TR/radcon/2007.6/Elsayed/3

Prepared by

Abd-Elrahman Elsayed

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1 System Overview

1.1 System Architecture

1.1.1 Physical Architecture

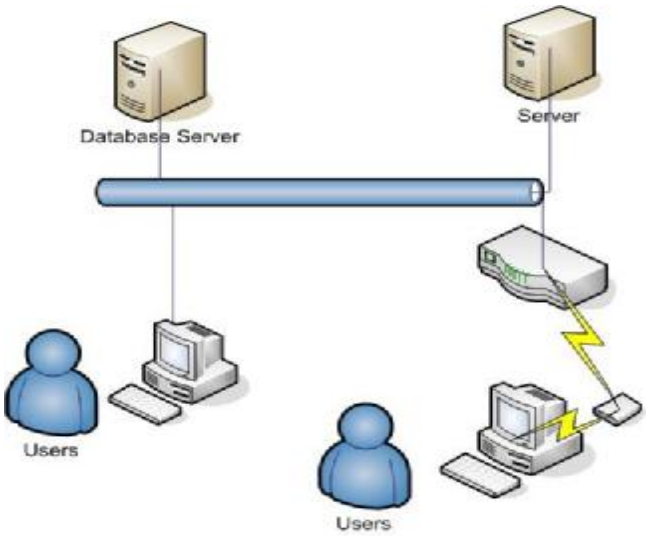

Figure 1 System physical architecture

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.

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1.1.2 High Level Logical Architecture

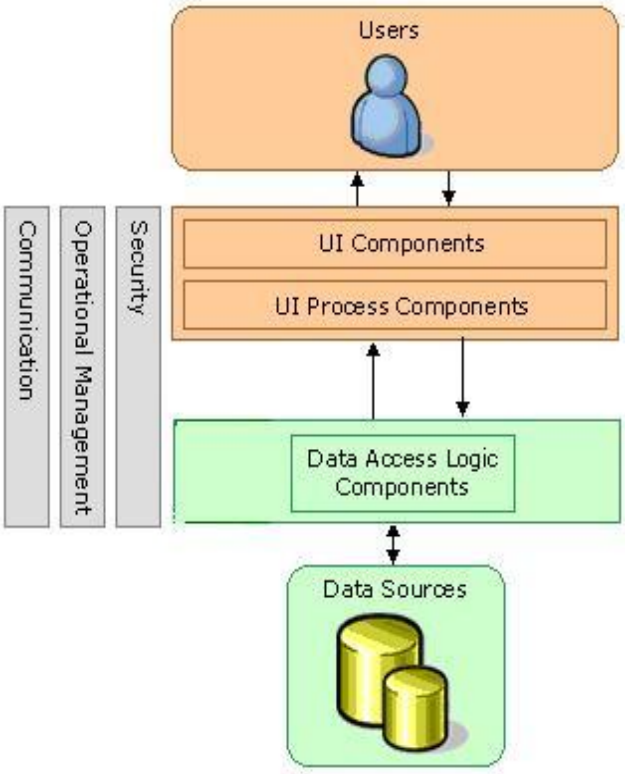

Figure 2 the High level logical architecture

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 thee 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

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1.1.3 Class diagram for Youth Module

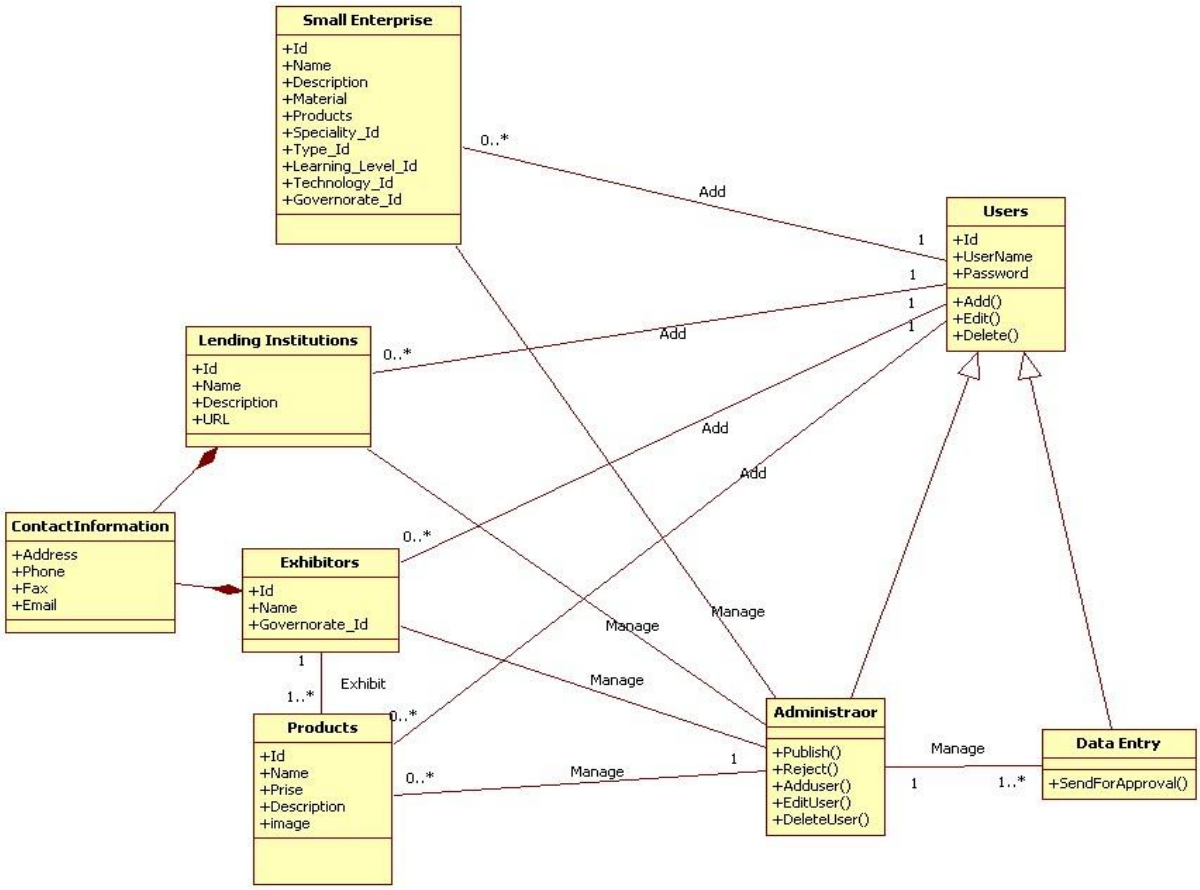

Figure 3 Class diagram for Youth module

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1.1.4 Youth information system Database

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

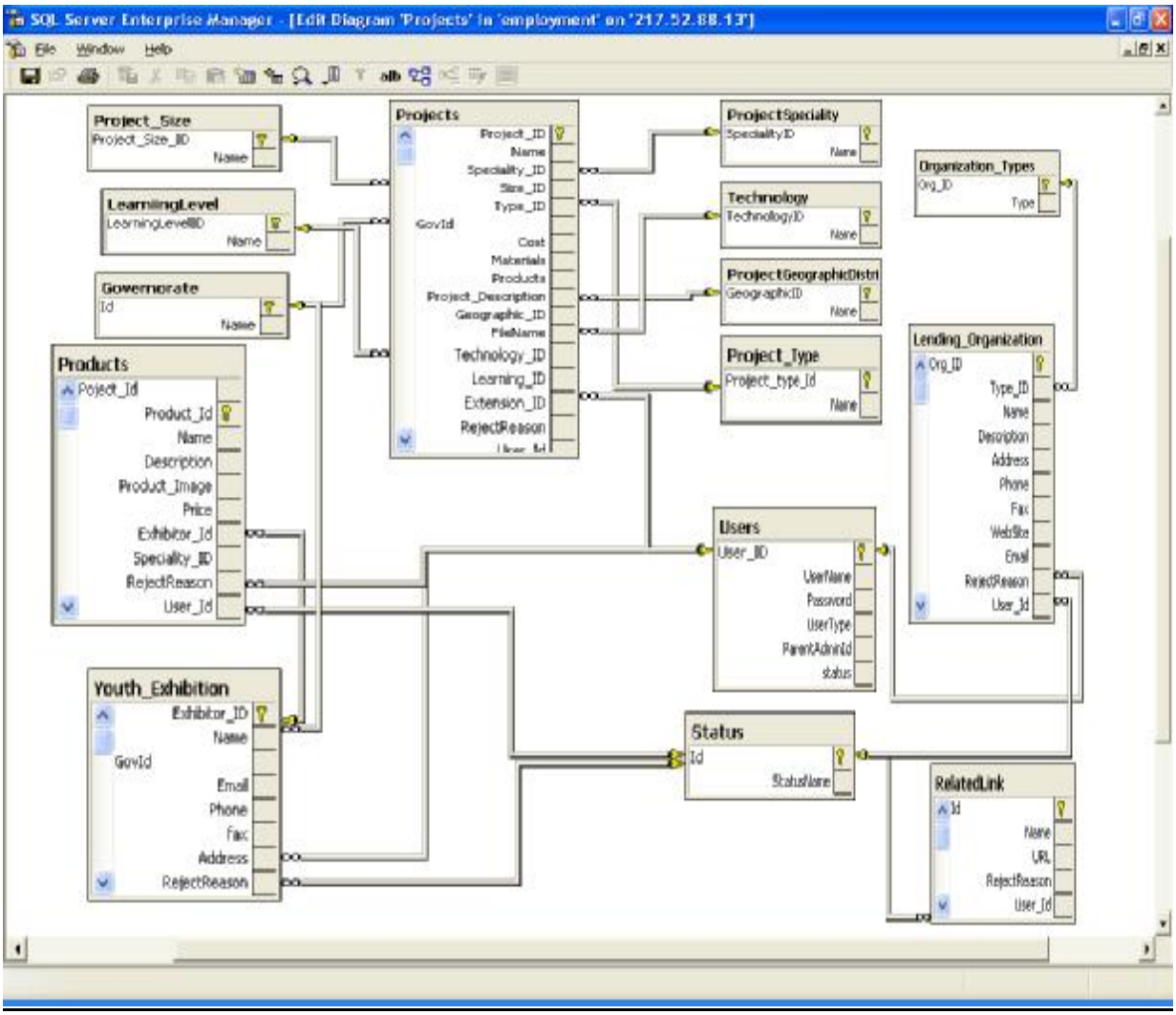

Figure 4 Entity relationship diagram for youth database design

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1.2 System State & Configuration

