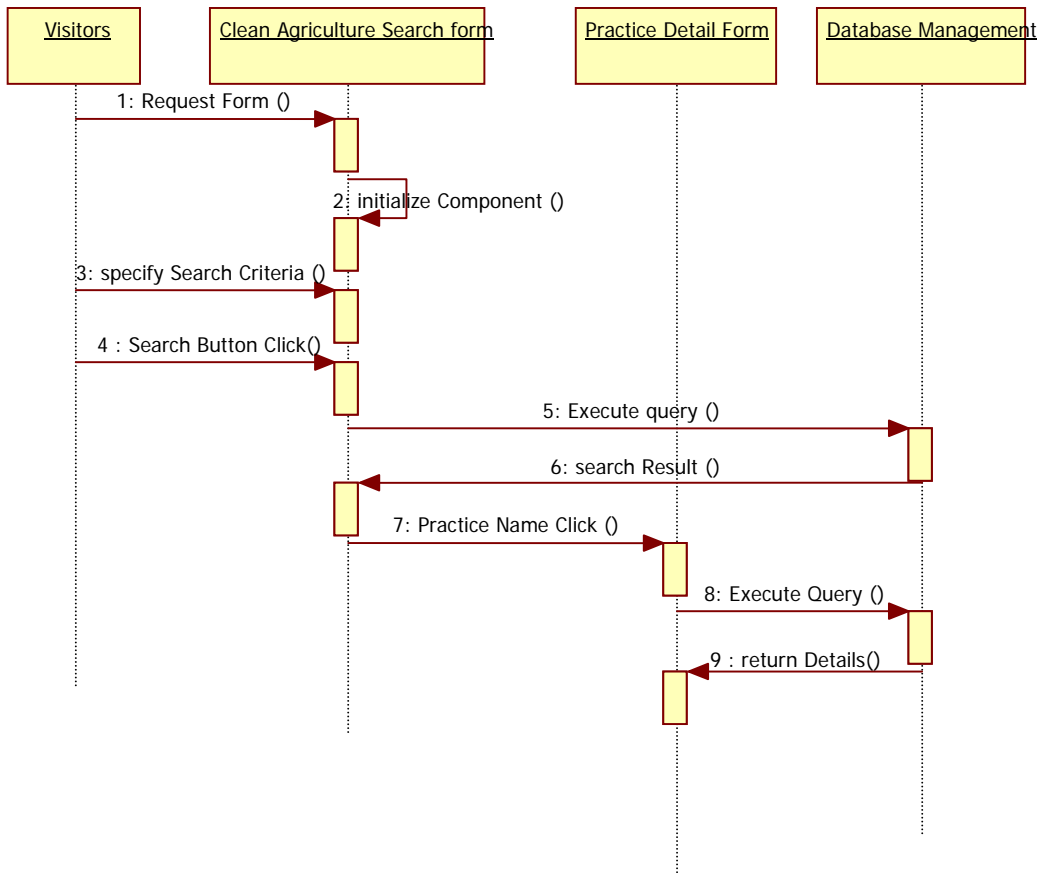


Figure 9 Sequence diagram for Practice Details Form

3.5.3 Graphical User Interface for Practice Details Form



Figure 10 Practice Details Form

3.5.4 Unit tests

Name	Test Cases
Practice Details	<ol style="list-style-type: none"> 1. Add Pest Practice 2. publish it 3. Got to "الزراعة النظيفة" page at front end 4. Select Practice type then click search button 5. Select one of Search Result <p>Expected output: the practice Details Appear</p>

4 Sub Module – Law and Decrease

Module Name	Law and Decrease
Module Description	This module contains the environment laws and their explanation
Reuse	<input type="checkbox"/> Written from scratch
Notes	

4.1 Structure chart / Class diagram for Law and Decrease

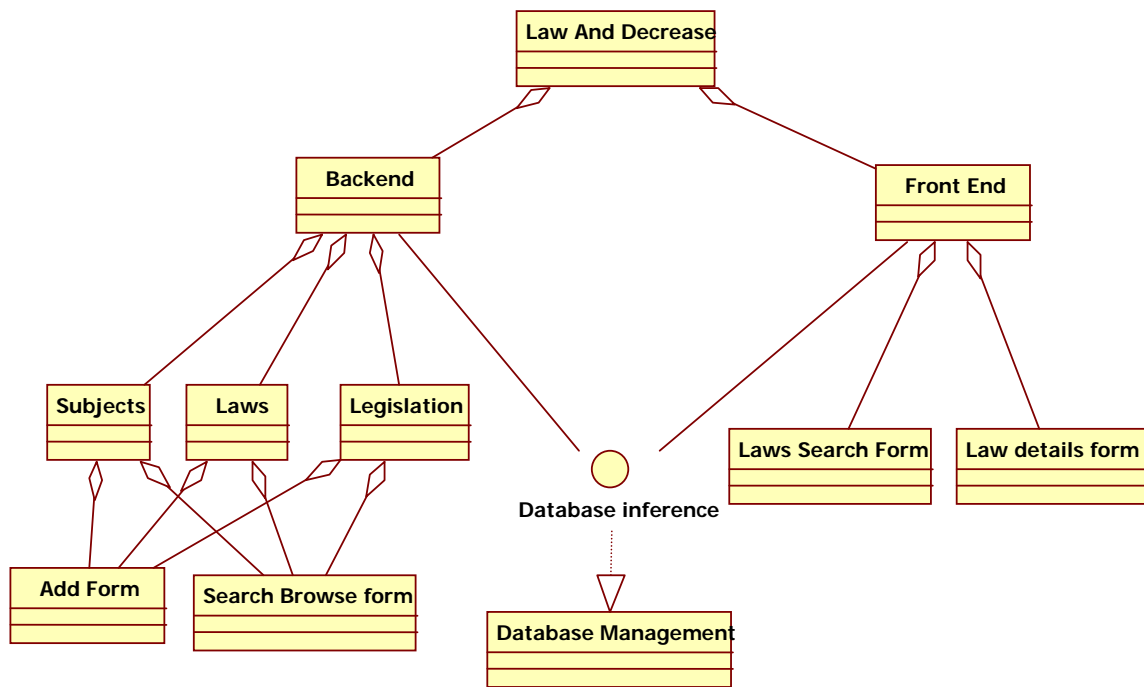


Figure 118 Structured Chart for Clean Agriculture

4.2 Portlet: Browsing Search legislation form at backend

Portlet Name	Browsing Search legislation form
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Eltashriat, Users, User_types
Source File(s)	Tash.aspx
Notes	

4.2.1 Component diagram for Browsing Search legislation form at Backend

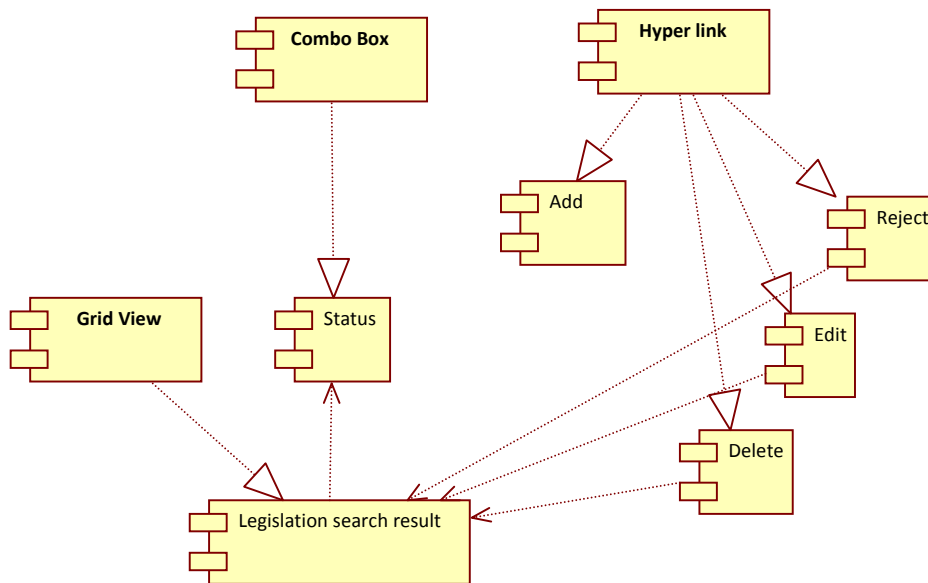


Figure 29 Browsing Search legislation form at backend

4.2.2 Interaction diagram for Browsing Search legislation form

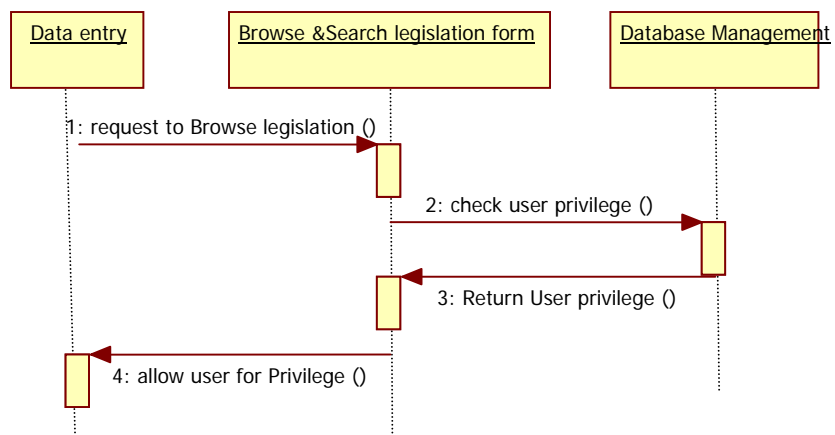


Figure 30 Sequence diagram for Browsing Search legislation form

4.2.3 Graphical user interface

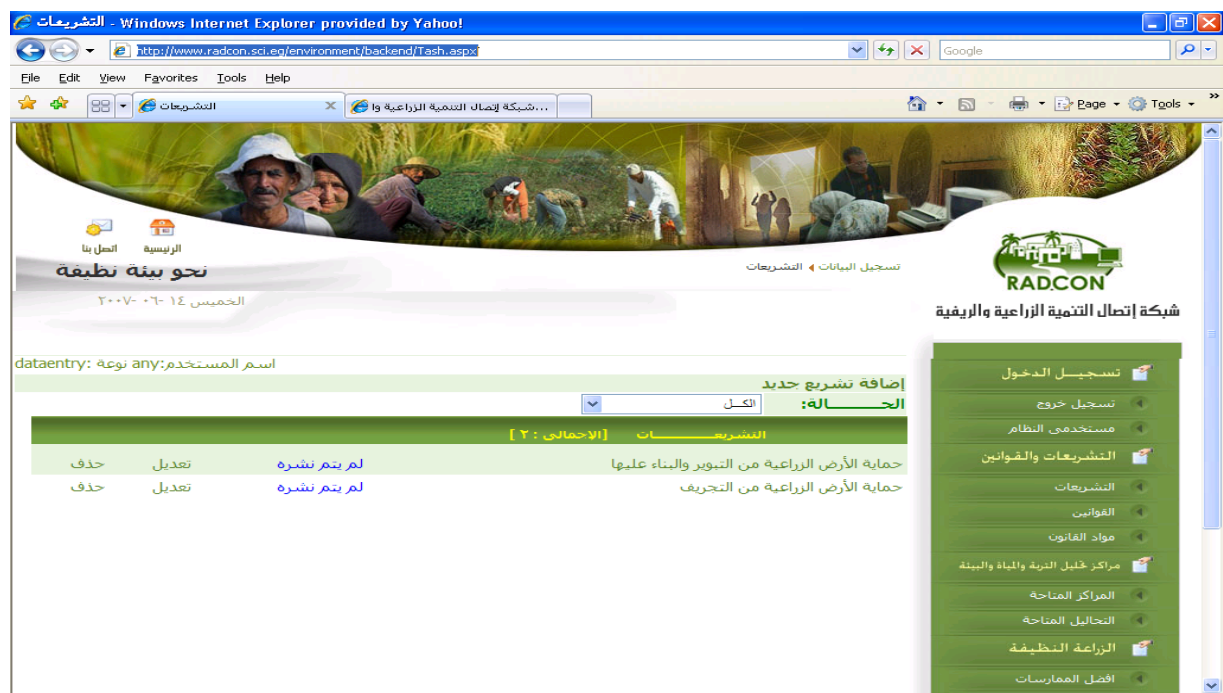


Figure 31 GUI for Browsing Search legislation form at back-end

4.2.4 Unit tests

Name	Test Cases
Display legislation that has status "لم يتم نشرها"	<ol style="list-style-type: none"> 1. Log on the web application 2. Click on "النشريات" link 3. Select status "لم يتم نشرها" <p>Expected output: the page should display all legislation subjects that has been entered and which has not been published yet:</p>
Search for legislation	<ol style="list-style-type: none"> 1. Log on the web application 2. Click on "النشريات" link <p>Expected output: the page should display all legislation subjects which name contains the search term</p>

4.3 Portlet: Add legislation subject form at backend

Portlet Name	Add legislation
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	Yes, Browse legislation at backend
Depends on Database Tables	Yes, , Eltashriat, Users, User_types
Source File(s)	add_Tashree.aspx
Notes	