1.2.1 System Configuration

```
<appSettings>
  <add key="Project_UploadFolder" value="../Upload/ProjectFiles" />
  <add key="Product_UploadFolder" value="../Upload/ProductFiles" />
</appSettings>
  <connectionStrings>
    <add name="YouthConn" connectionString="Data Source=192.168.1.40;Initial
Catalog=employment;User ID=arcmarket;Password=marketarc"
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 small enterprise. The fallowing link is used to upload small enterprise as an extension document http://www.vercon.sci.eg/aindexui/indexdocayman.asp

- In our module we use the website http://www.afkargadida.com to get information about how to prepare the feasibility study and to get information about laws procedures. We use two links
  1- http://www.afkargadida.com/?page=2642
  2- http://www.afkargadida.com/?page=101

1.3 Statechart for user status

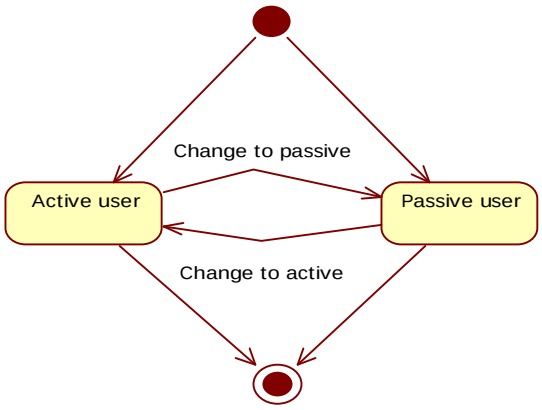

Figure 5 statechart for user status

This statechart of user status defines the status of the data entry users. The administrator will define the data entry users; the status of the defined user will be active user or passive user. Active means that he can use the system. At any time the administrator can change the status of the data entry user.

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1.4 Statecharts for the workflow of (small enterprises, related links, products, product exhibitors, and lending institutions)

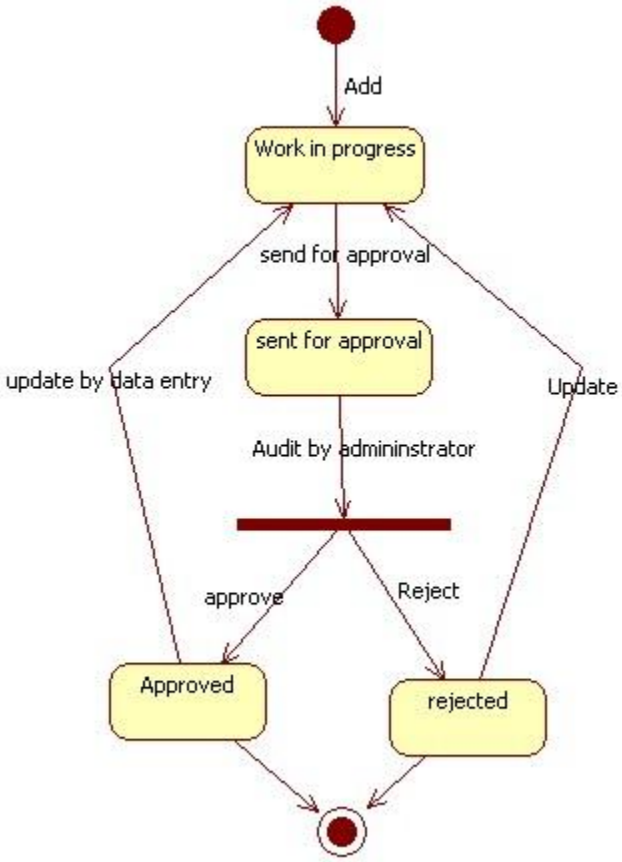

Figure 6 Statechart diagram for the objects at youth module

This statechart diagram describes the work flow of the system. AT the first step the object for example **small enterprise** will be added. After that the status of the object will be "**work in progress**". After that the data entry will send the object to be approved then the status of the object will be "**sent for approval**". The administrator will audit the object and then decide either to approve or reject it. If the object has been approved by the administrator the status of it will be "**Approved**" else it will be "**Rejected**".

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2 Sub Module – Small enterprise

Module Name	Small enterprise
Module Description	We will use this sub module for adding small enterprises and availing them to the internet visitors.
Reuse	Written from scratch and we use external module at **VERCON** To upload the full document of the small enterprise
Notes	

2.1 Class diagram for small enterprise

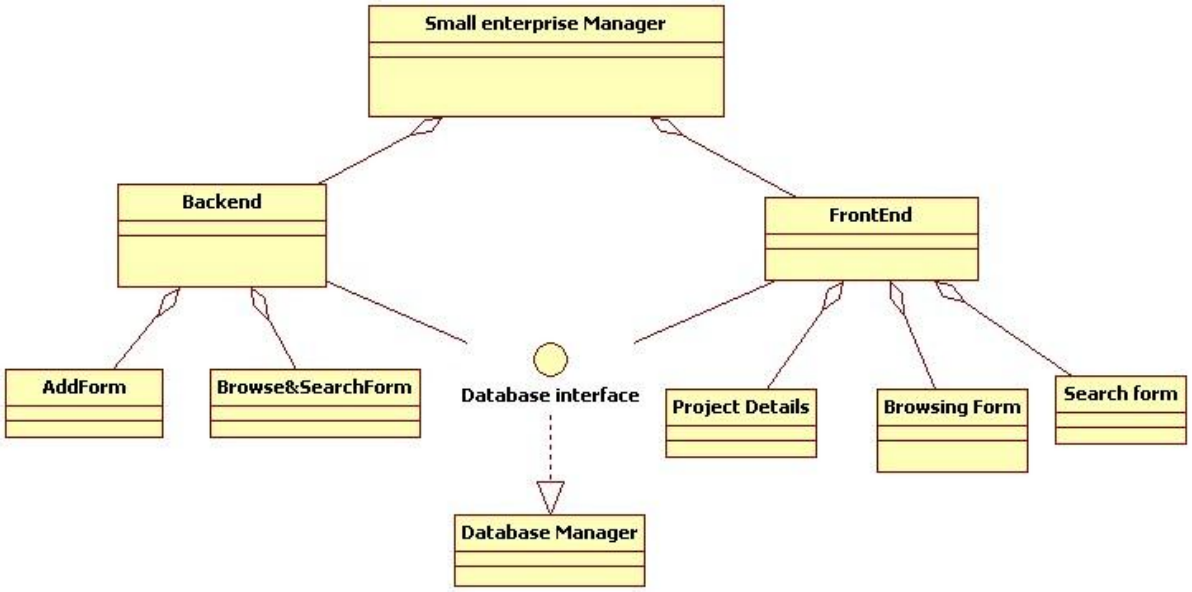

Figure 7 Structured Chart for small enterprise

2.2 Portlet: Browsing small enterprise form at backend

Portlet Name	Browsing small enterprise
Portlet Function	It will be used to help the data entry users and the administrator to navigate the small enterprise data .It will contains a link for adding new small enterprises and it will contains a set of links to manage the work flow of the small enterprise