4.3.1 Component diagram for Add legislation at Backend

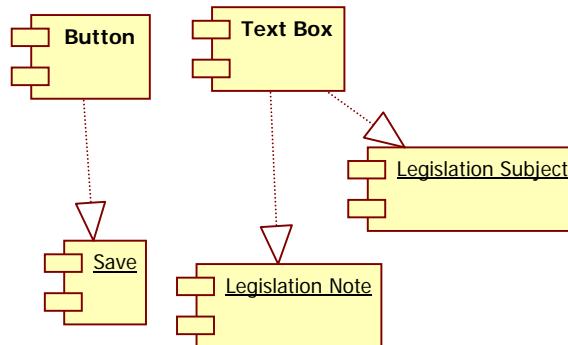


Figure 32 add legislation at backend

4.3.2 Interaction diagram for Adding legislation

As the same Search Clean Agriculture sequence diagram

4.3.3 Graphical user interface

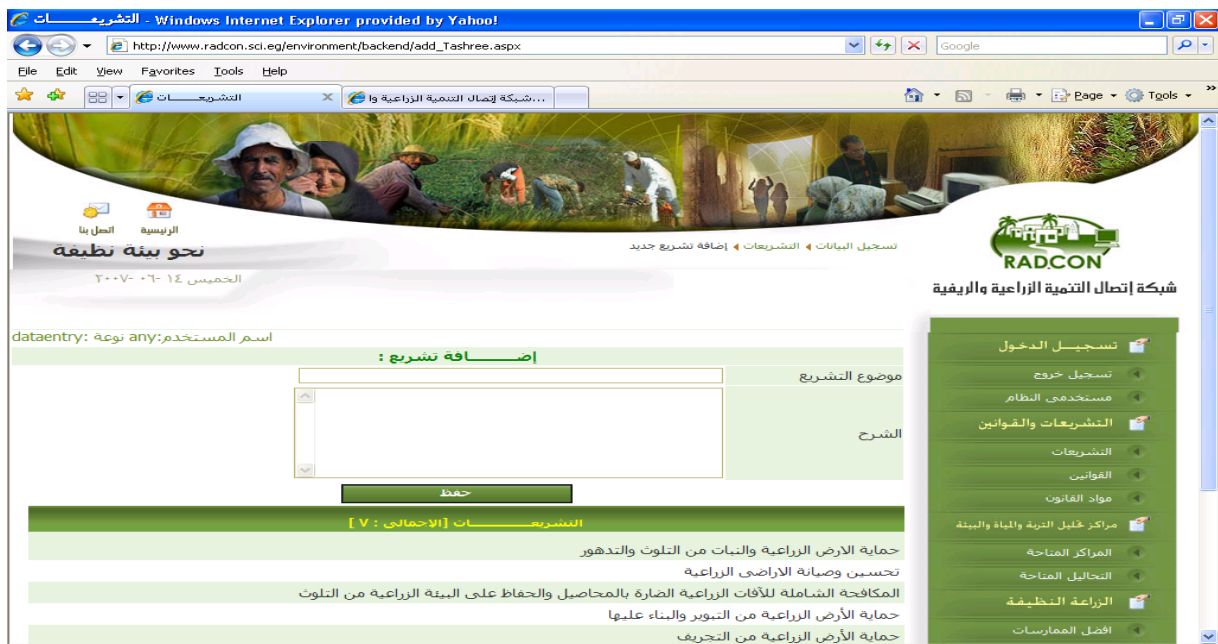


Figure 33 Snapshot for Adding legislation at backend

4.3.4 Unit tests

Name	Test Cases
------	------------

Adding legislation	<p>Log on the web application</p> <p>2. Click on “التشريعات” link</p> <p>3. Click on “أضافة تشريع جديد” hyperlink</p> <p>4. Insert legislation data</p> <p>Expected output: progress indication bar appears until processing finishes, then you’re directed to the “legislation” page</p>
---------------------------	--

4.4 Portlet: Browsing Search law form at backend

Portlet Name	Browsing Search law form
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Eltashriat, Lows, Users, User_types
Source File(s)	law.aspx
Notes	Law depends on legislation subject

4.4.1 Component diagram for Browsing Search law form at Backend

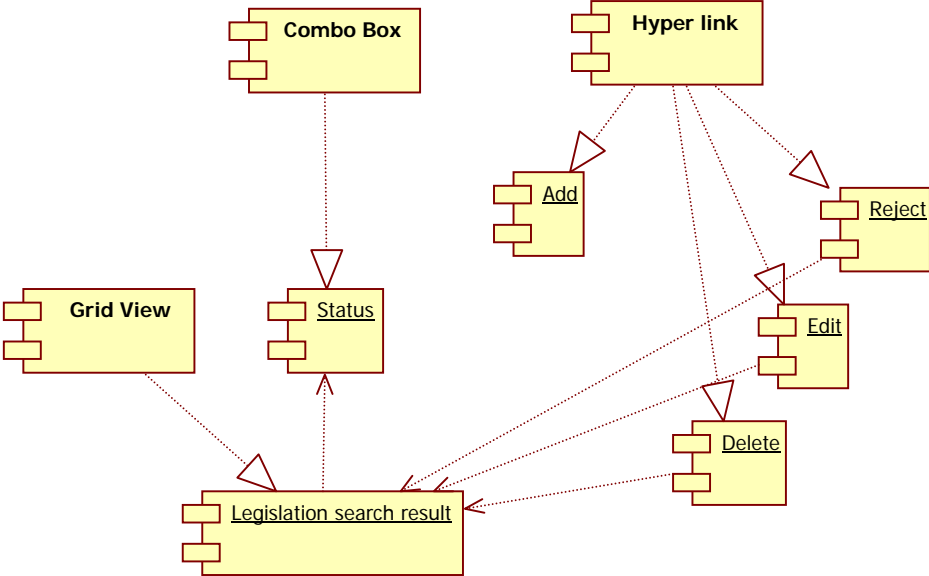


Figure 34 Browsing Search law form at backend

4.4.2 Interaction diagram for Browsing Search law form

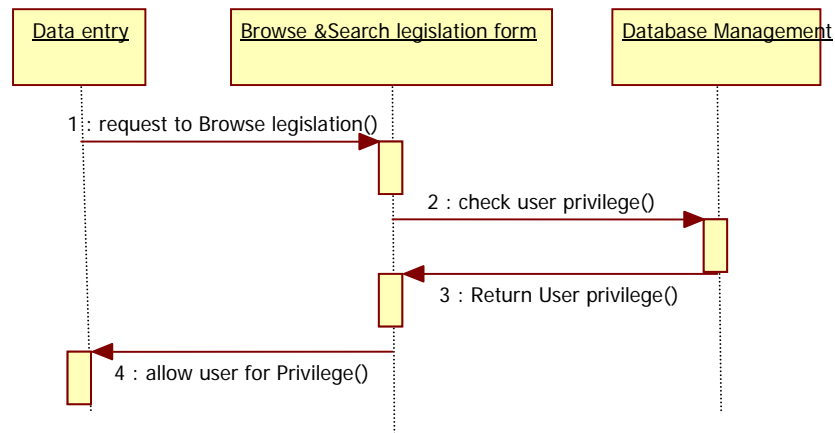


Figure 35 Sequence diagram for Browsing Search law form

4.4.3 Graphical user interface

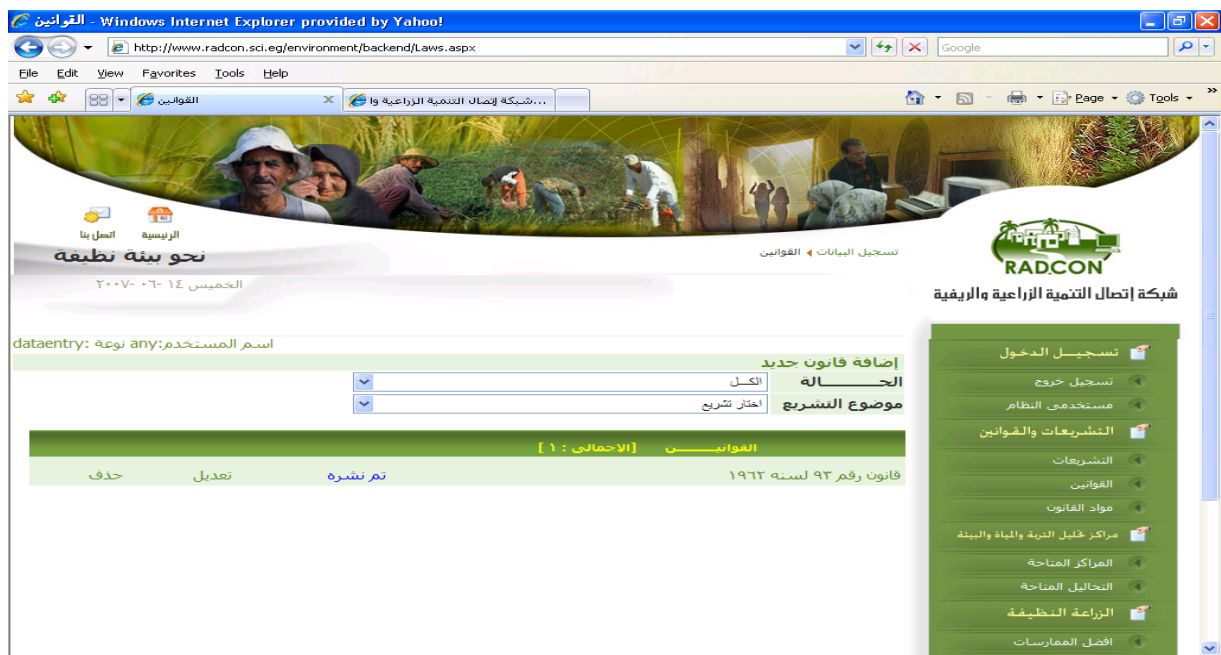


Figure 12 GUI for Browsing Search law form at back-end

4.4.4 Unit tests

Name	Test Cases
Display laws that has status "لم يتم نشرها"	<ol style="list-style-type: none"> 1. Log on the web application 2. Click on "القوانين" link 3. Select status "لم يتم نشرها" 4. select legislation subject

	Expected output: the page should display all legislation subjects that has been entered and which has not been published yet and belong to selected legislation subject:
Search for environment laws	<ol style="list-style-type: none"> 1. Log on the web application 2. Click on “القوانين” link 3. select legislation subject <p>Expected output: the page should display all law which name contains the search term</p>

4.5 Portlet: Add Law form at backend

Portlet Name	Add law
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	Yes, Browse legislation at backend
Depends on Database Tables	Yes, , Eltashriat,lows, Users, User_types
Source File(s)	Add_Law.aspx
Notes	

4.5.1 Component diagram for Add law at Backend

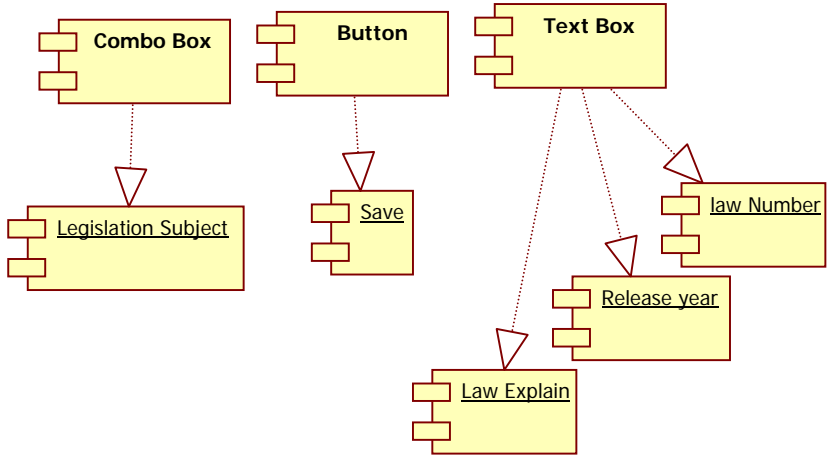


Figure 37 Add law at backend

4.5.2 Interaction diagram for Adding law

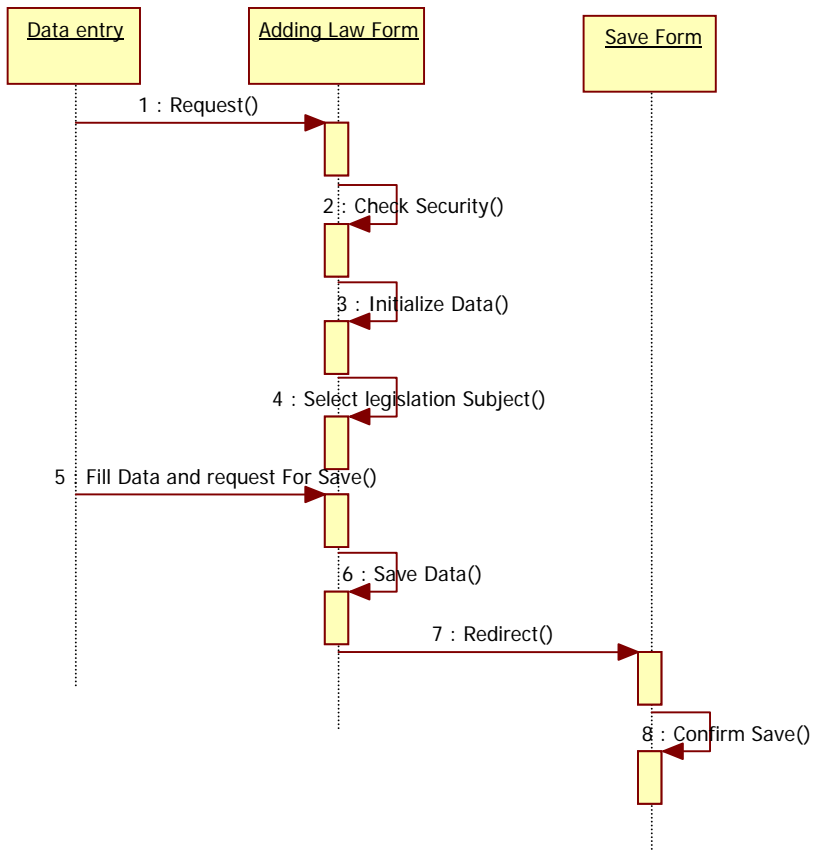


Figure 38 Sequence diagram for Add law at backend

4.5.3 Graphical user interface

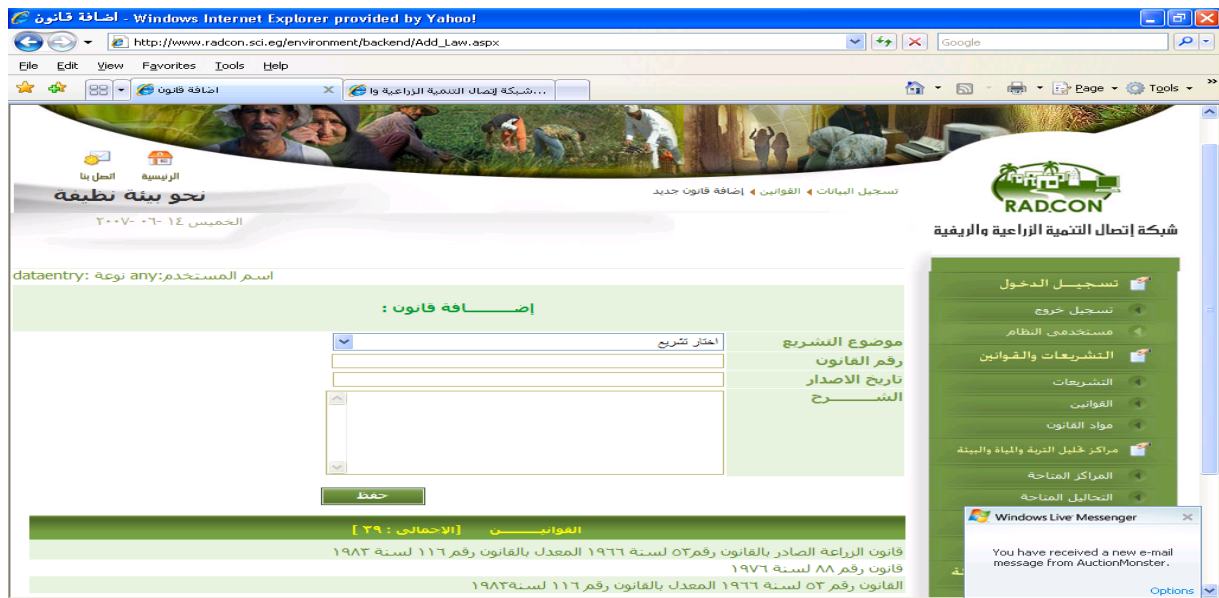


Figure 39 Snapshot for Adding law at backend

4.5.4 Unit tests

Name	Test Cases
Adding Law Data	Log on the web application 2. Click on "القوانين" link 3. Click on "أضافة قانون جديد" hyperlink 4. Insert legislation data Expected output: progress indication bar appears until processing finishes, then you're directed to the "law" page