Reuse	☐ Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Projects, Users, Status
Source File(s)	Projects.aspx
Notes	

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2.2.1 Component diagram for browsing Small enterprise

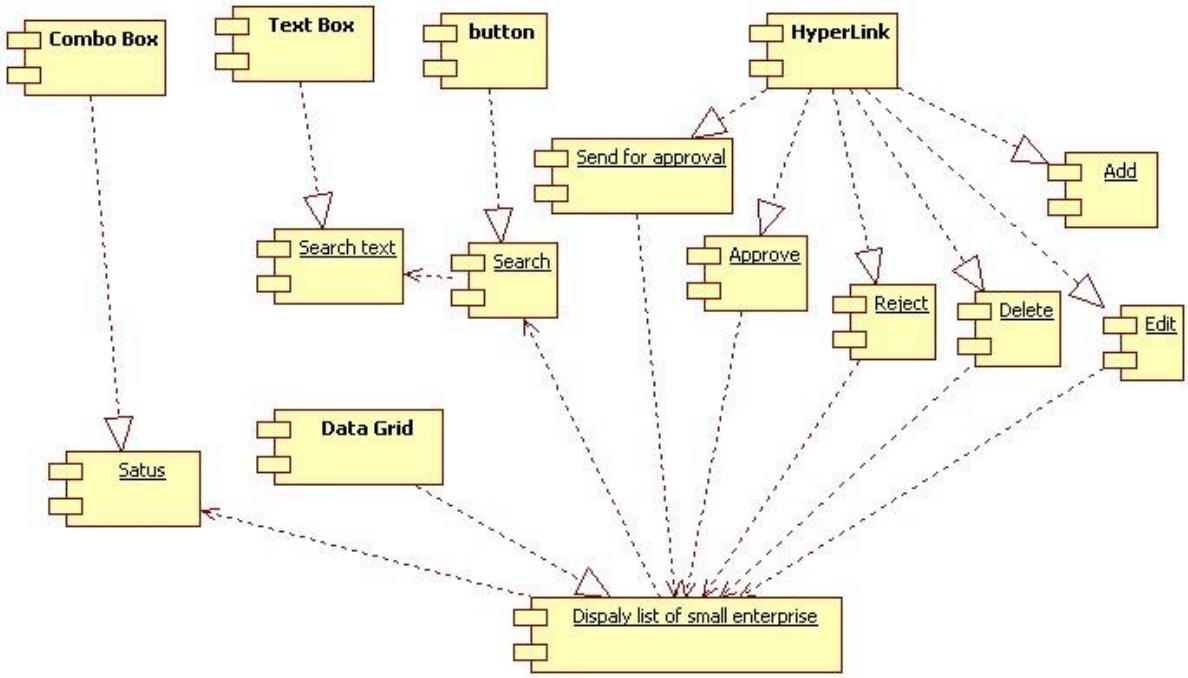

Figure 8 Browse small enterprises at backend

2.2.2 Interaction diagram for browsing small enterprise

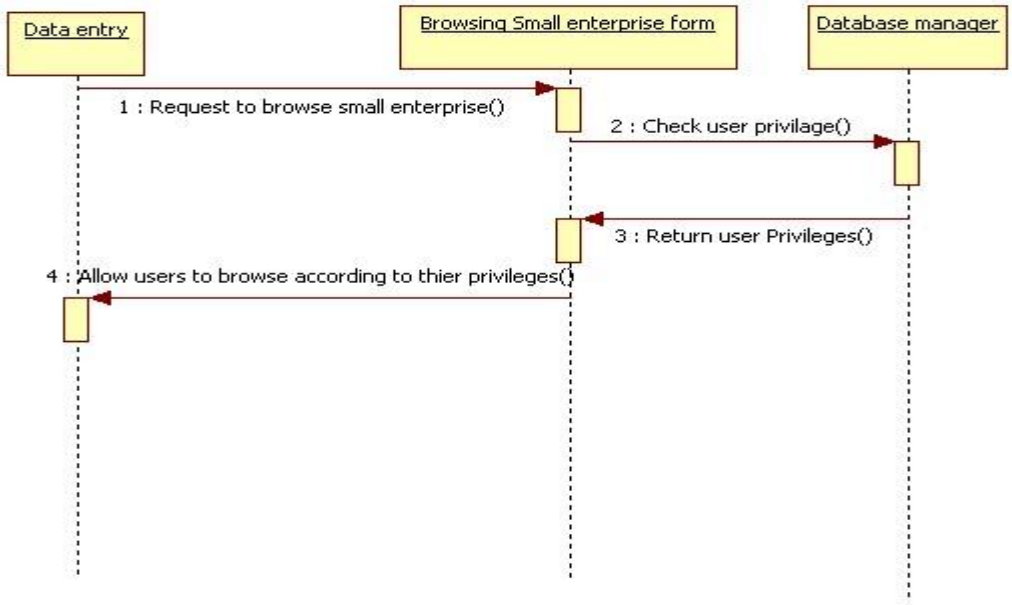

Figure 9 Sequence diagram for browsing small enterprise

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2.2.3 Graphical user interface

Figure 10 Snapshot for browsing small enterprise

2.2.4 Unit tests

Name	Test Cases
Display small enterprise that has status "Work in progress"	1. Log on the web application 2. Click on "دراسات فنية واقتصادية" link 3. Select status 'جارى العمل بها' **Expected output:** the page should display all small enterprises that has been entered and which has not been published yet
Send small enterprise for approval	1. Log on the web application 2. Click on "دراسات فنية واقتصادية" link 3. Select status 'جارى العمل بها' 4. select small enterprise and send it for approval **Expected output:** the selected small enterprise status should be changed to "sent for approval"
Search for small enterprise	1. Log on the web application 2. Click on "دراسات فنية واقتصادية" link 3. Set the search term and then click search **Expected output:** the page should display all small enterprise which name contains the search term

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2.3 Portlet: Add small enterprise Form

Portlet Name	Add new small enterprises
Portlet Function	It will be used for adding new small enterprise or editing existing one
Reuse	Written from scratch and Depends on an existing component at VERCON
Depends on other Portlets	Yes, Browsing small enterprise form at backend
Depends on Database Tables	Yes, Projects, ProjectSpeciality, Technology, ProjectGeographicDistribution, Project_Type, Project_Size, LearniingLevel, Governorate
Source File(s)	Backend/ProjectAdd.aspx, Backend/ProjectSaved.aspx
Notes	

2.3.1 Component diagram for adding small enterprise form

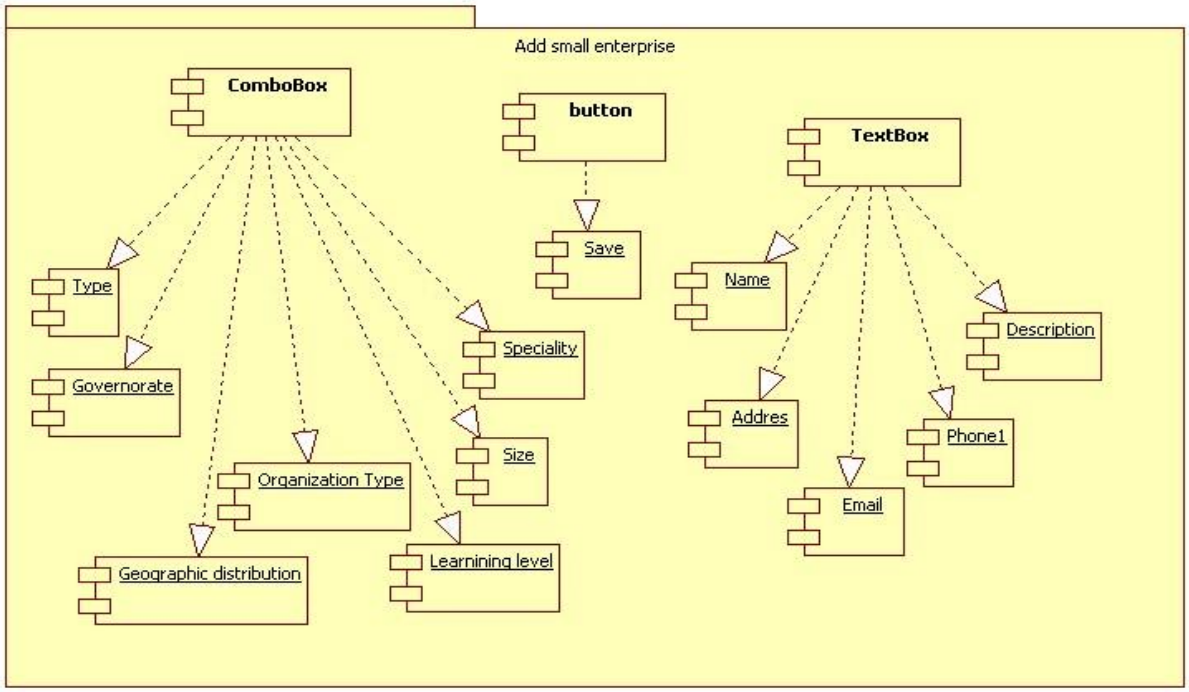

Figure 11 Component diagram for adding small enterprise form

The component diagram shows all the used control in adding small enterprise. Each combo box control will be initialized and filled with data from the references tables at the database. After the user filling the data of the text components boxes and select the data form combo boxes components he will click in save button to add the small enterprise data.

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2.3.2 Interaction Diagram for adding new small enterprise

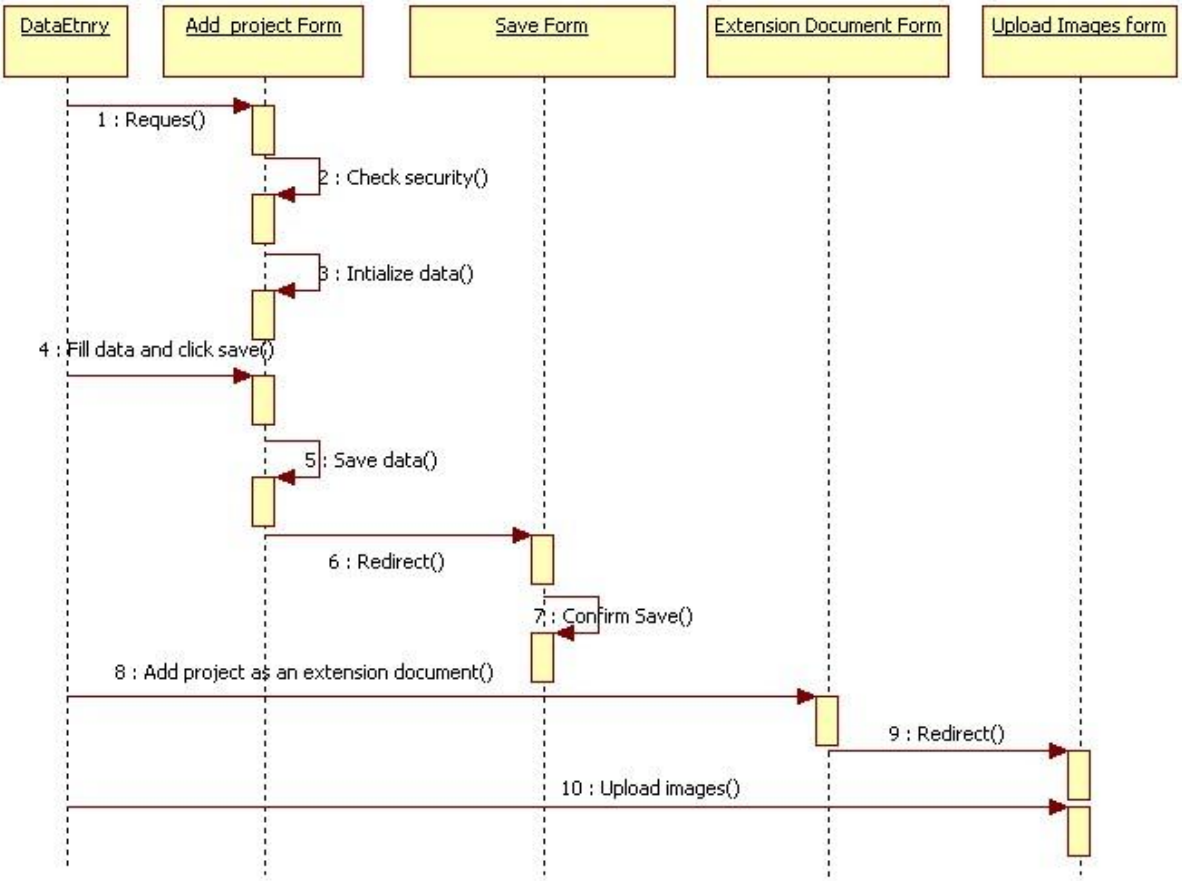

Figure 12 Sequence diagram for adding small enterprise