4.6 Portlet: Browsing Search Subject form at backend

Portlet Name	Browsing Search Subject form
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Low_Subjects, Eltashriat, Lows, Users, User_types
Source File(s)	Subjects.aspx
Notes	Subject depends on legislation subject and law number

4.6.1 Component diagram for Browsing Search law form at Backend

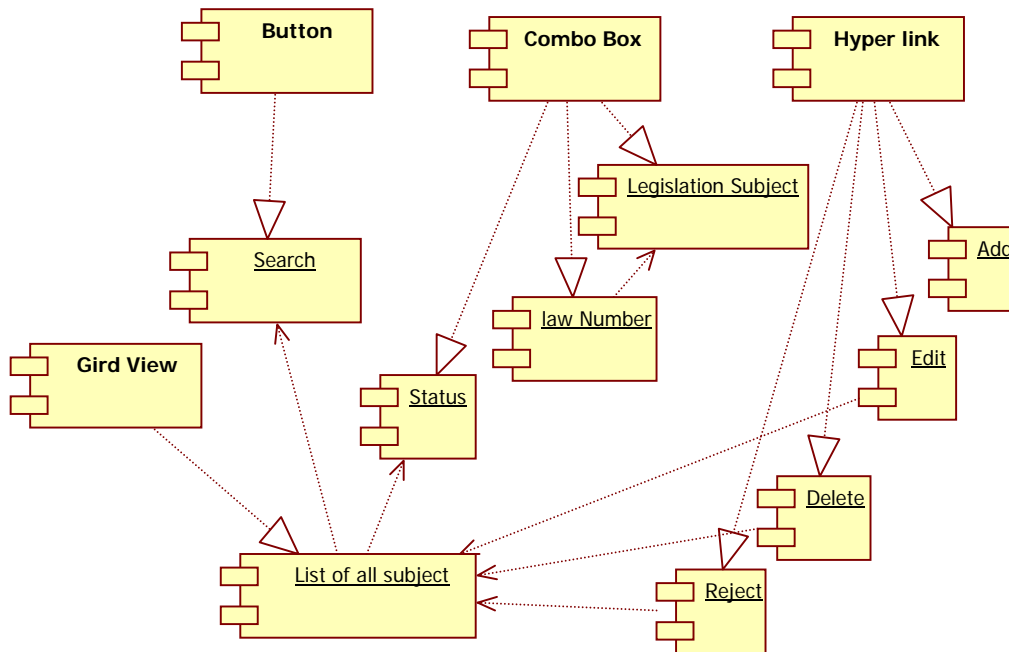


Figure 40 Browsing Search Subject form at backend

4.6.2 Interaction diagram for Browsing Search subject form

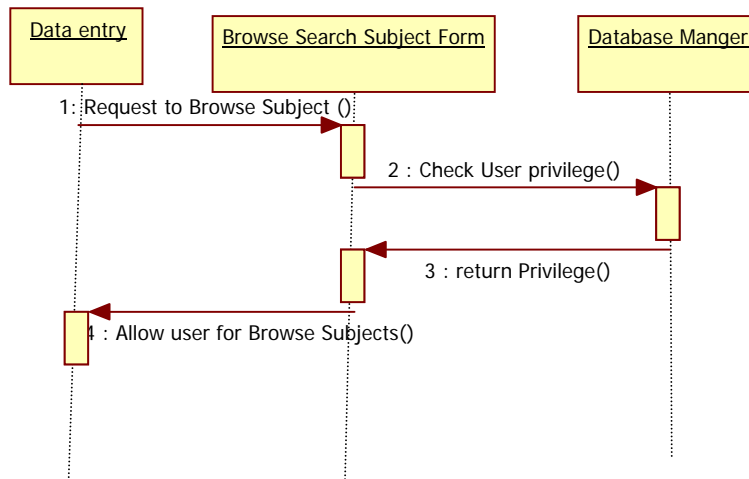


Figure 41 Sequence diagram for Browsing Search law form

4.6.3 Graphical user interface

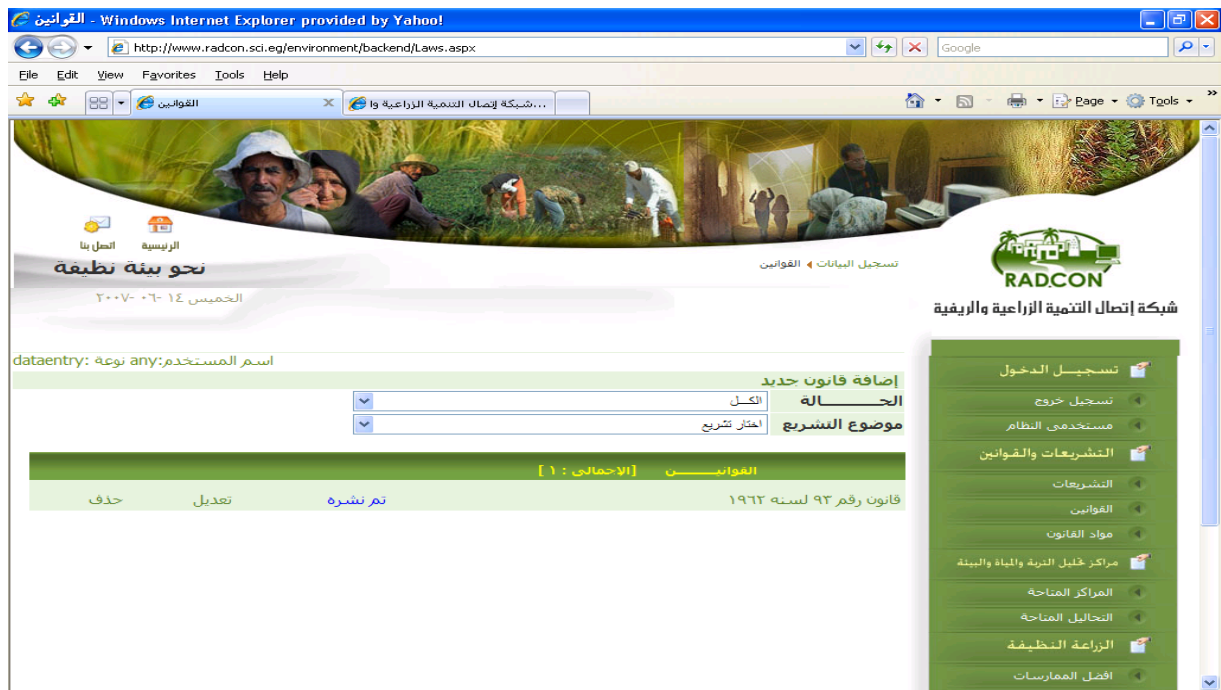


Figure 42 GUI for Browsing Search Subject form at back-end

4.6.4 Unit tests

Name	Test Cases
Display Subject that has status "لم يتم نشرها"	<ol style="list-style-type: none"> 1. Log on the web application 2. Click on "مواد القانون" link 3. Select status "لم يتم نشرها" 4. select legislation subject 5. select law Number <p>Expected output: the page should display all legislation subjects that has been entered and which has not been published yet and belong to selected legislation subject:</p>
Search for subjects of selected Law	<ol style="list-style-type: none"> 1. Log on the web application 2. Click on "مواد القانون" link 3. select legislation subject 4. select law Number <p>Expected output: the page should display all subject which name contains the search term</p>

4.7 Portlet: Add subject form at backend

Portlet Name	Add subject
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	Yes, Add Subject at backend
Depends on Database Tables	Yes, Low_Subjects, Eltashriat, lows, Users, User_types

Source File(s)	Add_Subject.aspx
Notes	

4.7.1 Component diagram for Add Subject at Backend

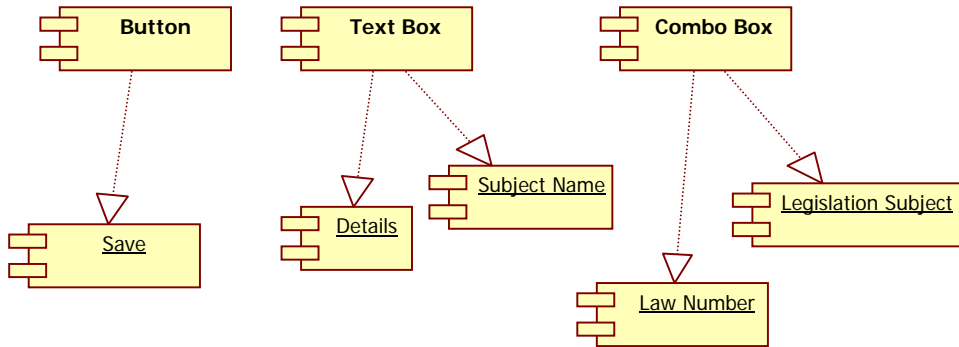


Figure 43 Add subject at backend

4.7.2 Interaction diagram for Adding subject

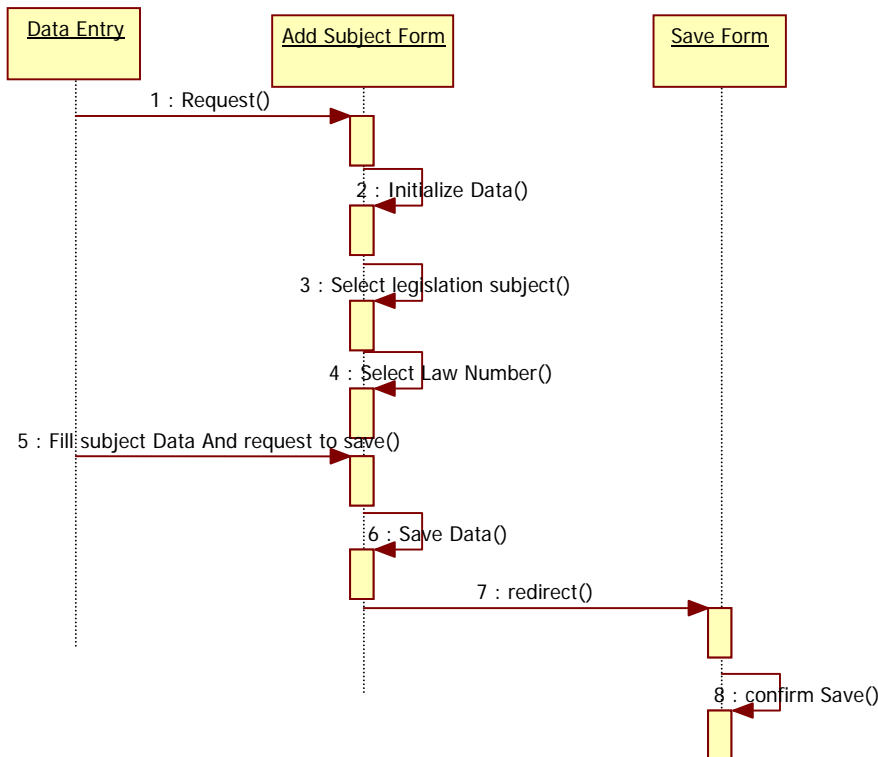


Figure 43 Sequence diagram for Add subject at backend

4.7.3 Graphical user interface



Figure 44 Snapshot for Adding subject at backend

4.7.4 Unit tests

Name	Test Cases
Adding Subject data	<ol style="list-style-type: none"> Log on the web application Click on “مواد القانون” link Click on “إضافة مادة جديد” hyperlink Insert Subject data <p>Expected output: progress indication bar appears until processing finishes, then you're directed to the “legislation” page</p>

4.8 Portlet – Search Law and Decrease at Front-End

Portlet Name	Search Law and Decrease
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Low_Subjects, Eltashriat, lows
Source File(s)	Laws.aspx
Notes	Only the environment laws that has been published will be displayed by this portlet