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2.3.3 Graphical user interface

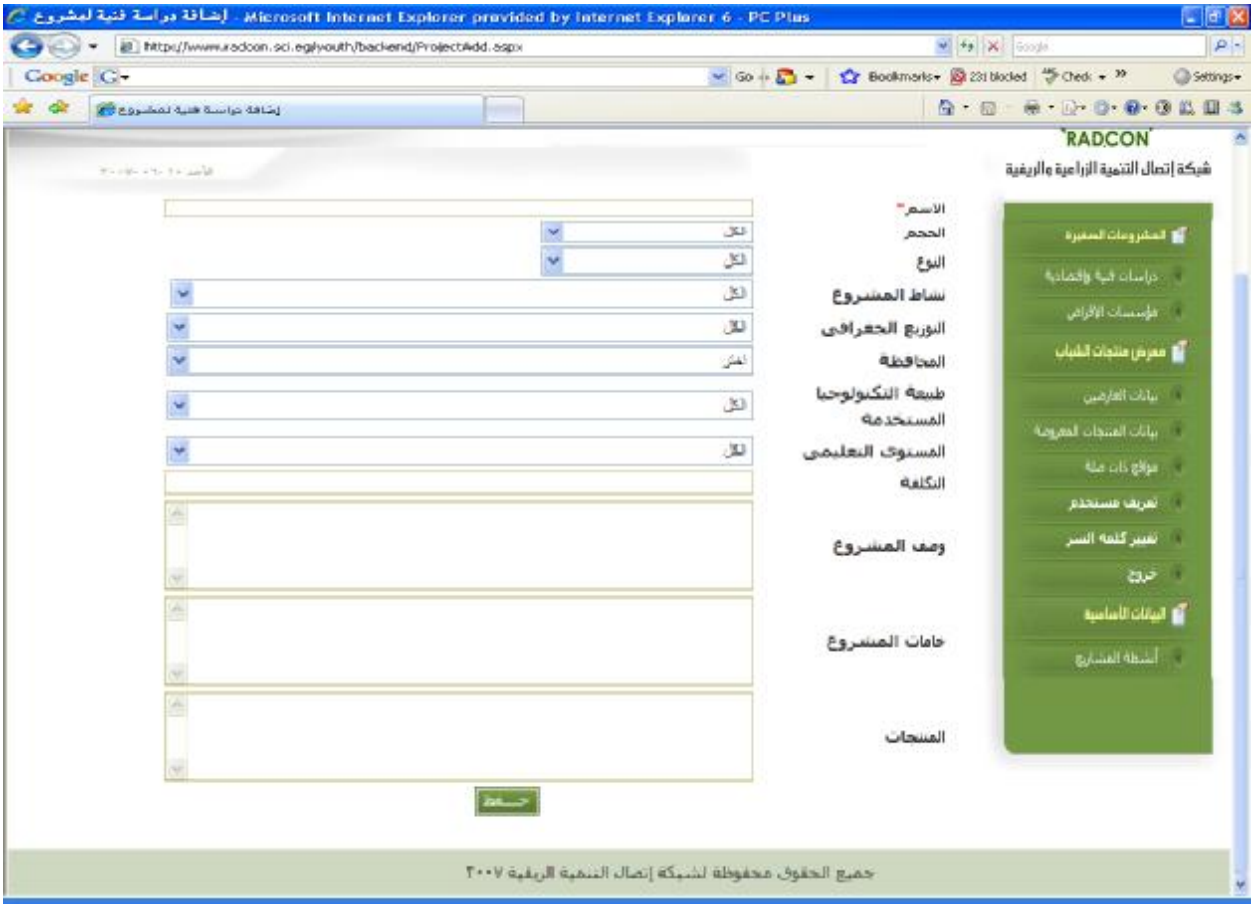

Figure 13 Snapshot for adding small enterprise form

2.3.4 Unit tests

Name	Test Cases
Open "add small enterprise page"	1. Log on the web application 2. Click on "دراسات فنية واقتصادية" link 3. Click on "ضافة مشروع جديد ' hyperlink **Expected output:** progress indication bar appears until processing finishes, then you're directed to the "ProjectAdd.aspx" page
Add new small enterprise	1. Open add small enterprise page 2. Insert project data 3. Click save button 4. Upload small enterprise as an extension document **Expected output:** progress indication bar appears until processing finishes, then you're directed to the "ProjectSaved.aspx" page

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2.4 Portlet – Browsing project at Front-End

Portlet Name	Browsing small enterprise at front end
Portlet Function	Help internet users to browse the small enterprises
Reuse	☐ Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Projects, Status
Source File(s)	
Notes	Only the small enterprise that has been published will be displayed by this portlet

2.4.1 Component diagram for browsing small enterprise

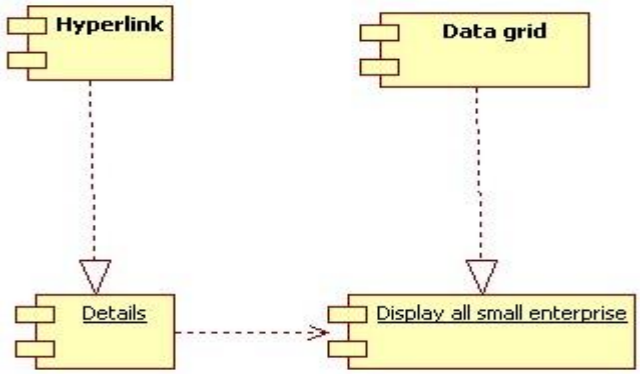

Figure 14 browse small enterprise at front-end

2.4.2 Graphical User Interface for browsing Small enterprise

Figure 15 GUI for browsing Small enterprise at front-end

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2.4.3 Unit tests

Name	Test Cases
Browse published small enterprise	1. Add small enterprise 2. publish it 3. Got to "دراسات فنية ولقتصادية" page at front end **Expected output:** progress indication bar appears until processing finishes, then you're directed to the result page

2.5 Portlet – Search small enterprise at Front-End

Portlet Name	searching small enterprise
Portlet Function	Help internet users to search for small enterprise using different criteria such as small enterprise name , learning level, geographical distribution, etc.
Reuse	☐ Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Projects, ProjectSpeciality, Technology, ProjectGeographicDistribution, LearniingLevel
Source File(s)	
Notes	Only the small enterprise that has been published will be displayed by this portlet

2.5.1 Component diagram for Search small enterprise

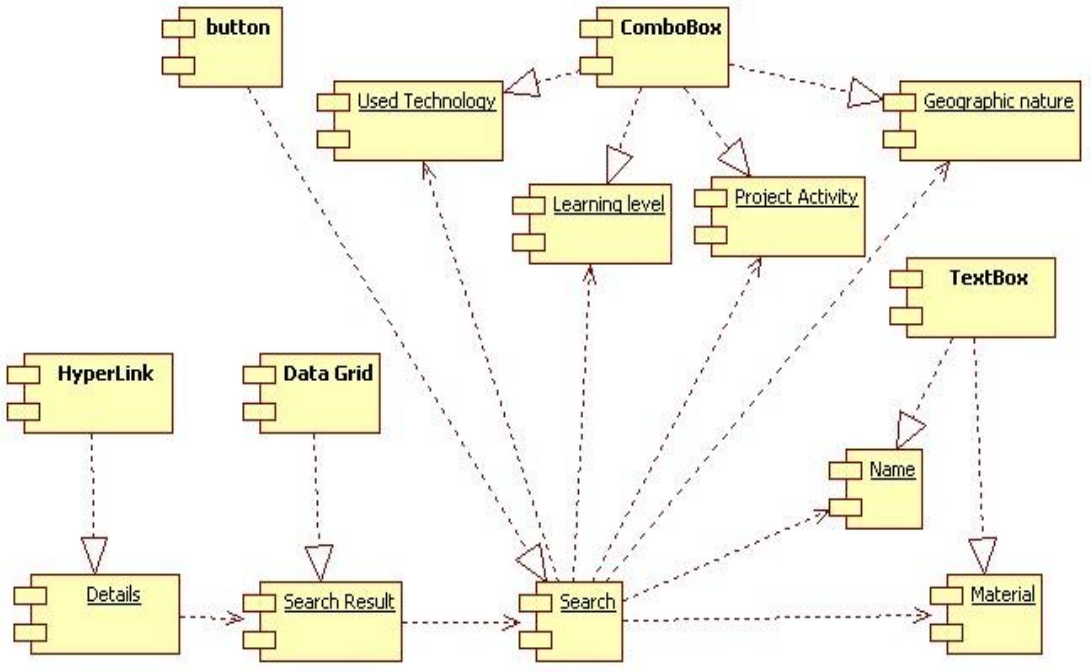

Figure 16 Component diagram for search small enterprise at the front-end

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2.5.2 Interaction diagram

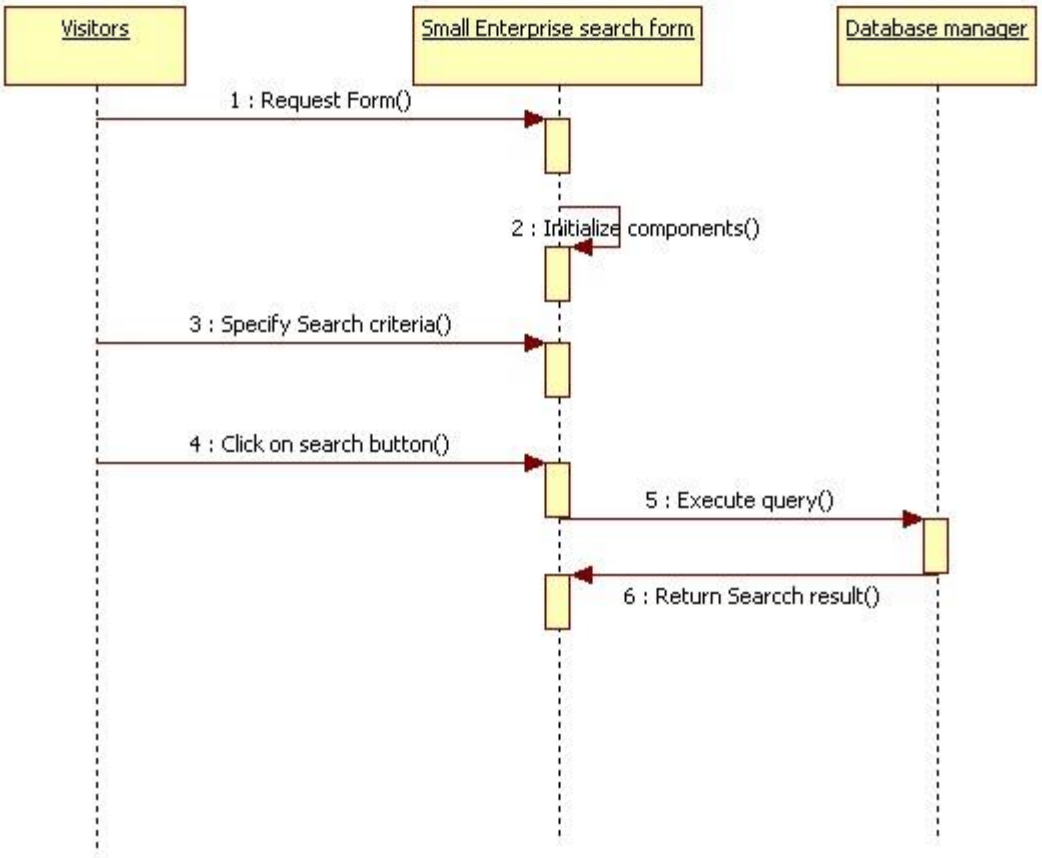

Figure 17 Search small enterprise sequence diagram

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2.5.3 Graphical User Interface for Search Small enterprise

Figure 18 GUI for searching small enterprise at front-end

2.5.4 Unit tests

Name	Test Cases