4.8.1 Component diagram for Search Law and Decrease

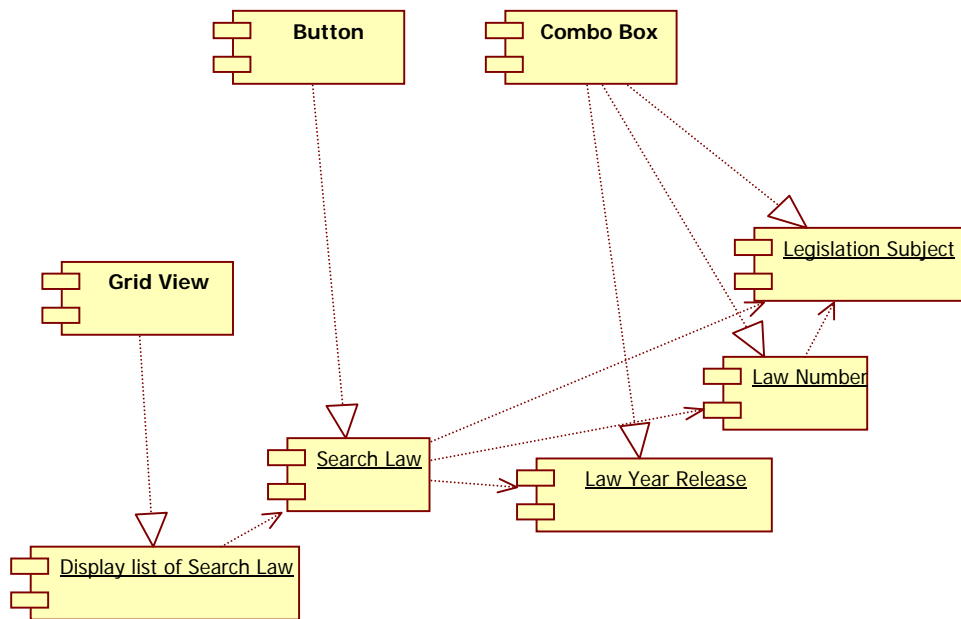


Figure 45 Search Law and Decrease at front-end

4.8.2 Interaction diagram

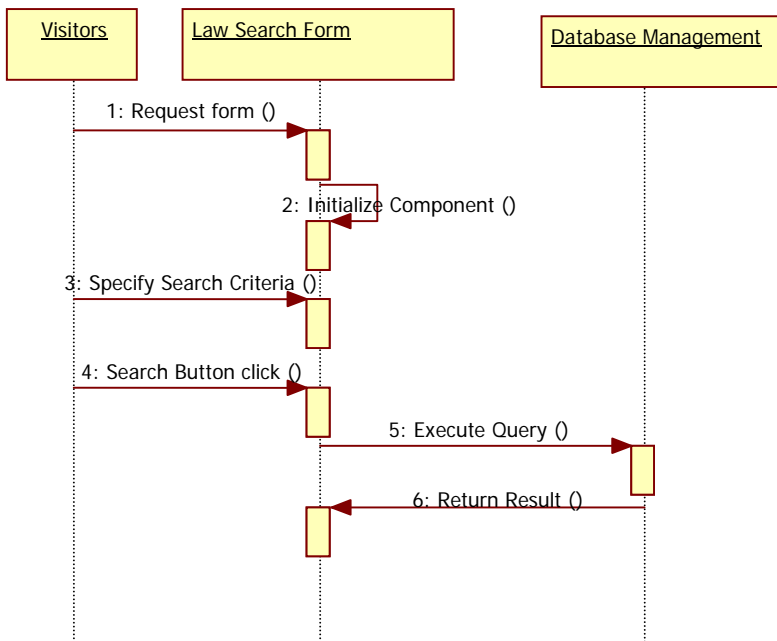


Figure 46 Sequence diagram for Search Law and Decrease

4.8.3 Graphical User Interface for Search Law and Decrease



Figure 47 Search Law and Decrease

4.8.4 Unit tests

Name	Test Cases
Search Law and Decrease	<ol style="list-style-type: none"> Add law publish it Got to "التشريعات والقوانين" page at front end Select legislation Subject then click search button <p>Expected output: progress indication bar appears until processing finishes, then you're directed to the result page</p>

4.9 Portlet - law Details Form at Front-End

Portlet Name	Display law Details
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	Yes, Search Law and Decrease
Depends on Database Tables	Yes, Low_Subjects, Eltashriat, lows
Source File(s)	showLaw_Form.aspx?CtrlId=33
Notes	Only the law that has been Selected to be displayed by this portlet

4.9.1 Component diagram for Law Details Form

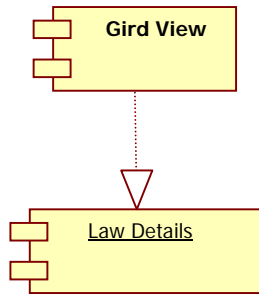


Figure 48 law Details Form at front-end

4.9.2 Interaction diagram

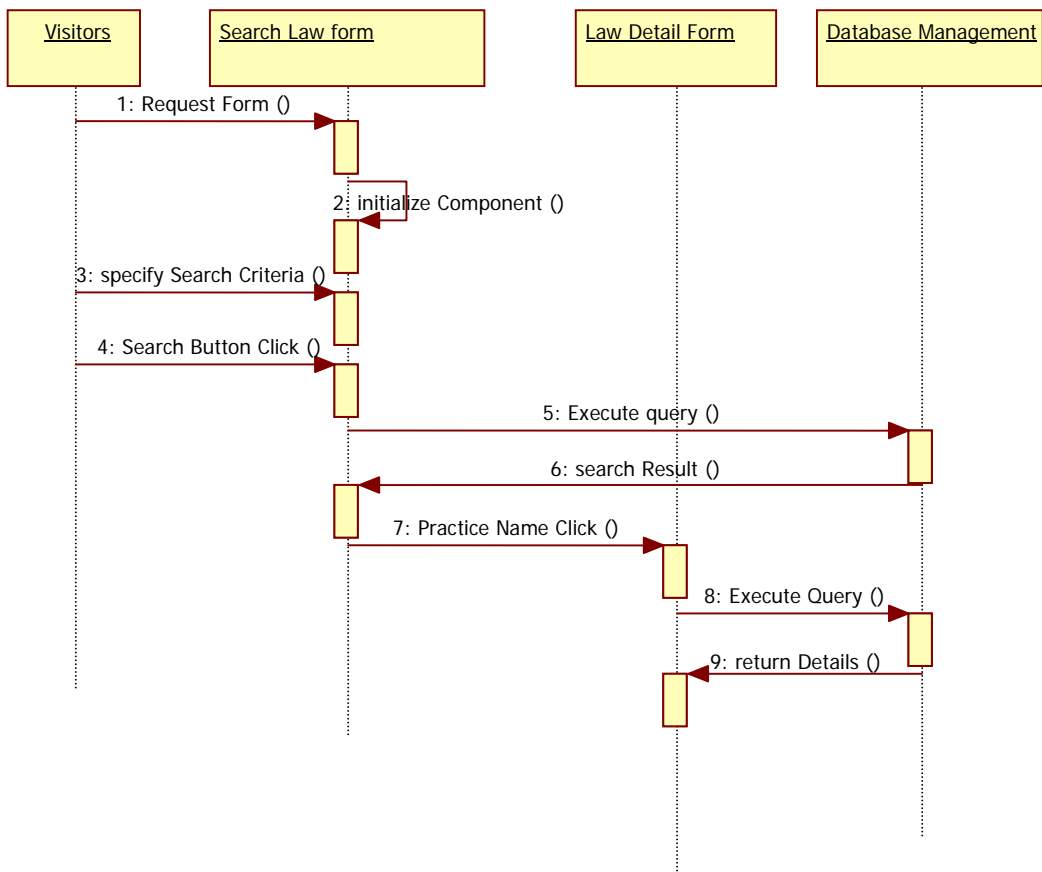


Figure 49 Sequence diagram for Law Details Form

4.9.3 Graphical User Interface for Law Details Form



Figure 50 Law Details Form

4.9.4 Unit tests

Name	Test Cases
Law Details	<ol style="list-style-type: none"> 1. Add Law 2. publish it 3. Got to "التشريعات والقوانين" page at front end 4. Select legislation subject then click search button 5. Select one of Search Result <p>Expected output: the law Details Appear</p>

5 Sub Module – Soil, water and environment analysis Center

Module Name	Soil, water and environment analysis Center
Module Description	This module contains the analysis Center which the farmer can analysis Soil, water and pesticide on his field to increasing his production and prevent agricultural land of degradation
Reuse	<input type="checkbox"/> Written from scratch
Notes	

5.1 Structure chart / Class diagram for Soil, water and environment analysis Center

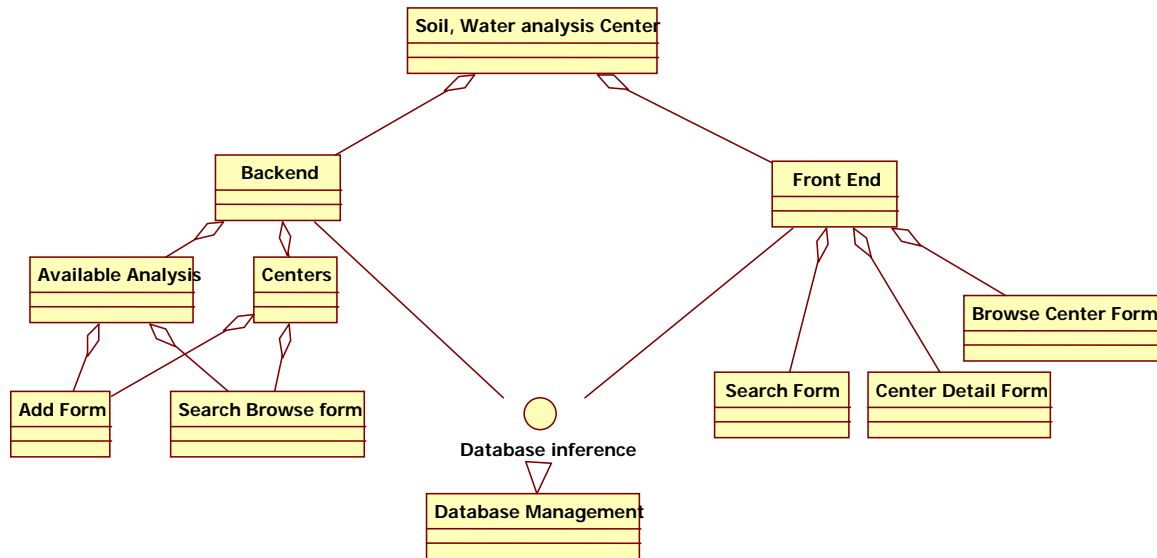


Figure 51 Structured Chart for Soil, water and environment analysis Centre

5.2 Portlet: Browsing analysis Centers form at backend

Portlet Name	Browsing analysis Centers
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Tahlil_Centers, Govtable,Users, User_types
Source File(s)	All_Centers.aspx
Notes	

5.2.1 Component diagram for browsing analysis Centers at Backend

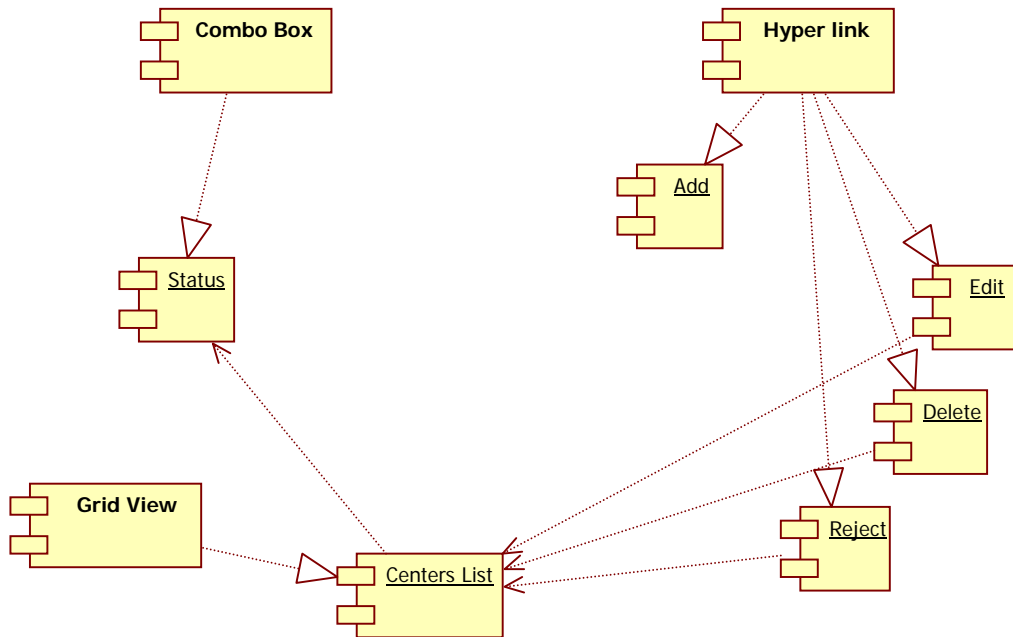


Figure 52 Browse analysis Centres at backend

5.2.2 Interaction diagram for browsing analysis Centers

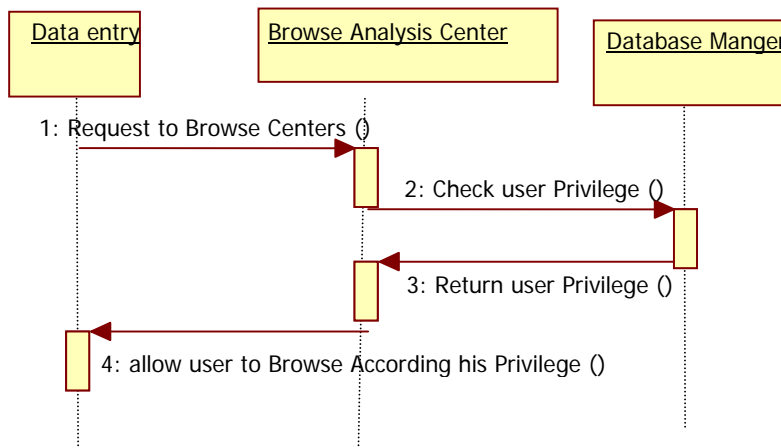


Figure 53 Sequence diagram for browsing analysis Centres

5.2.3 Graphical user interface



Figure 54 GUI for browsing analysis Centres at back-end

5.2.4 Unit tests

Name	Test Cases
Display Analysis Center that has status "لم يتم نشرها"	<ol style="list-style-type: none"> 1. Log on the web application 2. Click on "المراكز المتاحة" link 3. Select status "لم يتم نشرها" <p>Expected output: the page should display all centers that has been entered and which has not been published yet:</p>
Search for center	<ol style="list-style-type: none"> 1. Log on the web application 2. Click on "المراكز المتاحة" link <p>Expected output: the page should display Center which name contains the search term</p>

5.3 Portlet: Add analysis Center form at backend

Portlet Name	Add analysis Center
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	Yes, Browse Analysis centre at backend
Depends on Database Tables	Yes, Tahlil_Centers, Govtable, Users, User_types
Source File(s)	Add_Center.aspx
Notes	

5.3.1 Component diagram for Add analysis Center at Backend

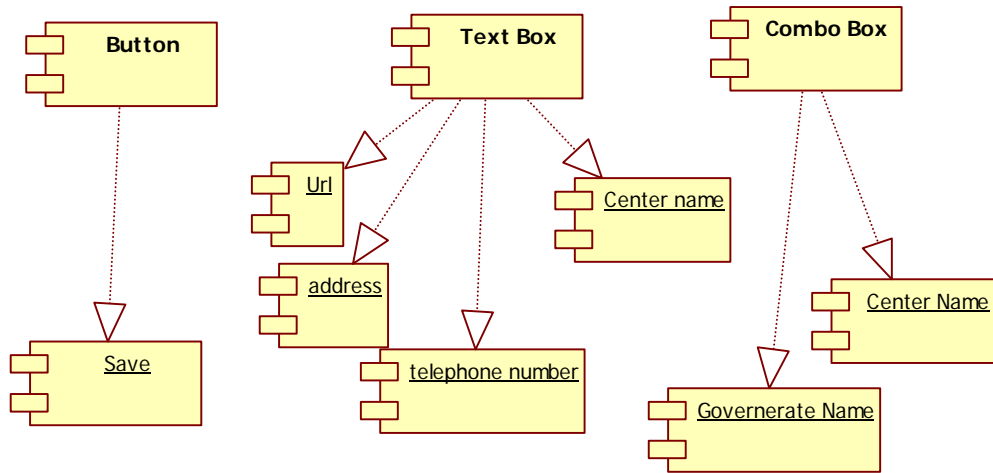


Figure 135 Add analysis Centre at backend

5.3.2 Interaction diagram for Adding analysis Center

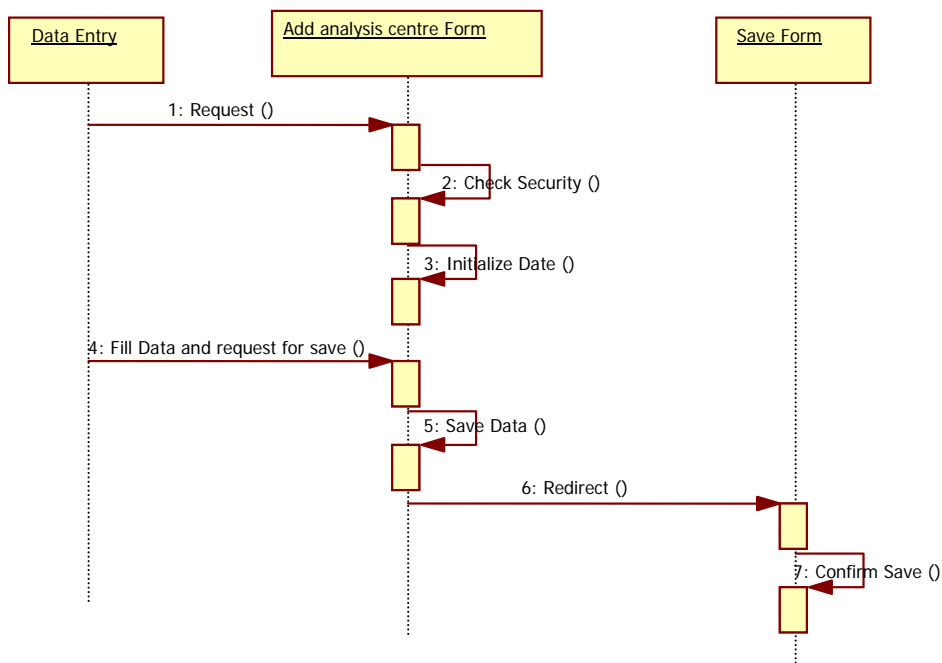


Figure 514 Sequence diagram for Adding analysis Centre

5.3.3 Graphical user interface

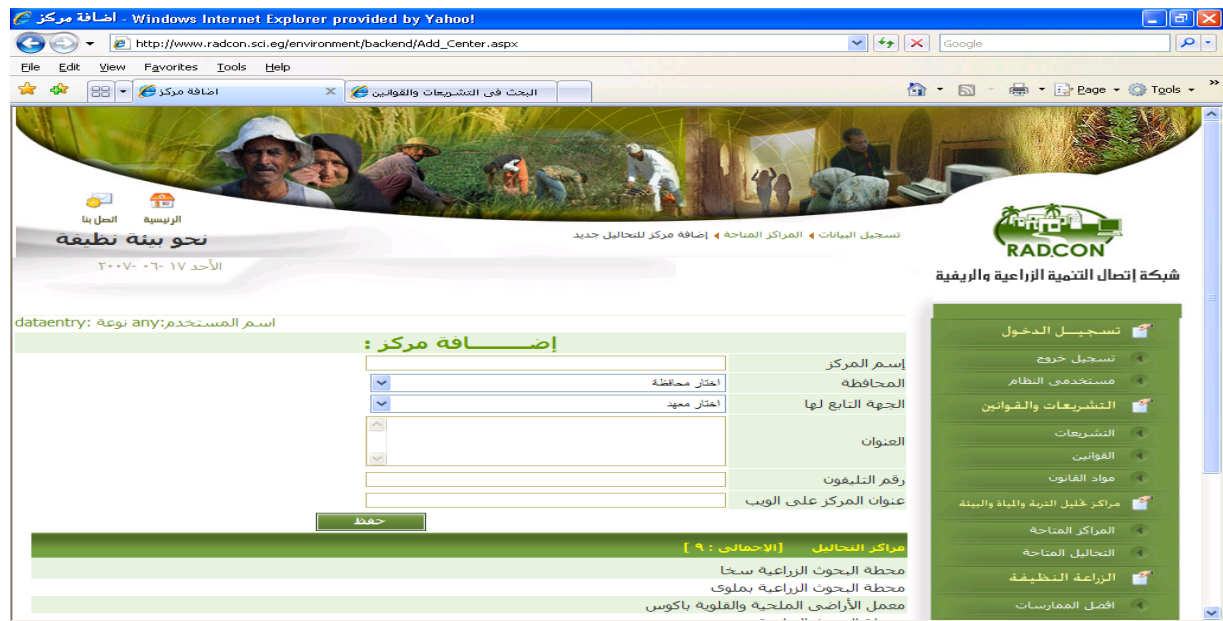


Figure 57 Snapshot for Adding analysis Centre at backend

5.3.4 Unit tests

Name	Test Cases
Adding analysis centre	<ol style="list-style-type: none"> 1. Log on the web application 2. Click on "التحاليل المتاحة" link 3. Click on "إضافة مركز جديد" hyperlink 4. Insert analysis center data <p>Expected output: progress indication bar appears until processing finishes, then you're directed to the "analysis centers" page</p>

5.4 Portlet: Browsing Available Analysis form at backend

Portlet Name	Browsing Available Analysis
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, TahlilNames, Tahlil_Kind ,Users, User_types
Source File(s)	All_Tahlils.aspx
Notes	

5.4.1 Component diagram for browsing Available Analysis at Backend

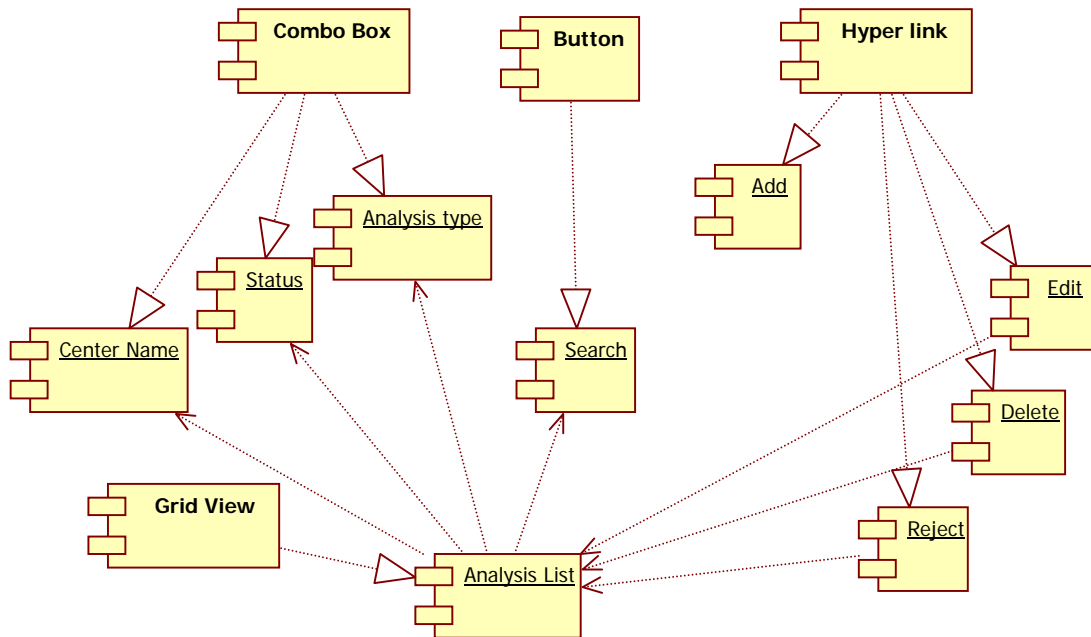


Figure 158 Browse Available Analysis at backend

5.4.2 Interaction diagram for browsing Available Analysis

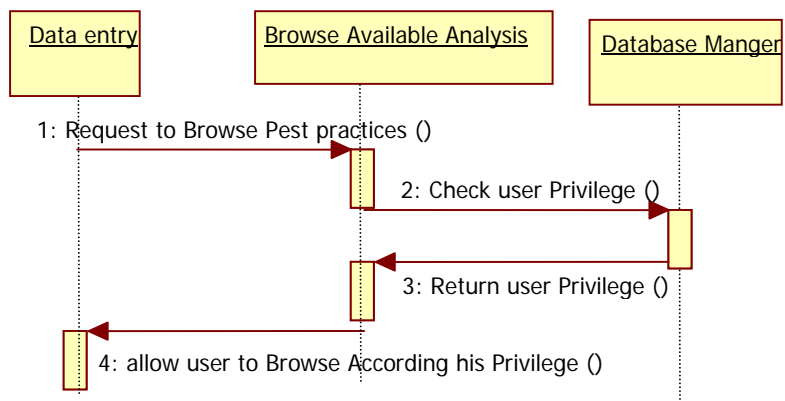


Figure 59 Sequence diagram for browsing Available Analysis

5.4.3 Graphical user interface



Figure 60 GUI for browsing Available Analysis at back-end

5.4.4 Unit tests

Name	Test Cases
Display Analysis that has status "لم يتم نشرها"	<ol style="list-style-type: none"> Log on the web application Click on "التحاليل المتاحة" link Select status "لم يتم نشرها" select Center Name <p>Expected output: the page should display all analysis that has been entered and which has not been published yet:</p>
Search for Analysis	<ol style="list-style-type: none"> Log on the web application Click on "التحاليل المتاحة" link <p>Expected output: the page should display Pest Practices which name contains the search term</p>

5.5 Portlet: Add Analysis form at backend

Portlet Name	Add Analysis
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	Yes, Browse Analysis at backend
Depends on Database Tables	Yes, , TahliilNames, Tahliil_Kind ,Users, User_types User_types
Source File(s)	Add_Tahliil.aspx
Notes	