Search published small enterprise	1. Add small enterprise 2. publish it 3. Got to “دراسات فنية ولقتصادية” page at front end 4. write project name then click search button **Expected output:** progress indication bar appears until processing finishes, then you’re directed to the result page
Advanced search	1. Add a set of small enterprise 2. Publish it 3- Specify search criteria such as project type, Geographic distribution, learning level **Expected output:** progress indication bar appears until processing finishes, then you’re directed to the result page that contains the records that meet search criteria

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2.6 Portlet – Display the most recent small enterprises

Portlet Name	Display the most recent small enterprises
Portlet Function	It will display the most recent small enterprises (it will display three small enterprises)
Reuse	☐ Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Projects
Source File(s)	
Notes	The most recent small enterprise will be displayed in a box at the left menu of the front-page of the Youth module

2.6.1 Component diagram for the Portlet (Displaying the most recent Small Enterprises)

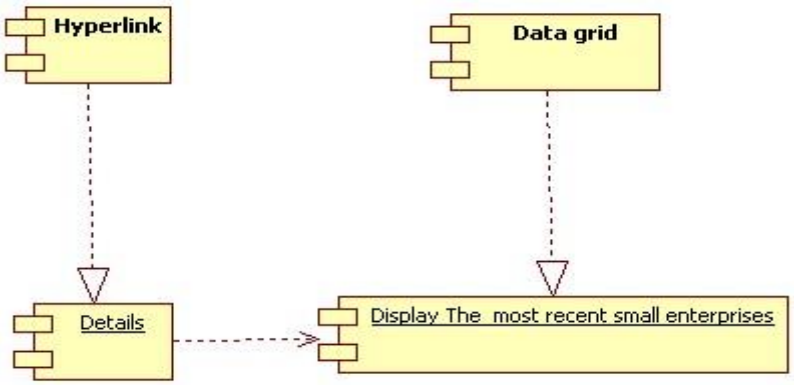

Figure 19 Component diagram for displaying the most recent small enterprises

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2.6.2 Interaction diagram

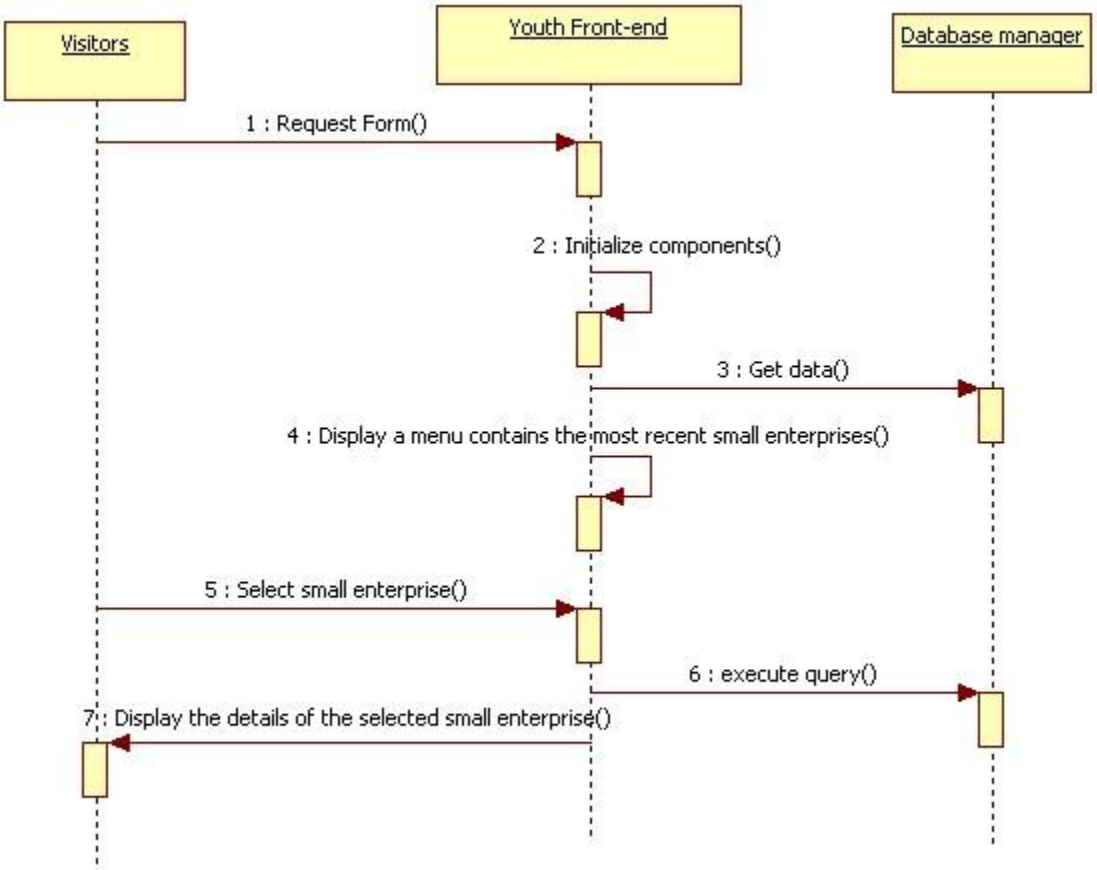

Figure 20 Sequence diagram for displaying the most recent small enterprises

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2.6.3 Graphical User Interface for displaying the most recent Small enterprise

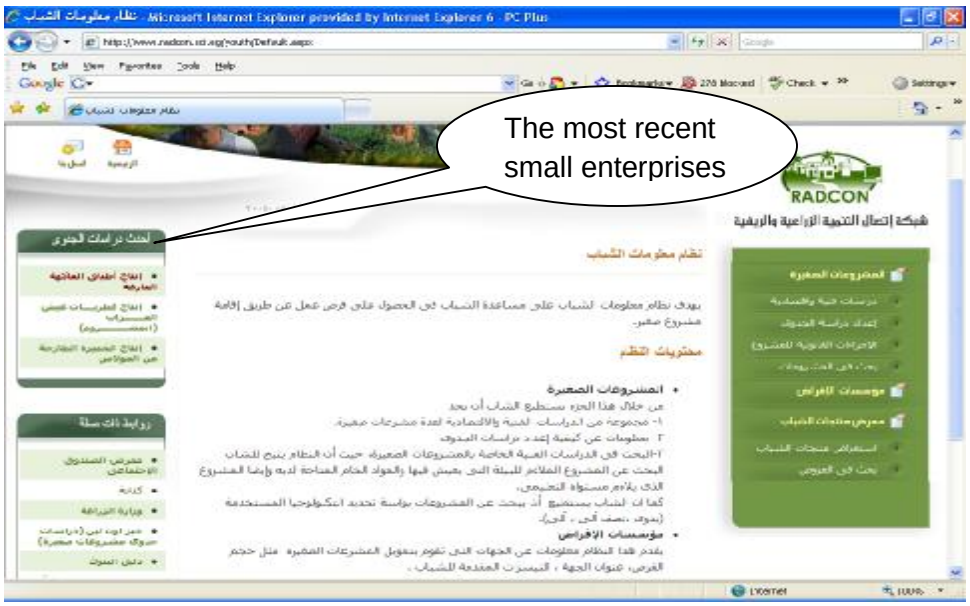

Figure 21 the graphical user interface for the most recent small enterprises

2.6.4 Unit tests

Name	Test Cases
Add small enterprise	1. Add small enterprise 2. publish it 3. Got to front-end page **Expected output:** The added small enterprise should be displayed in the most recent menu
Display the details of small enterprise	1. Select small enterprise from most recent menu **Expected output:** The details of the small enterprise should be displayed

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3 Sub Module – Lending Institution

Module Name	Lending institution
Module Description	We will use this sub module for adding lending institutions and availing them to the internet visitors.
Reuse	Written from scratch
Notes	

3.1 Class diagram for lending institutions

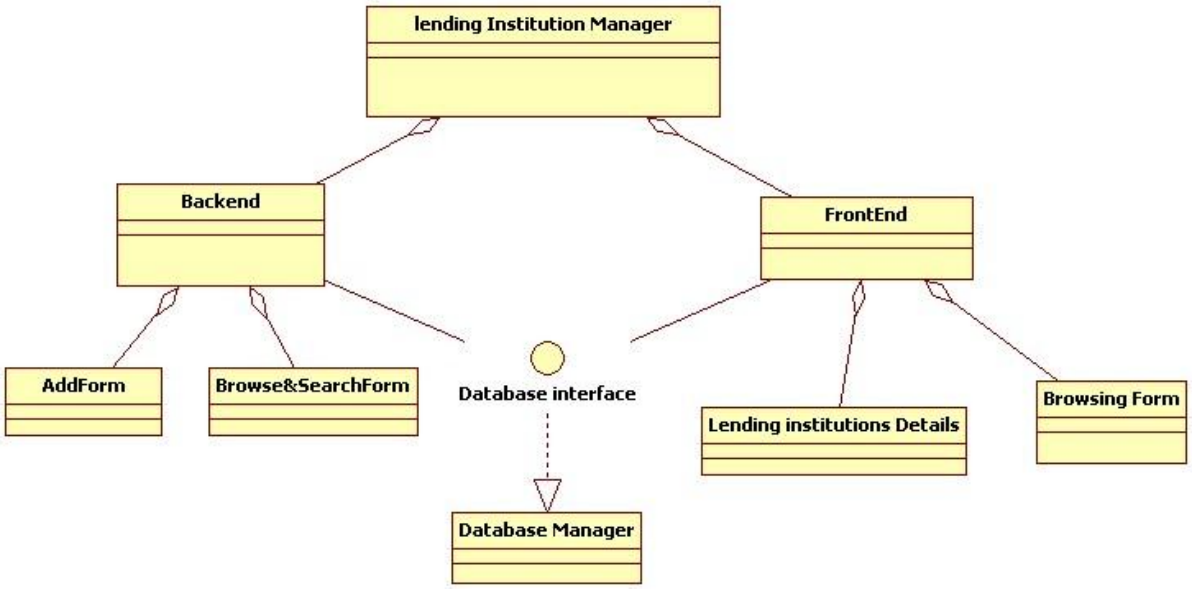

Figure 22 Class diagram for lending institutions enterprise

3.2 Portlet: Browsing Lending institution form at the backend

Portlet Name	Browsing lending institutions
Portlet Function	It will be used to help the data entry users and the administrator to navigate the lending institutions data .It will contains a link for adding new lending institution and it will contains a set of links to manage the work flow of the lending institutions