5.5.1 Component diagram for Add analysis at Backend

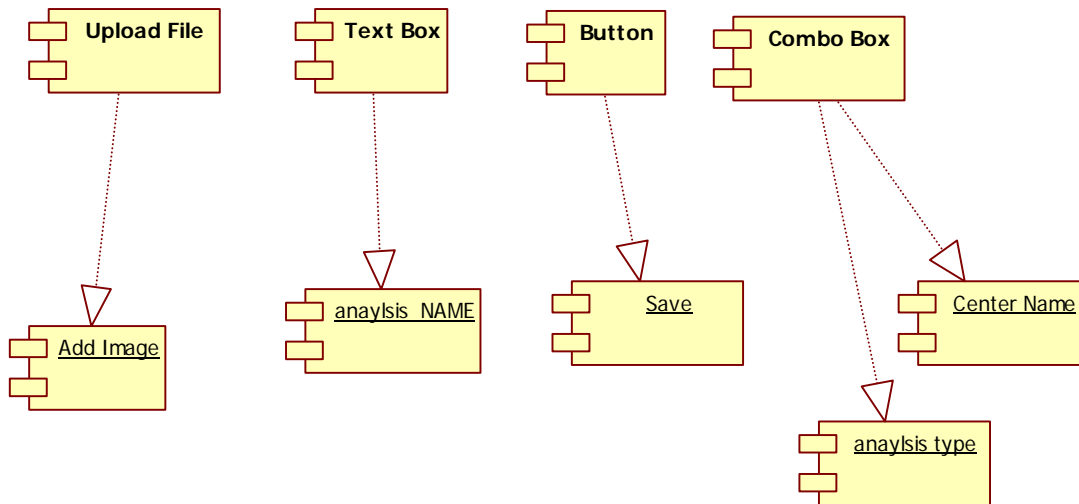


Figure 61 Add analyses at backend

5.5.2 Interaction diagram for Adding analysis

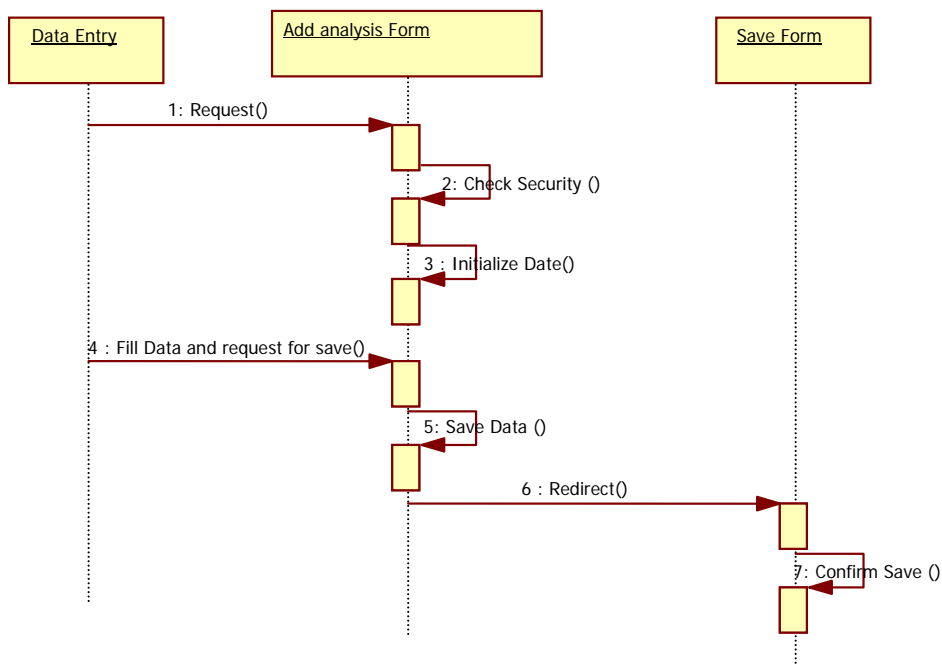


Figure 162 Sequence diagram for Adding analysis

5.5.3 Graphical user interface

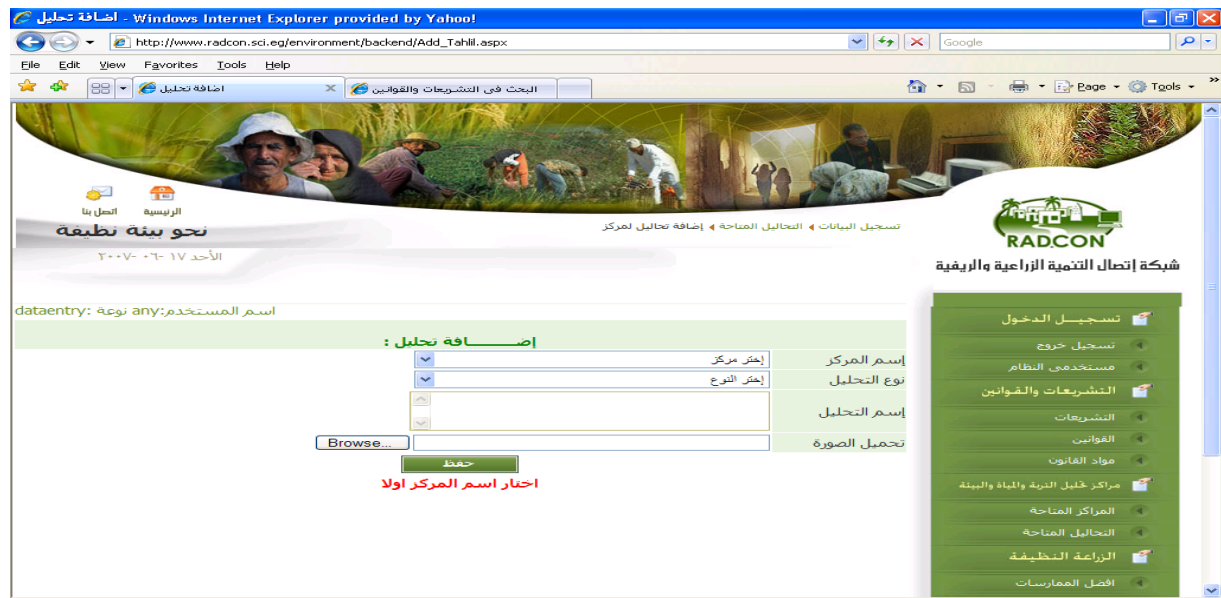


Figure 63 Snapshot for Adding analysis at backend

5.5.4 Unit tests

Name	Test Cases
Adding analysis	<ol style="list-style-type: none"> Log on the web application Click on “التحاليل المتاحة” link Click on “ إضافة تحليل لمركز ” hyperlink Insert analysis data <p>Expected output: progress indication bar appears until processing finishes, then you're directed to the “analysis” page</p>

5.6 Portlet – Browse analysis centers at Front-End

Portlet Name	Browse analysis centers
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Tahlil_Centers
Source File(s)	Analysis_Form.aspx
Notes	Only the analysis centers that has been published will be displayed by this portlet

5.6.1 Component diagram for Browse analysis centers

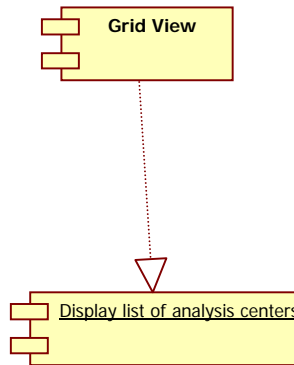


Figure 64 Browse analysis centers at front-end

5.6.2 Interaction diagram

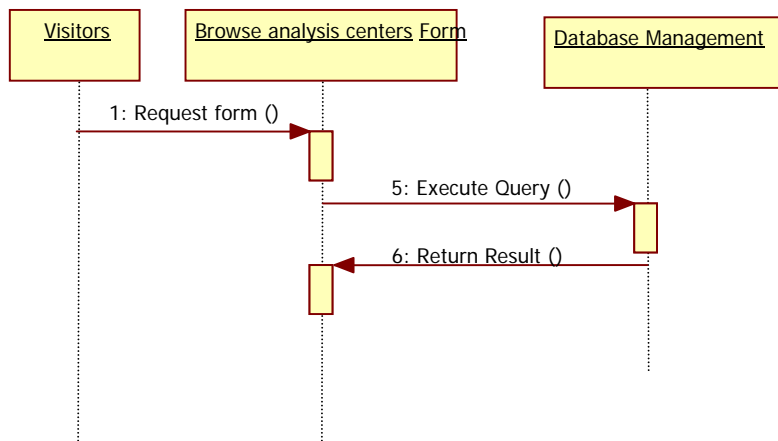


Figure 65 Sequence diagram for Browse analysis centers

5.6.3 Graphical User Interface for Browse analysis centers



Figure 66 Browse analysis centers Unit tests

Name	Test Cases
Browse analysis centers	<ol style="list-style-type: none"> 1. Add center 2. publish it 3. Got to "مراكز تحاليل التربة والمياه والبيئة" page at front end
Expected output: you're directed to the result page list of analysis center	

5.7 Portlet - Search analysis Centre at Front-End

Portlet Name	Search analysis Centre
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, TahlilNames, Tahlil_Kind, Govtable, Tahlil_Centers
Source File(s)	CenterSearchForm.aspx
Notes	Only the analysis centers that has been published will be displayed by this portlet

5.7.1 Component diagram for Search analysis Centre

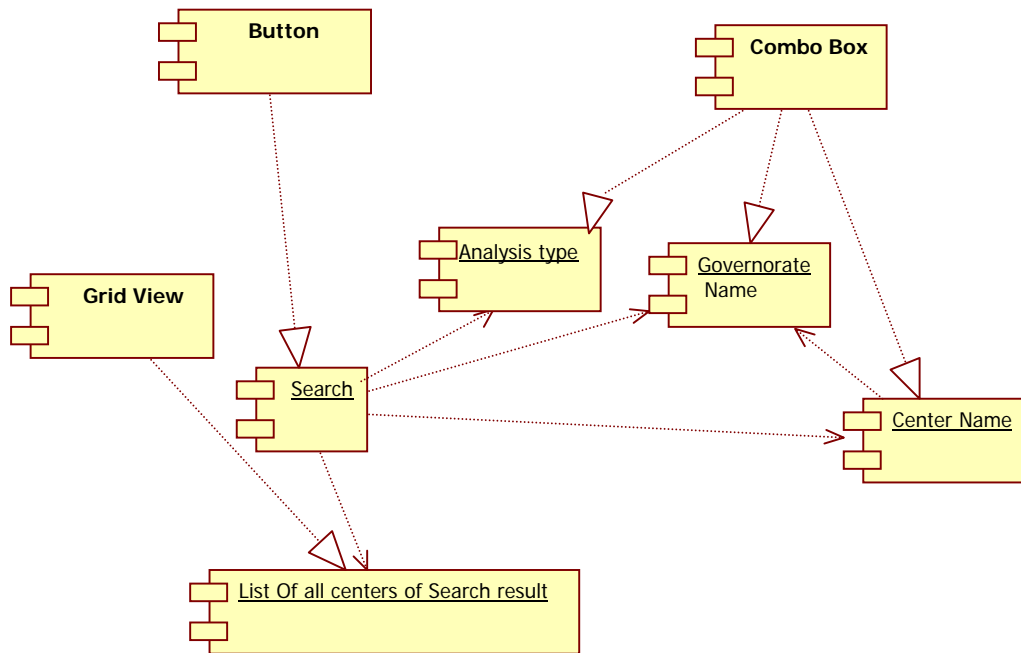


Figure 67 Search analysis Centre at front-end

5.7.2 Interaction diagram

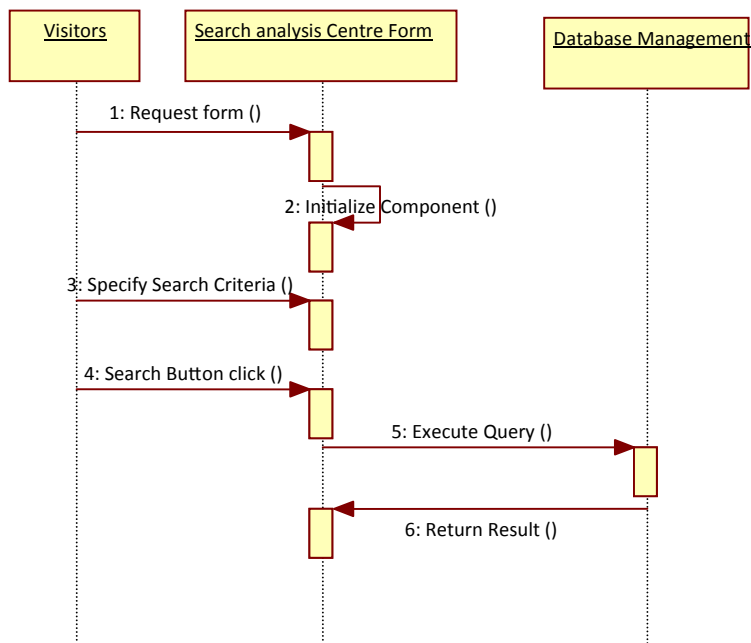


Figure 68 Sequence diagram for Search analysis Centre

5.7.3 Graphical User Interface for Search analysis Centre



Figure 69 Search analysis Centre

5.7.4 Unit tests

Name	Test Cases
Search analysis Centre	<ol style="list-style-type: none"> 4. Add analysis Centre 5. publish it 6. Got to “بحث” page at front end 7. Select governorate name then click search button <p>Expected output: progress indication bar appears until processing finishes, then you're directed to the result page</p>

5.8 Portlet – Center Details Form at Front-End

Portlet Name	Display Center Details
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	Yes, Search analysis center or browse analysis center
Depends on Database Tables	Yes, TahlilNames, Tahlil_Kind, Govtable, Tahlil_Centers
Source File(s)	showAnalysis_Form.aspx
Notes	Only the centers that has been Selected to displayed by this portlet

5.8.1 Component diagram for center Details Form

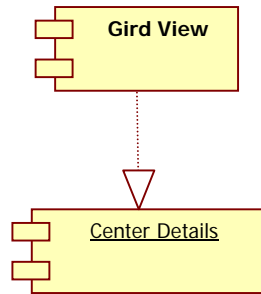


Figure 70 Centre Details Form at front-end

5.8.2 Interaction diagram

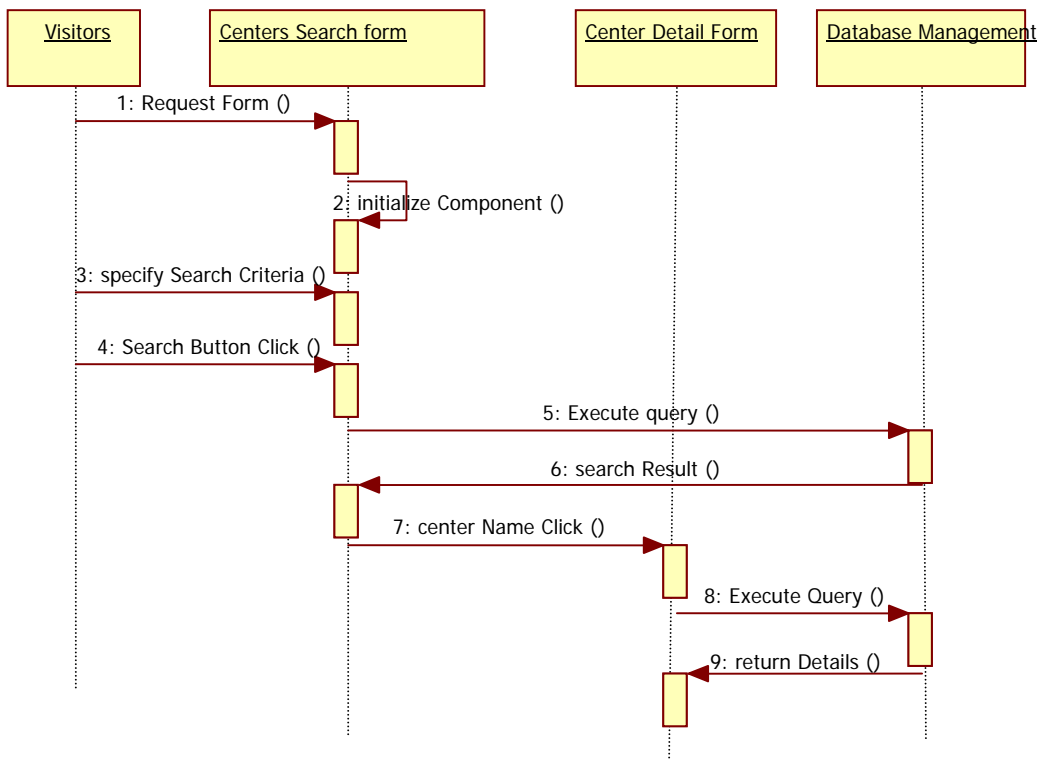


Figure 71 Sequence diagram for Centre Details Form

5.8.3 Graphical User Interface for center Details Form

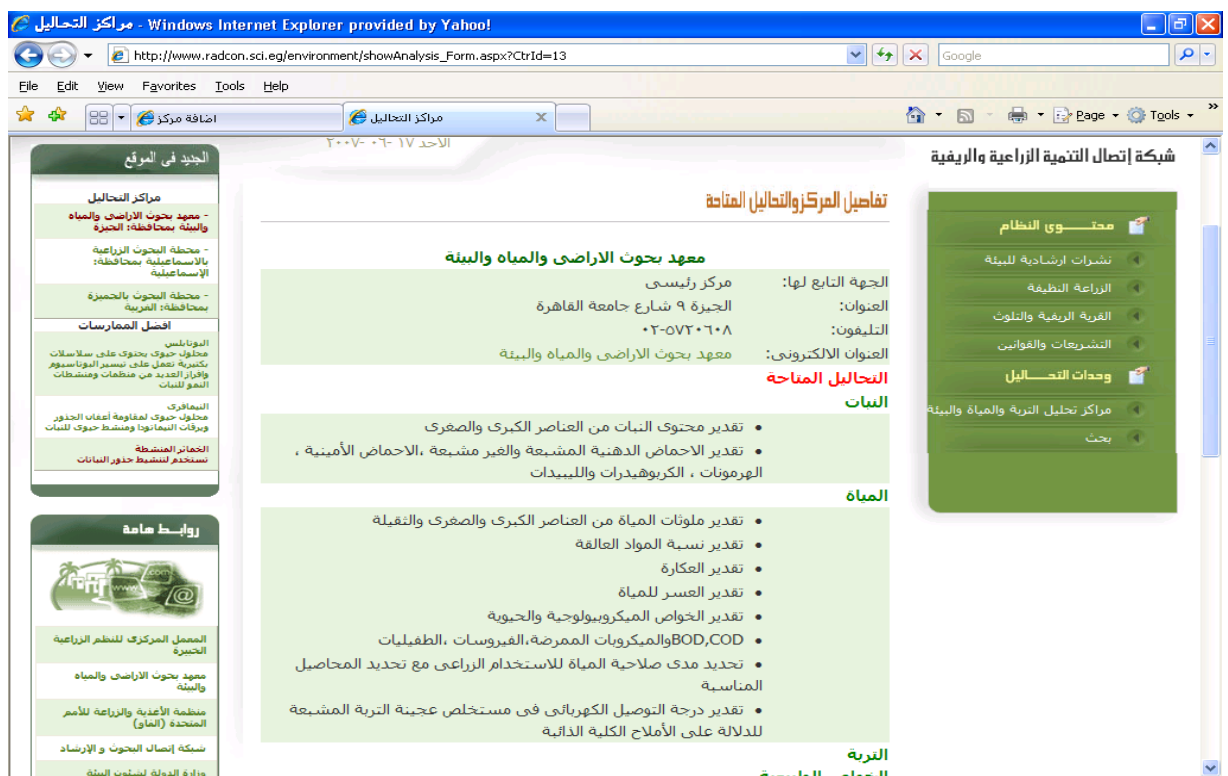


Figure 72 centre Details Form

5.8.4 Unit tests

Name	Test Cases
center Details	<ol style="list-style-type: none"> 6. Add center 7. publish it 8. Go to "بحث" page at front end 9. Select center then click search button 10. Select one of Search Result <p>Expected output: the center Details Appear</p>

6 Sub Module - The rural village and the pollution

Module Name	The rural village and pollution
Module Description	This module contains (environment pollutions problems and their solution)
Reuse	<input type="checkbox"/> Written from scratch <input type="checkbox"/> use external module
Notes	use external module on VERCON(farmers Problems " مشاكل المزارعين ") after updating for adding Environment problems

6.1 Structure chart / Class diagram for rural village and pollution

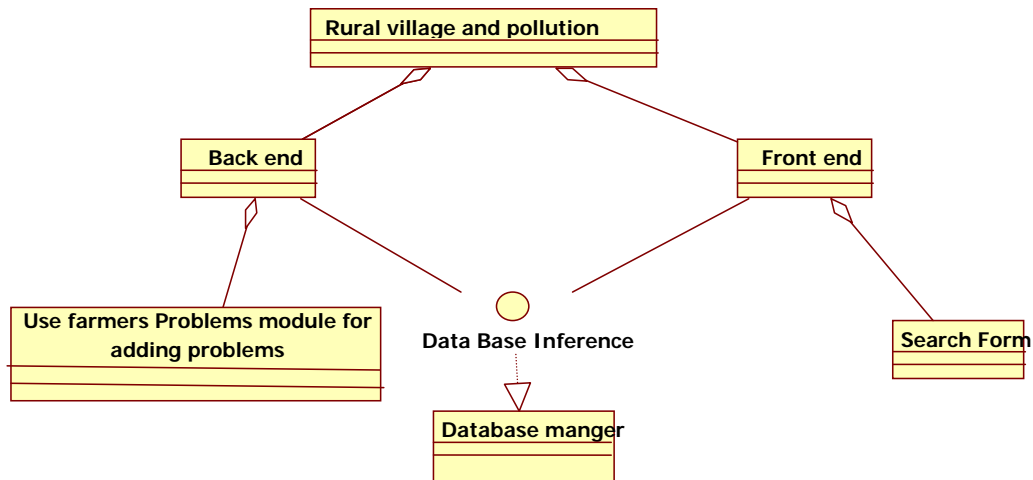


Figure 73 Structured Chart for rural village and pollution

6.2 Portlet – Search rural village and pollution Form at Front-End

Portlet Name	Browsing rural village and pollution
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, problems, Governorates, ProblemCategories, ProblemSubCategories
Source File(s)	EnvProplems.aspx
Notes	Only the Environment Problems that has been published and solved will be displayed by this portlet

6.2.1 Component diagram for Search rural village and pollution Form

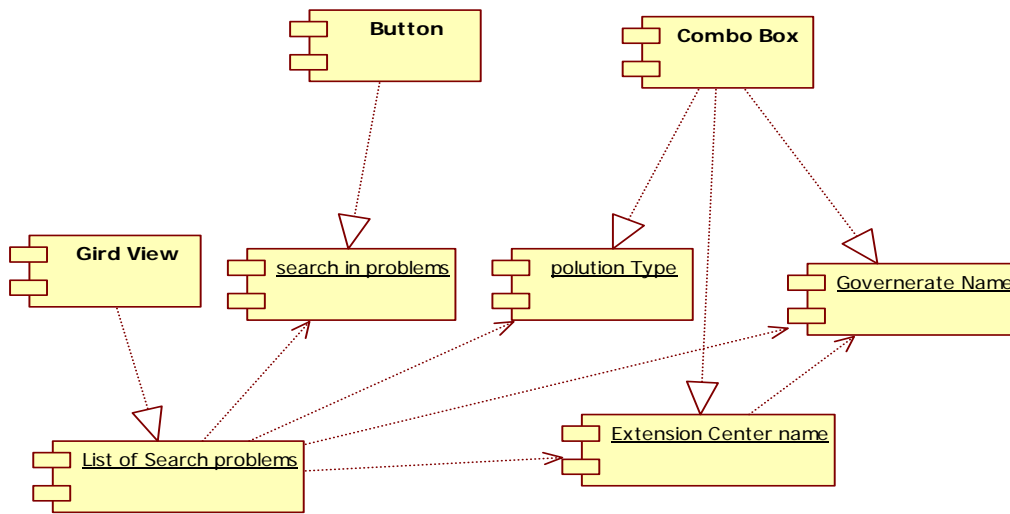


Figure 74 Search rural village and pollution Form

6.2.2 Interaction diagram

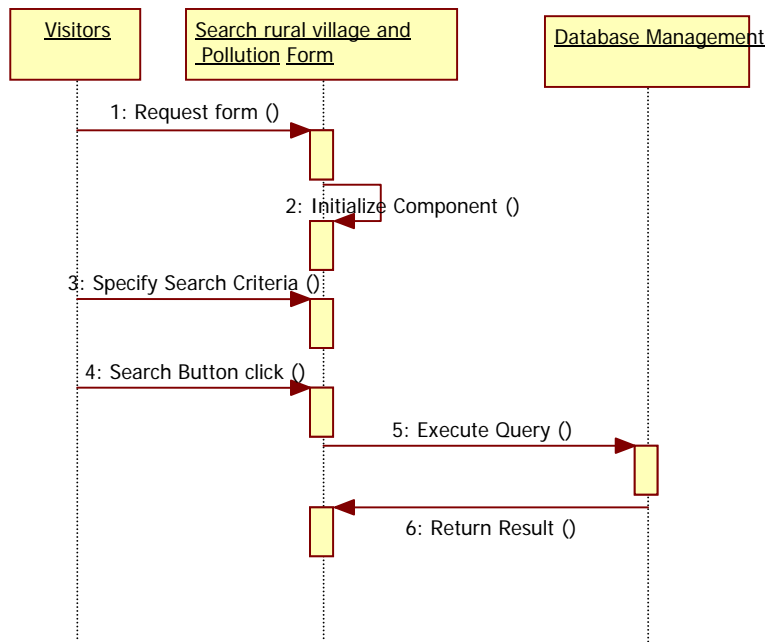


Figure 75 Sequence diagram for Search rural village and pollution

6.2.3 Graphical User Interface for Search rural village and pollution Form documents



Figure 76 GUI for Search rural village and pollution Form at front-end

6.2.4 Unit tests

Name	Test Cases
Search and Browse published rural village and pollution problems	<ol style="list-style-type: none"> 1. Add Environment Problem 2. publish it 3. Go to "القرية الريفية والتلوث" page at front end <p>Expected output: progress indication bar appears until processing finishes, list of environment problems</p>

6.3 Use VERCON module "farmer Problems" for adding environment problems

1. Use this link "<http://www.vercon.sci.eg/Plogin.asp>" to adding new an environment problem



after login

Figure 77 GUI login Form for adding new environment problem

2. Select "environment" on problem
3. Select problem type from details
4. Select add problem data "إدخال بيانات المشكلة" button



Figure 78 GUI Select problem details Form

5. Add problem data then select button "أضافة"




Figure 79 GUI add problem Data Form

6. Select "تتبع مسار المشكلات" (Follow problem path)
7. Select period of date to display problems
8. click on selected problem discretion "وصف المشكلة" (Problem description) for updating



Figure 80 GUI display problems Form during selected period

9. Insert new data

10. Select update button "تعديل بيانات المشكلة"



Figure 81 GUI Update problem Form

11. on select The problems must be clarified "مشاكل يجب توضيحها"



Figure 82 GUI problems must be clarified Form

7 Sub Module – Related links

Module Name	Related link
Module Description	We will use this sub module for adding related links and availing them to the internet visitors.
Reuse	Written from scratch
Notes	

7.1 Class diagram for related links

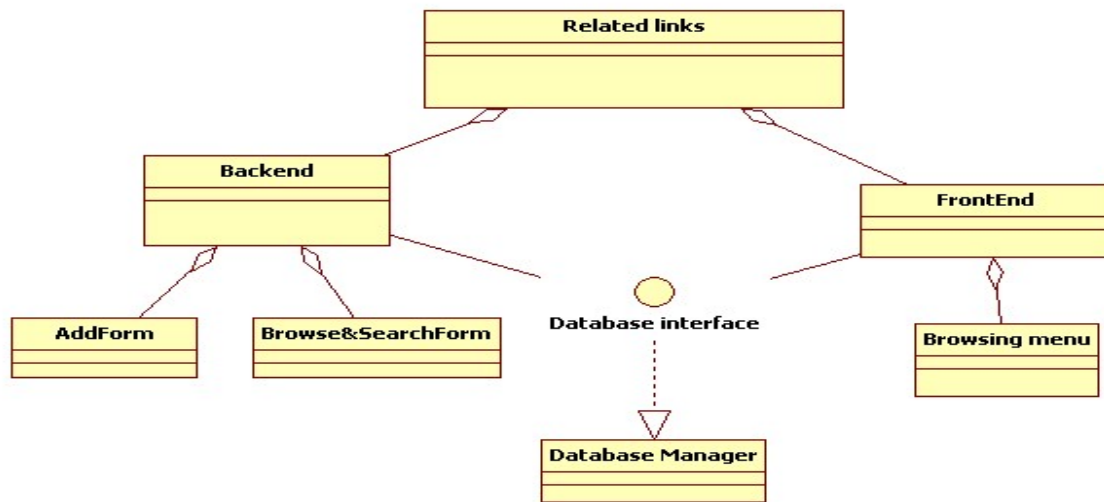


Figure 17 class diagram for related links

7.2 Portlet: Browsing related links form at backend

Portlet Name	Browsing related links
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets	no
Depends on Database Tables	Yes, LinkUrl, Users, User_types
Source File(s)	backend/All_UrlLinks.aspx
Notes	