Reuse	☐ Written from scratch
Depends on other Portlets	no
Depends on Database Tables	Yes, Lending_Organization, Users, Status
Source File(s)	Backend/LendingOrg.aspx,
Notes	

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3.2.1 Component diagram for browsing Lending institutions

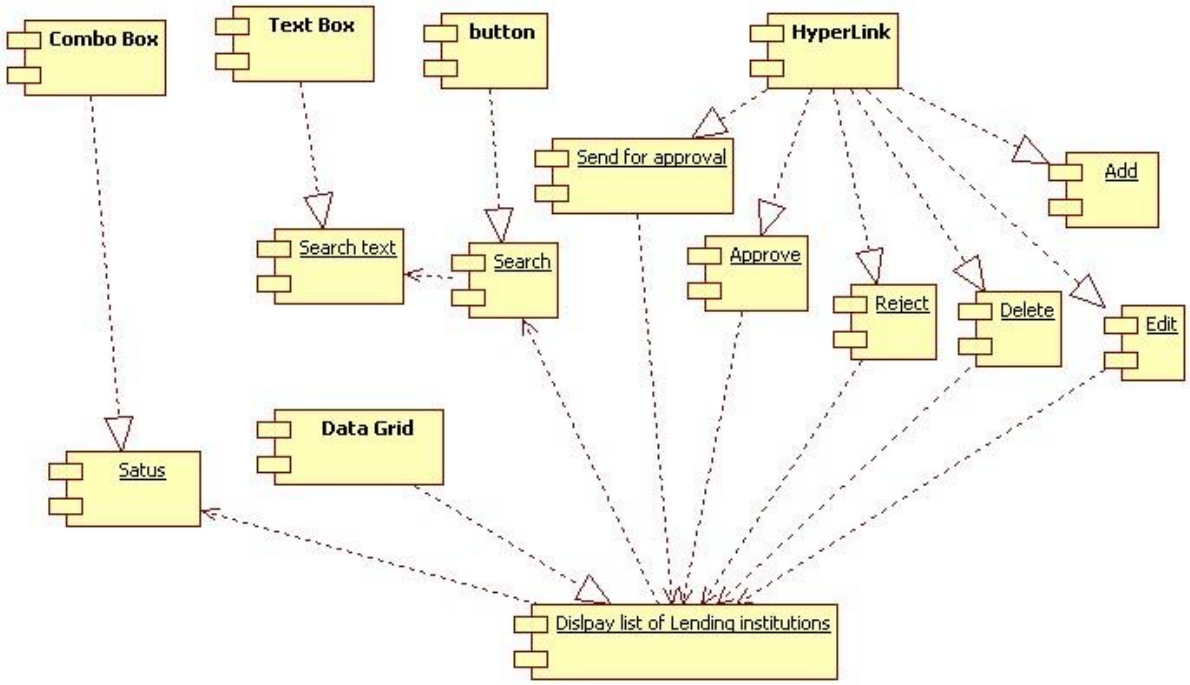

Figure 23 Browse lending institutions at backend

3.2.2 Interaction diagram for browsing lending institutions

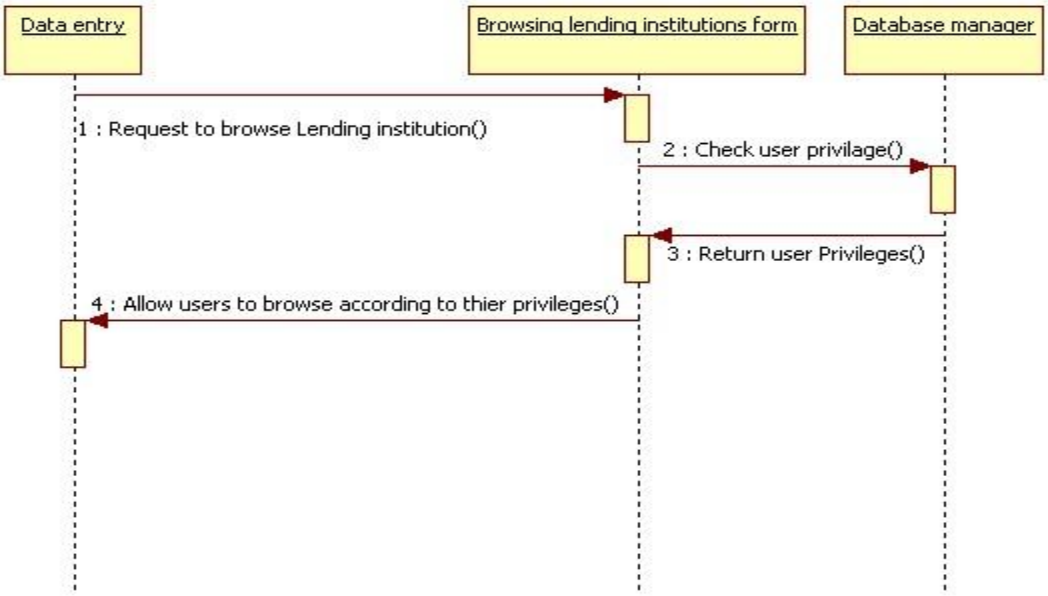

Figure 24 Sequence diagram for browsing lending institution

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3.2.3 Graphical User Interface

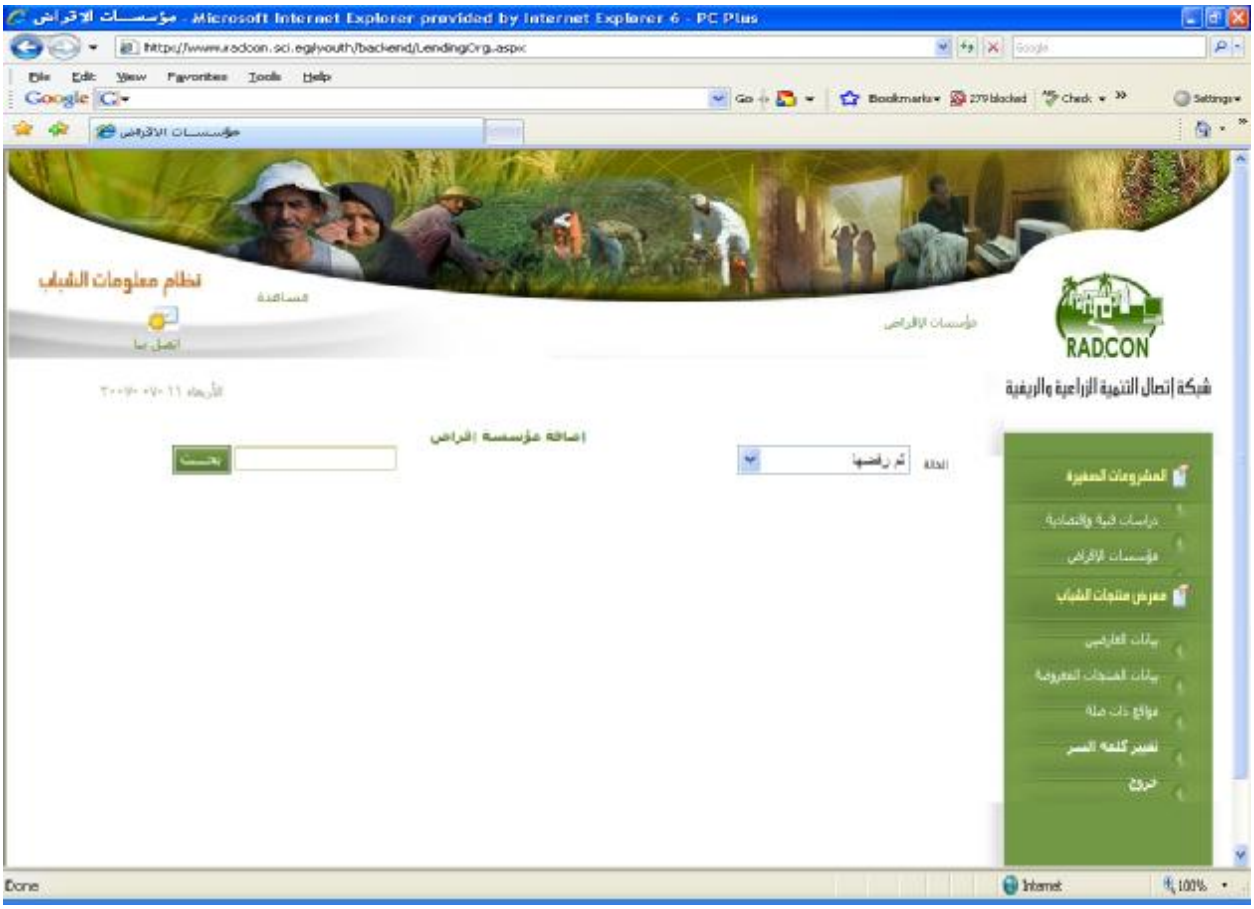

Figure 25 the graphical user interface for browsing small enterprise

3.2.4 Unit tests

Name	Test Cases
Display lending institutions that has status "Work in progress"	1. Log on the web application 2. Click on "مؤسسات الإقراض" link 3. Select status 'جارى العمل بها' **Expected output:** the page should display all lending institutions that has been entered and which has status work in progress
Search for small enterprise	1. Log on the web application 2. Click on "مؤسسات الإقراض" link 3. Set the search term and then click search **Expected output:** the page should display all lending institutions which name contains the search term

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3.3 Portlet: Add Lending institution form

Portlet Name	Add lending institutions
Portlet Function	It will be used for adding new lending institutions
Reuse	☐ Written from scratch
Depends on other Portlets	Yes, Browsing lending institution form at backend
Depends on Database Tables	Yes, Lending_Organization, Organization_Types
Source File(s)	LendingAdd.aspx, lendingSaved.aspx
Notes	

3.3.1 Component diagram for adding lending institution form

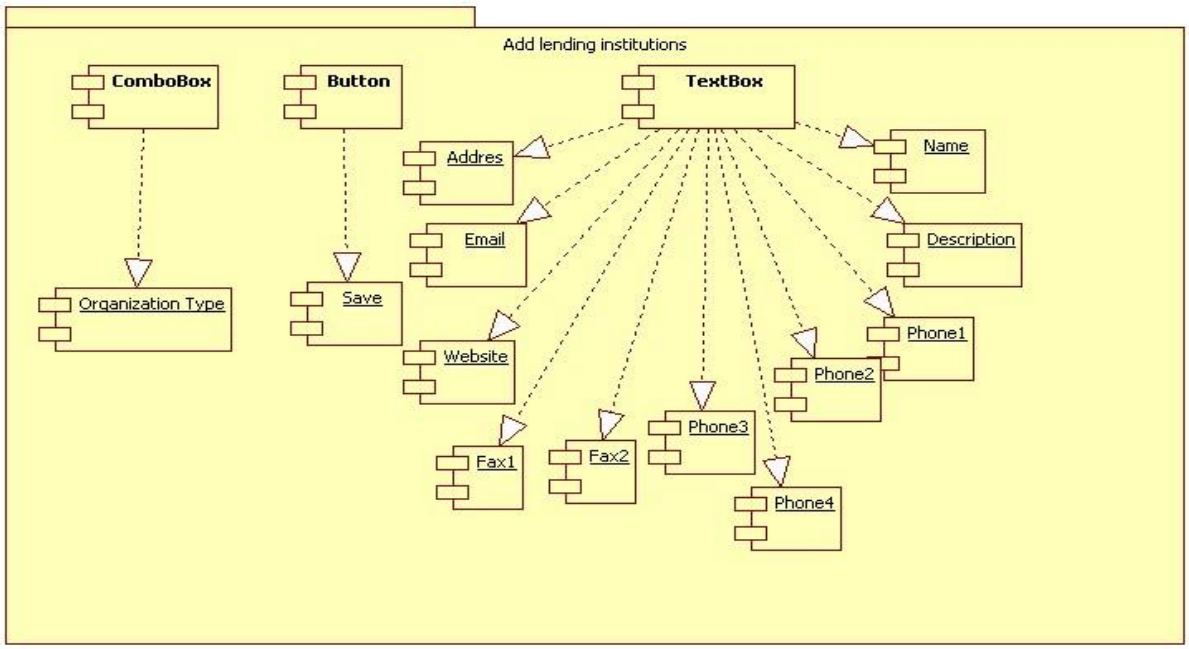

Figure 26 Component diagram for adding lending institutions form

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3.3.2 Interaction Diagram

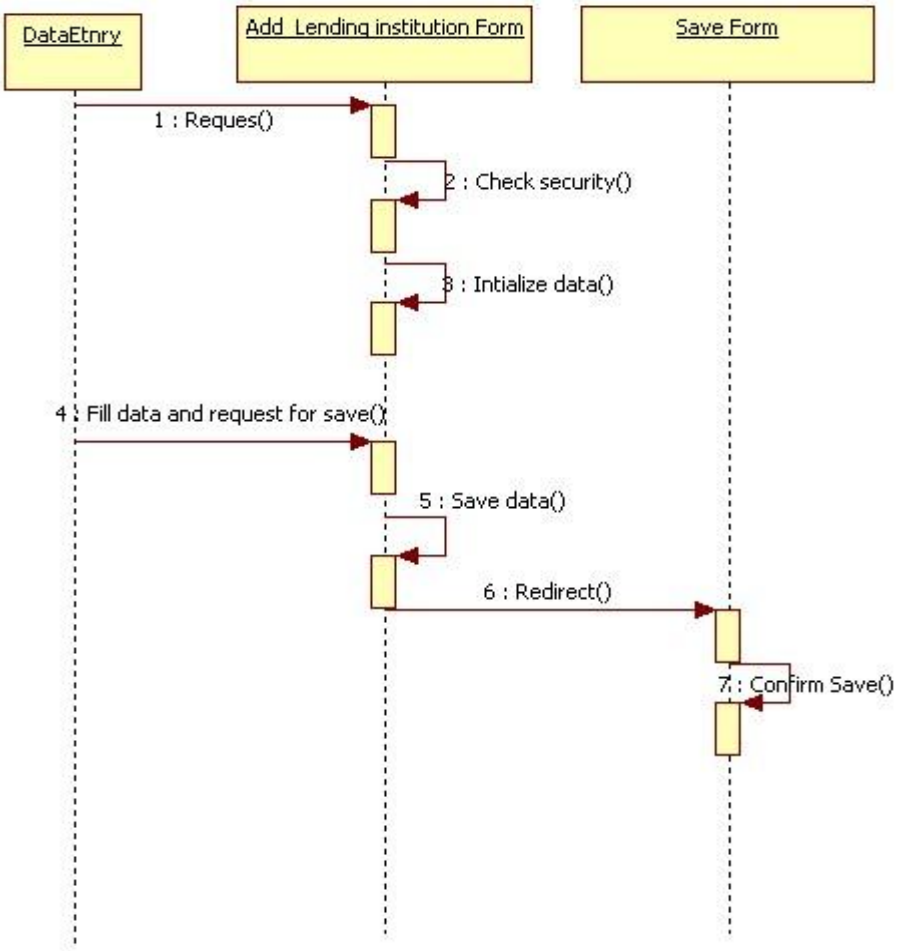

Figure 27 Sequence diagram for adding lending institutions

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3.3.3 Graphical user interface

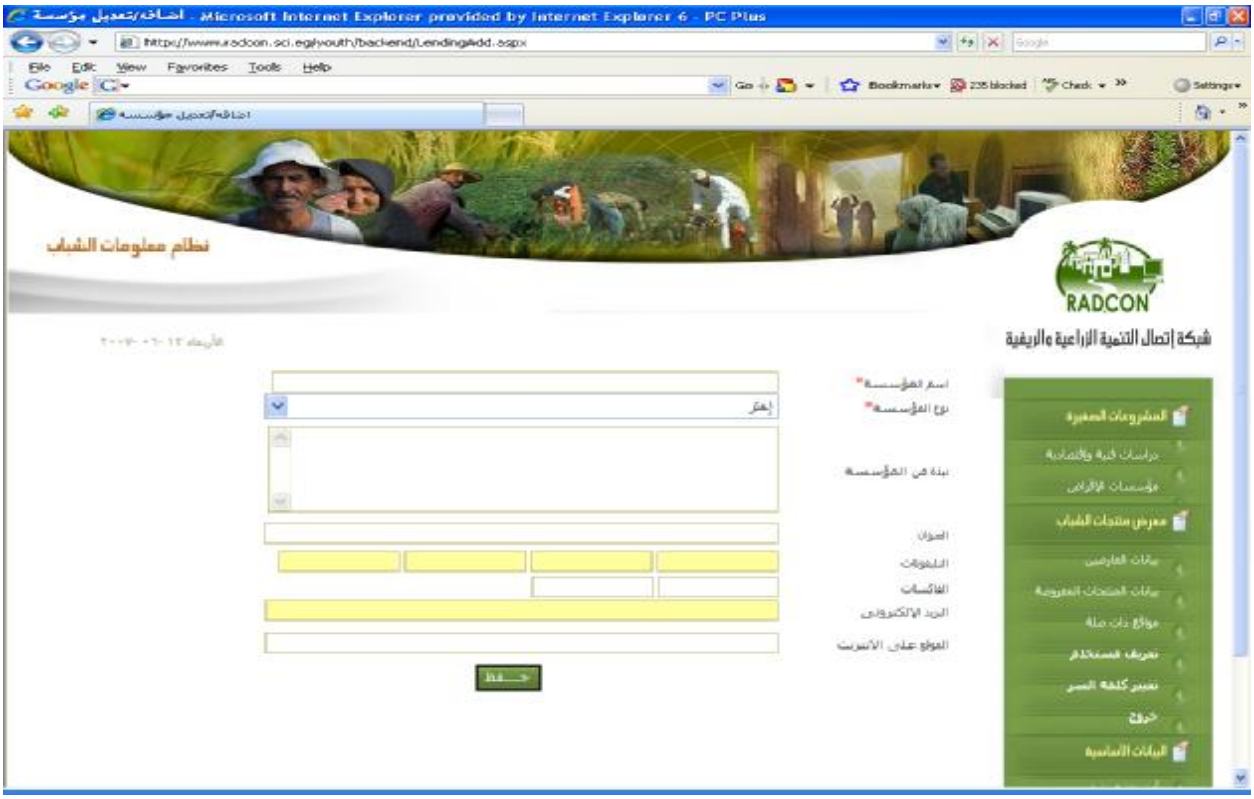

Figure 28 Snapshot for adding Lending institutions form

3.3.4 Unit tests

Name	Test Cases
add Lending institution	1. log on the web application 2. Click on "مؤسسات الإقراض" link 3. Click on "إضافة مشروع جديد ' hyperlink 4. Insert lending institutions data **Expected output:** progress indication bar appears until processing finishes, and then you're directed to the "lending institutions" save page. And the lending institution data has been updated
Edit Lending institution	1. log on the web application 2. Click on "مؤسسات الإقراض" link 3. select the lending institution that you have added 4. Edit lending institutions data **Expected output:** progress indication bar appears until processing finishes, then you're directed to the "lending institutions" save page. And The lending institution data has been updated

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3.4 Portlet – Browsing lending institutions at Front-End

Portlet Name	Browse lending institutions
Portlet Function	It help internet users to browse lending institutions data the front-end
Reuse	☐ Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Lending_Organization, Status
Source File(s)	
Notes	Only the small enterprise that has been published will be displayed by this portlet

3.4.1 Component diagram for browsing lending institutions

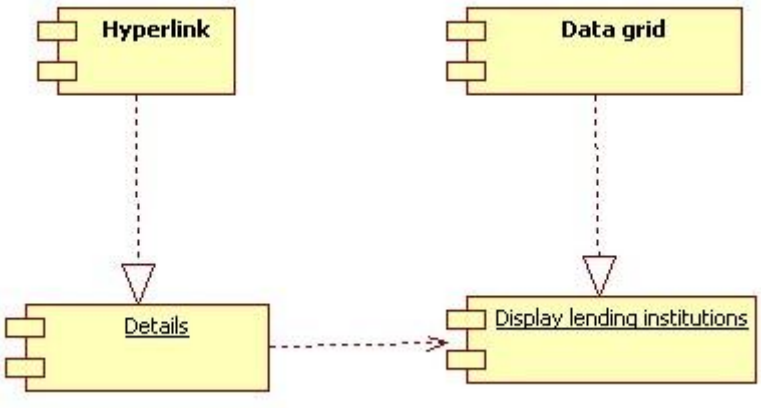

Figure 29 Component diagram for browsing small enterprise at front-end

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3.4.2 Interaction diagram

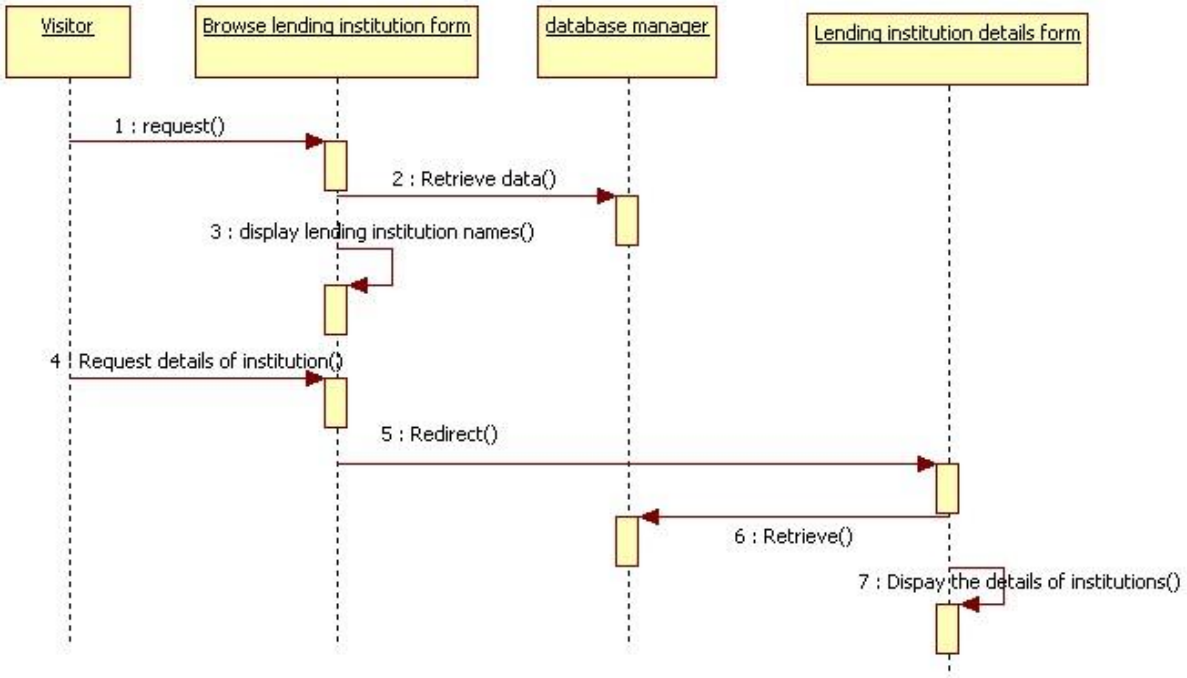

Figure 30 Sequence diagram for browsing lending institutions

3.4.3 Graphical User Interface for browsing lending institutions

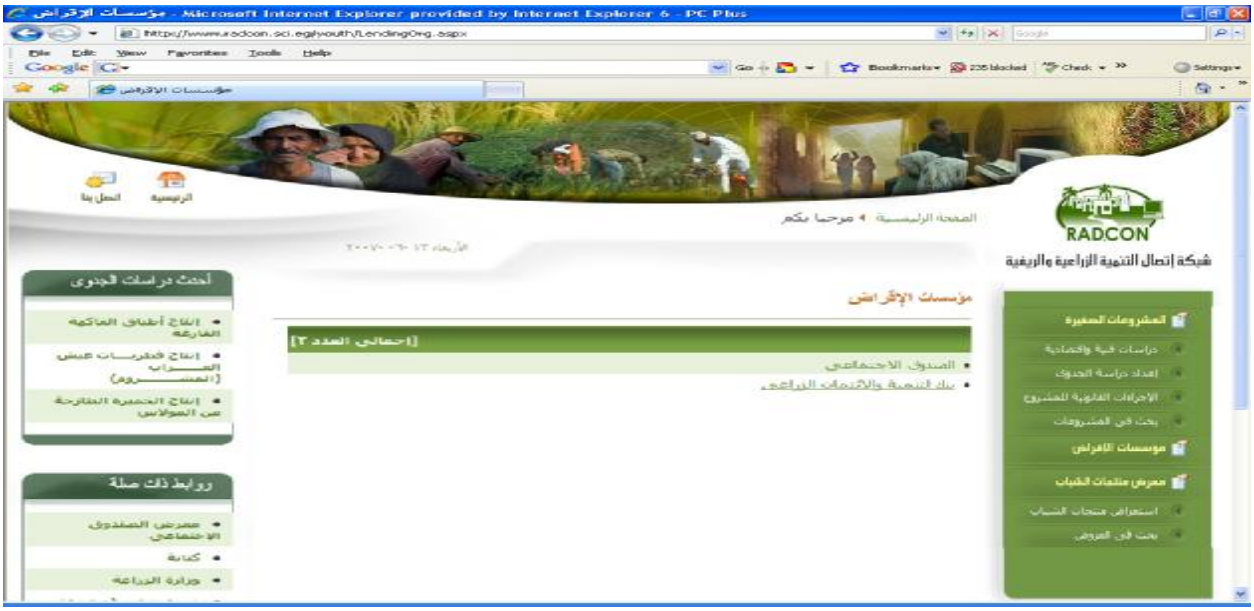

Figure 31 browsing lending institutions at the front-end

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3.4.4 Unit tests

Name	Test Cases
Browse published lending institutions	1. Add lending institutions 2. publish it 3. Got to "مؤسسات الإقراض" page at front end **Expected output:** progress indication bar appears until processing finishes, then you're directed to the result page

4 Sub Module – Exhibitors

Module Name	Exhibitors
Module Description	We will use this sub module for adding product exhibitor
Reuse	Written from scratch
Notes	

4.1 Class diagram for Exhibitor

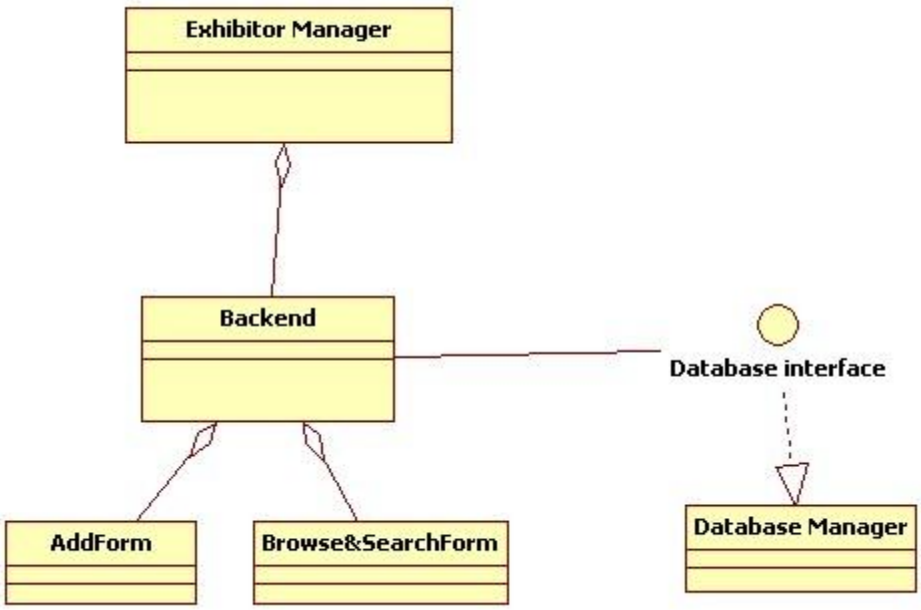

Figure 32 class diagram for Exhibitors

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4.2 Portlet: Browsing Exhibitor form at backend

Portlet Name	Browsing Exhibitors
Portlet Function	It will be used to help the data entry users and the administrator to navigate the exhibitors. It will contains a link for adding new exhibitor and it will contains a set of links to manage the work flow of the exhibitors
Reuse	☐ Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Youth_Exhibition, Users, Status
Source File(s)	backend/Exhibitors.aspx
Notes	When we will add new product for exhibition, we will select the producer from the added exhibitors

4.2.1 Component diagram for browsing Exhibitors

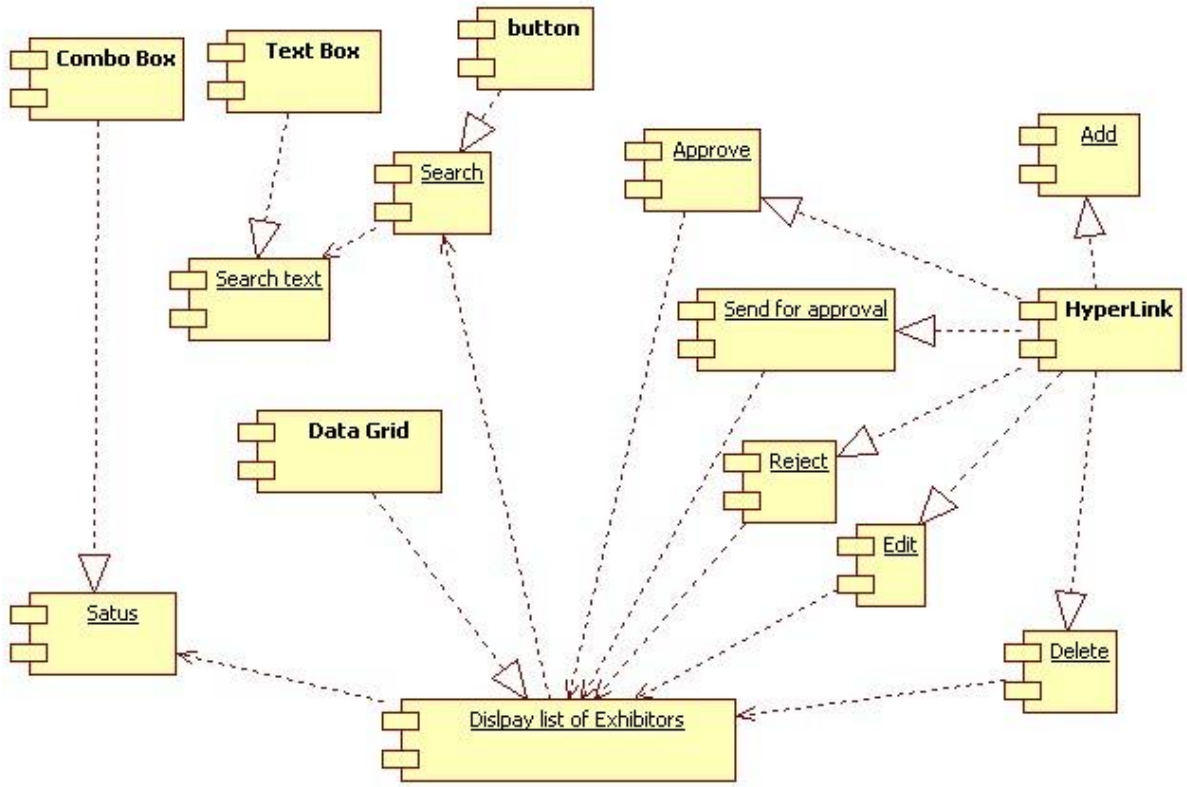

Figure 33 Browse lending institutions at backend

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4.2.2 Interaction diagram for browsing Exhibitors

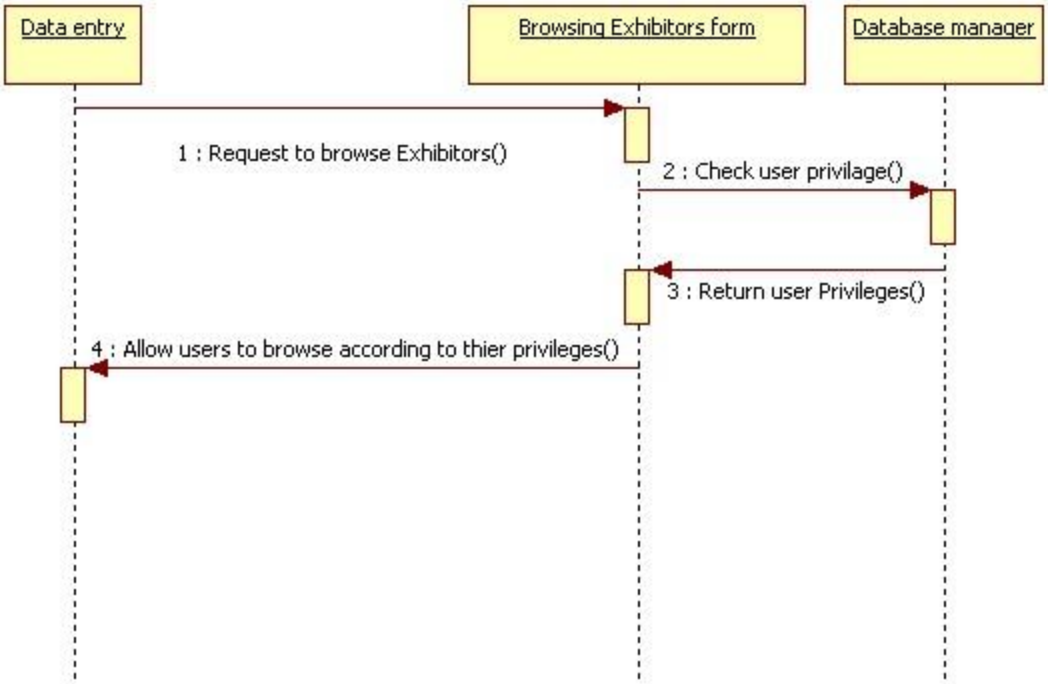

Figure 34 Sequence diagram for browsing Exhibitors

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4.2.3 Graphical user interface

Figure 35 the graphical user interface for browsing exhibitor

4.2.4 Unit tests