7.2.1 Component diagram for browsing related links

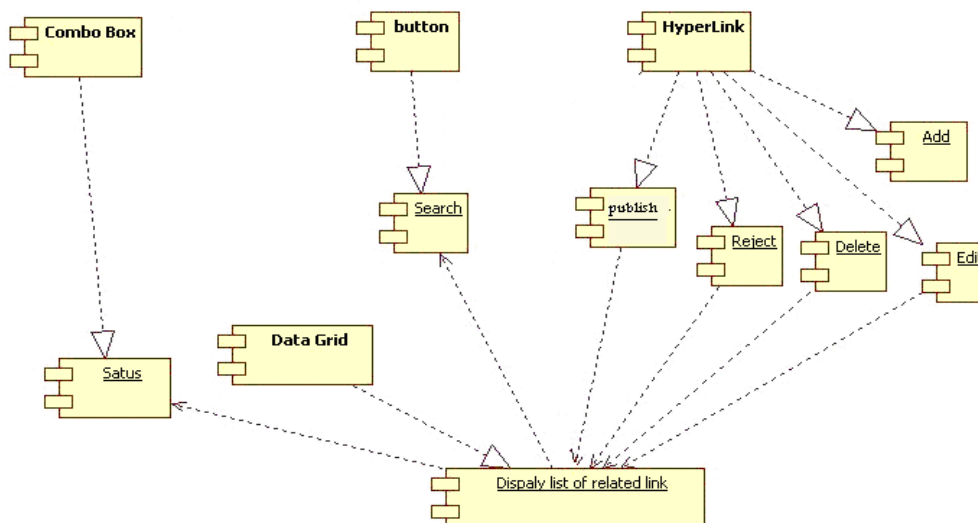


Figure 18 component diagram for browsing Related links

7.2.2 Interaction diagram for browsing related links

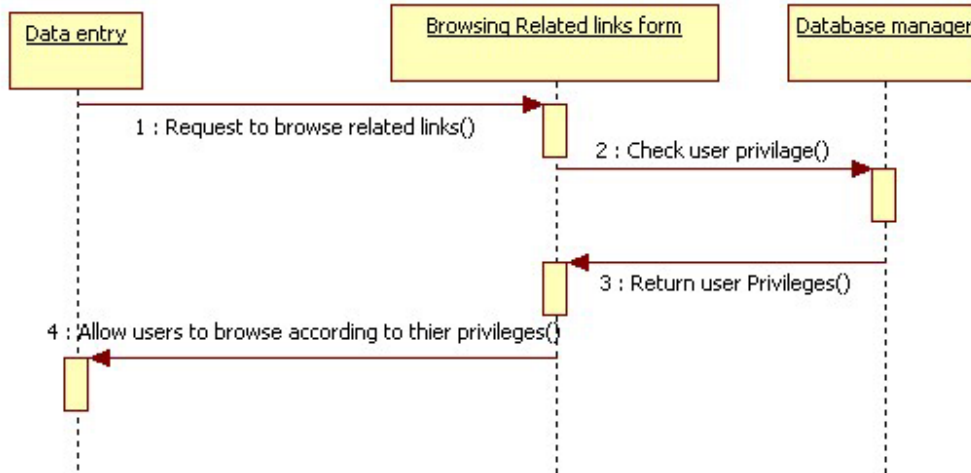


Figure 19 Sequence diagram for browsing related links

7.2.3 Unit tests

Name	Test Cases
Display related links that has status "published"	1. Log on the web application 2. Click on "روابط هامة" link 3. Select status 'تم نشرها' Expected output: the page should display all related links that has been published
Search for related link	1. Log on the web application 2. Click on "روابط هامة" link 3. Set the search term and then click search Expected output: the page should display all related links which name contains the search term

7.3 Portlet: Add Related link form

Portlet Name	Add related link
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets	Yes, Browsing related links form at backend
Depends on Database Tables	Yes, LinkUrl, Users, User_types
Source File(s)	Add_URI.aspx, ConfirmSaved.aspx
Notes	

7.3.1 Component diagram for add Related link form

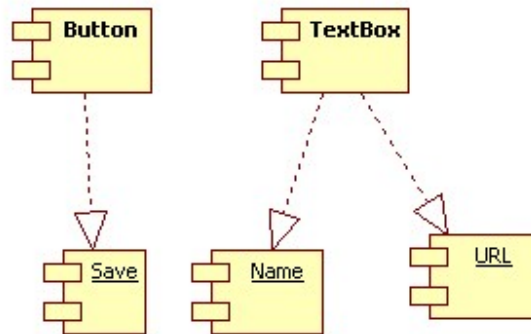


Figure 20 Component diagram for adding related links

7.3.2 Interaction Diagram

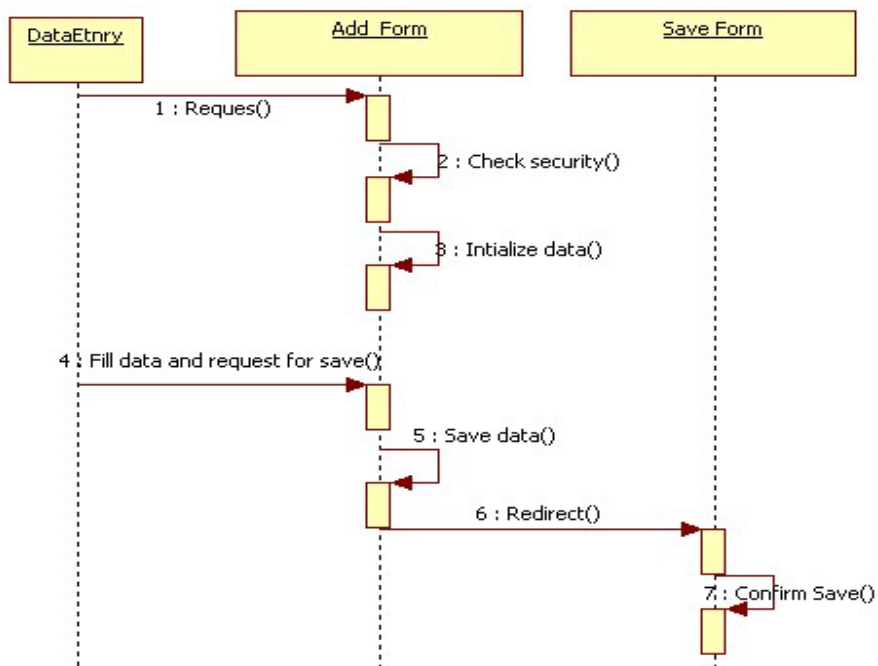


Figure 21 Sequence diagram for adding related links

7.3.3 Graphical user interface

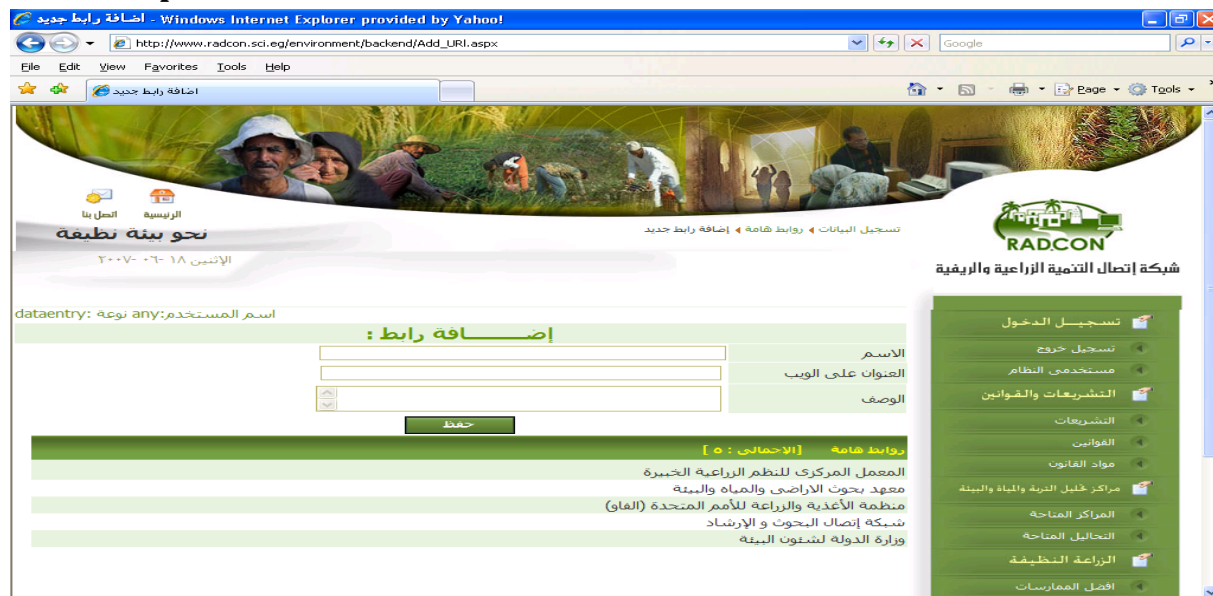


Figure 22 Snapshot for adding related links form

7.3.4 Unit tests

Name	Test Cases
add related link	<ol style="list-style-type: none"> 1. Login on the web application 2. Click on "روابط هامة" link 3. Click on "إضافة رابط جديد" hyperlink 4. Insert lending institutions data <p>Expected output: progress indication bar appears until processing finishes, then you're directed to the save confirmation page</p>

7.4 Portlet - Related link menu (left front end)

Portlet Name	Related link menu
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, RelatedLink, Status
Source File(s)	All files at front-end
Notes	All related link will be displayed as a menu in the left side of the front pages

7.4.1 Component diagram for related link menu

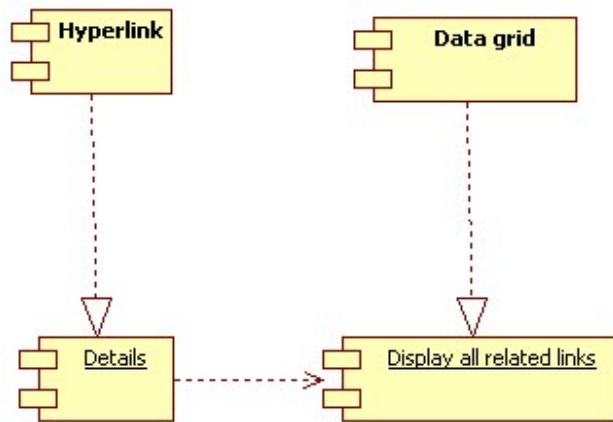


Figure 23 Component diagram for related link menu

7.4.2 Interaction diagram

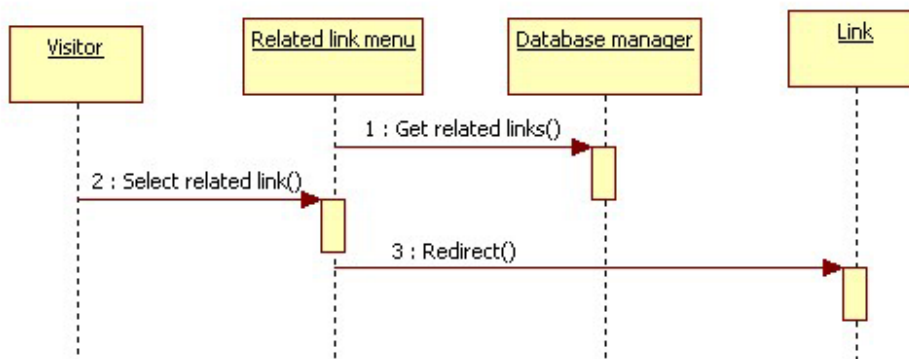


Figure 24 Sequence diagram for related link menu

7.4.3 Unit tests

Name	Test Cases
Browse environment front end	1. Add related link 2. publish it 3. Got to font-end Expected output: the related link will be displayed in the left menu

7.4.4 Graphical user interface



Figure 91 Snapshot for front end related links form

7.5 Portlet - most recent menu (left front end)

Portlet Name	most recent menu
Portlet Function	
Reuse	<input type="checkbox"/> Written from scratch
Depends on other Portlets?	Yes: Add Pest Practice form at backend, Add analysis Center form at backend
Depends on Database Tables	Yes, protected_operation, mehod_protected , Tahlil_Centers, Govtable,Users, User_types, Status
Source File(s)	All files at front-end
Notes	All most recent menu will be displayed as a menu in the left side of the front pages

7.5.1 Component diagram for most recent menu

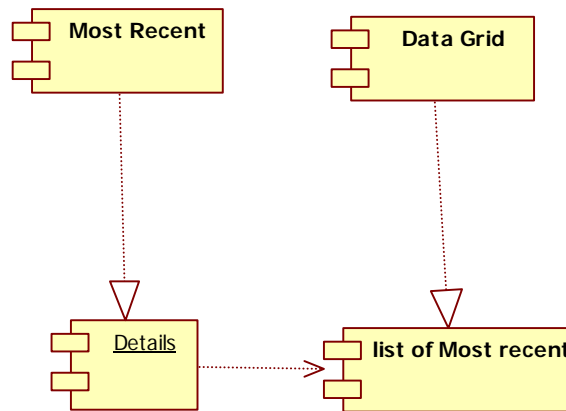


Figure 92 Component diagram for most recent menu

7.5.2 Interaction diagram

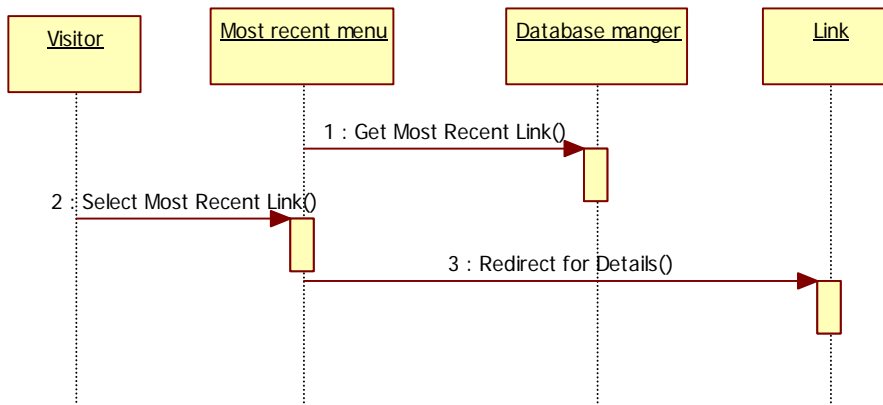


Figure 25 Sequence diagram for most recent menu

7.5.3 Unit tests

Name	Test Cases
Browse environment front end	1. Add new practice and new analysis center 2. publish it 3. Got to font-end home page www.radcon.sci.eg/environment Expected output: the most recent menu "الجدید فی الموقع" will be displayed in the left menu on click display Portlet (Practice Details Form at Front-End, analysis Center Details Form at Front-End).

7.5.4 Graphical user interface



Figure 94 Snapshot for front end most recent menu