Name	Test Cases
Display Exhibitors that has status "Work in progress"	1. Log on the web application 2. Click on "العارضين" link 3. Select status 'جارى العمل بها' **Expected output:** the page should display all lending institutions that has been entered and which has status work in progress
Search for exhibitors	1. Log on the web application 2. Click on "العارضين" link 3. Set the search term and then click search **Expected output:** the page should display all exhibitors which name contains the search term

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4.3 Portlet: Add Exhibitor form

Portlet Name	Add Exhibitor
Portlet Function	It will be used for adding new exhibitor or editing existing one
Reuse	☐ Written from scratch
Depends on other Portlets?	Yes, Browsing Exhibitor form at backend
Depends on Database Tables	Yes, Youth_Exhibition, Governorate
Source File(s)	backend/ExhibitorAdd.aspx
Notes	

4.3.1 Component diagram for adding Exhibitor form

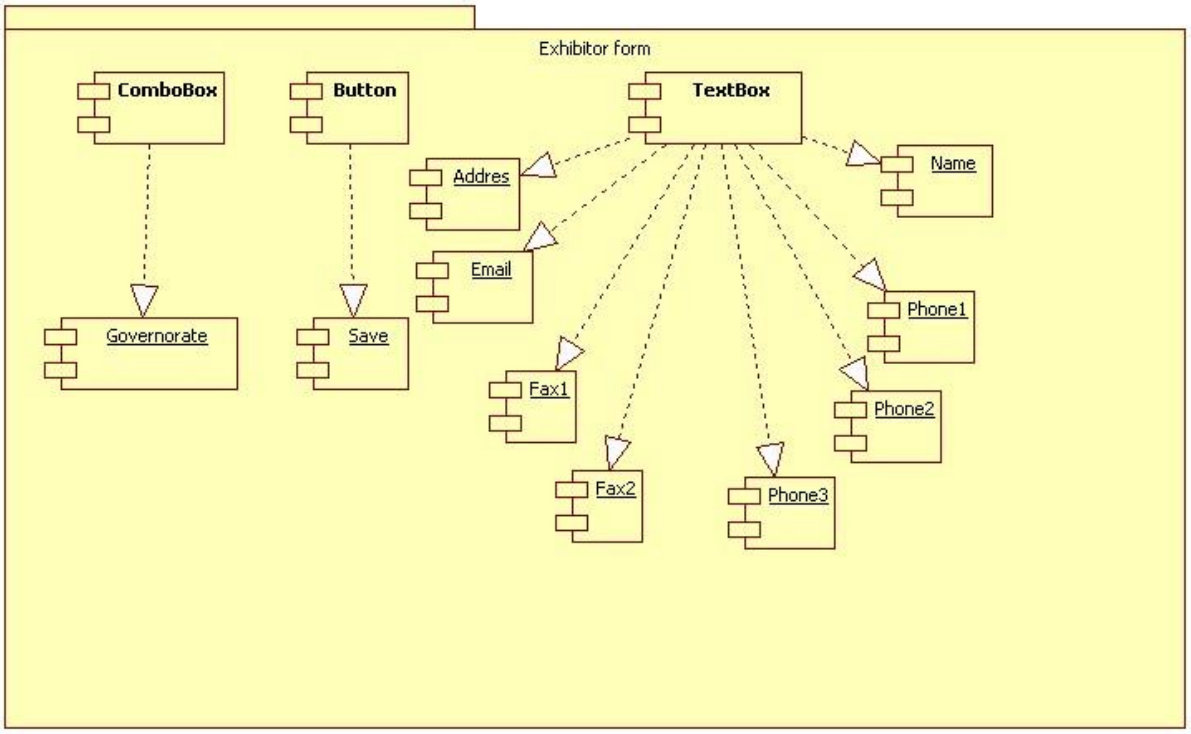

Figure 36 Component diagram for adding Exhibitor form

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4.3.2 Interaction Diagram

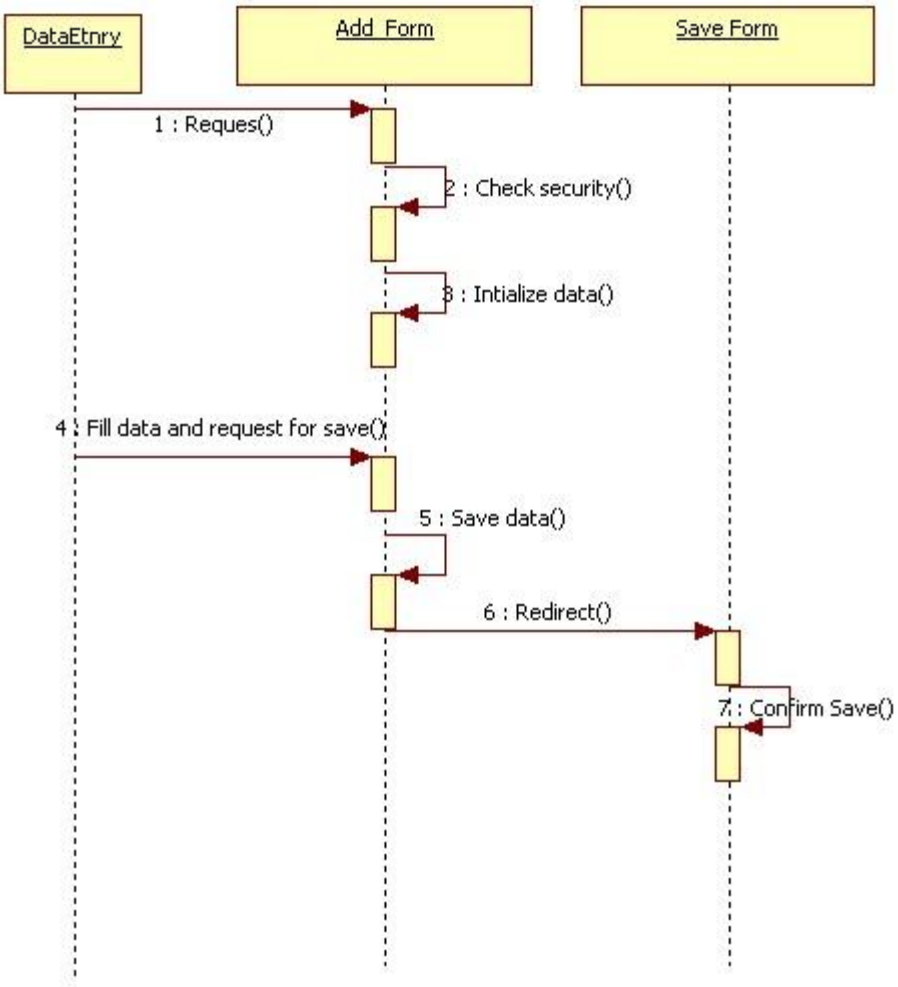

Figure 37 Sequence diagram for adding Exhibitors

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4.3.3 Graphical user interface

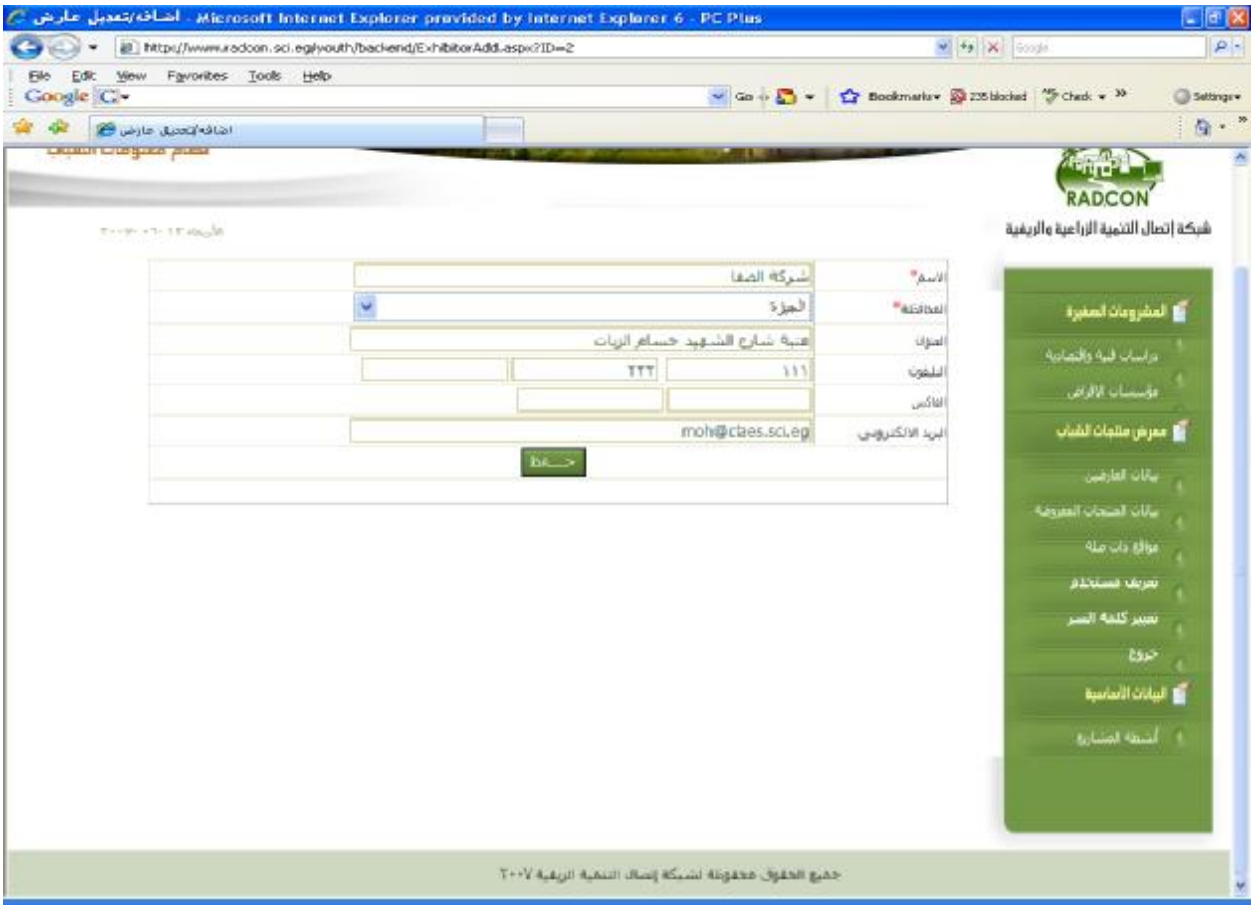

Figure 38 Snapshot for adding Exhibitor form

4.3.4 Unit tests

Name	Test Cases
add Exhibitor	Log on the web application 2. Click on "العارضين" link 3. Click on "ضافة عارض جديد ' hyperlink 4. Insert Exhibitor data **Expected output:** progress indication bar appears until processing finishes, then you're directed to save confirmation page

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5 Sub Module – Exhibited products

Module Name	Exhibited products
Module Description	We will use this sub module for adding exhibited product and availing them to the internet visitors.
Reuse	Written from scratch
Notes	

5.1 Class diagram for Exhibited products

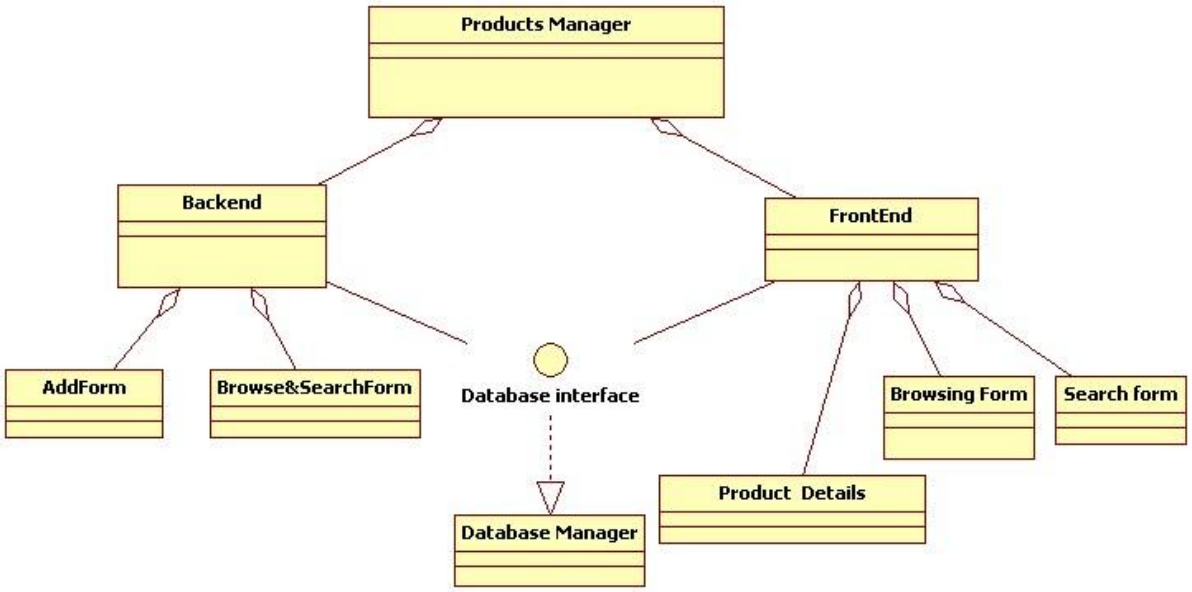

Figure 39 Structured Chart for small enterprise

5.2 Portlet: Browsing Products form at backend

Portlet Name	Browsing Products
Portlet Function	It will be used to help the data entry users and the administrator to navigate the exhibited products data .It will contains a link for adding new product and it will contains a set of links to manage the work flow of the exhibited products
Reuse	☐ Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Products, Users, Status
Source File(s)	backend/Exhibition.aspx
Notes	

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5.2.1 Component diagram for browsing products

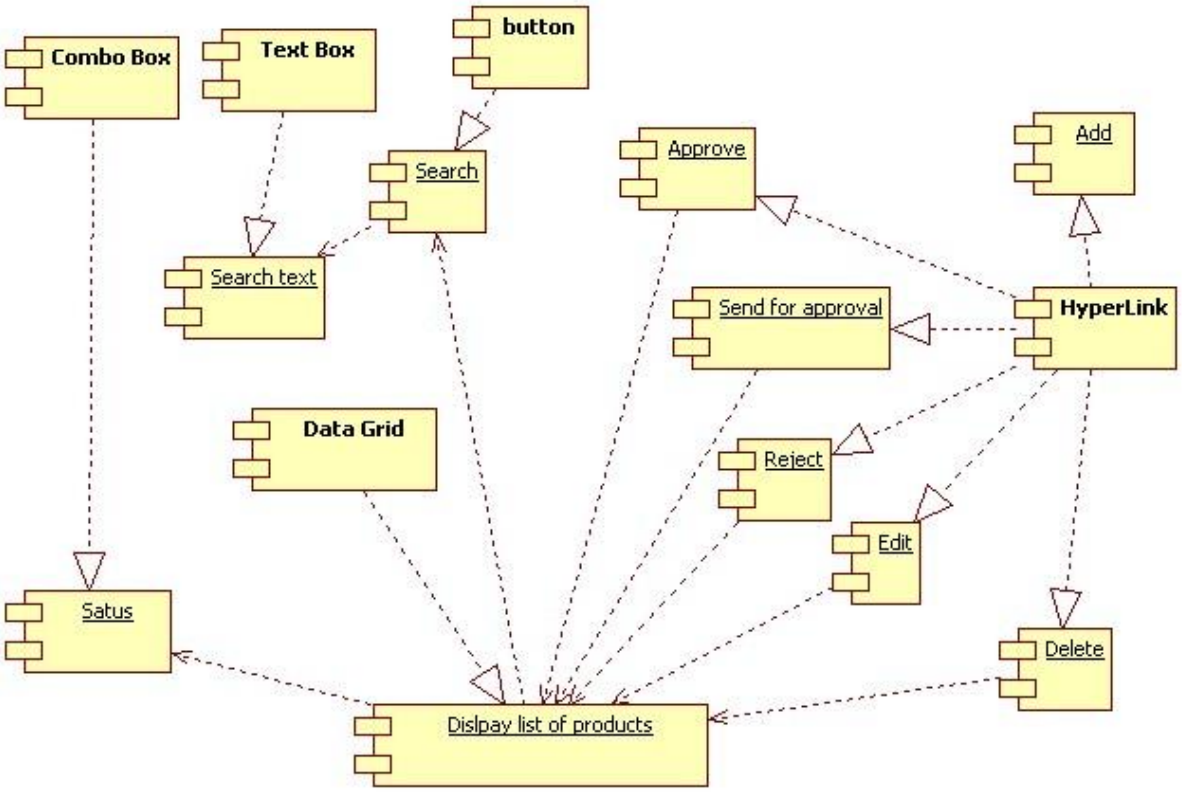

Figure 40 Component diagram for browsing product at backend

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5.2.2 Interaction diagram for browsing products

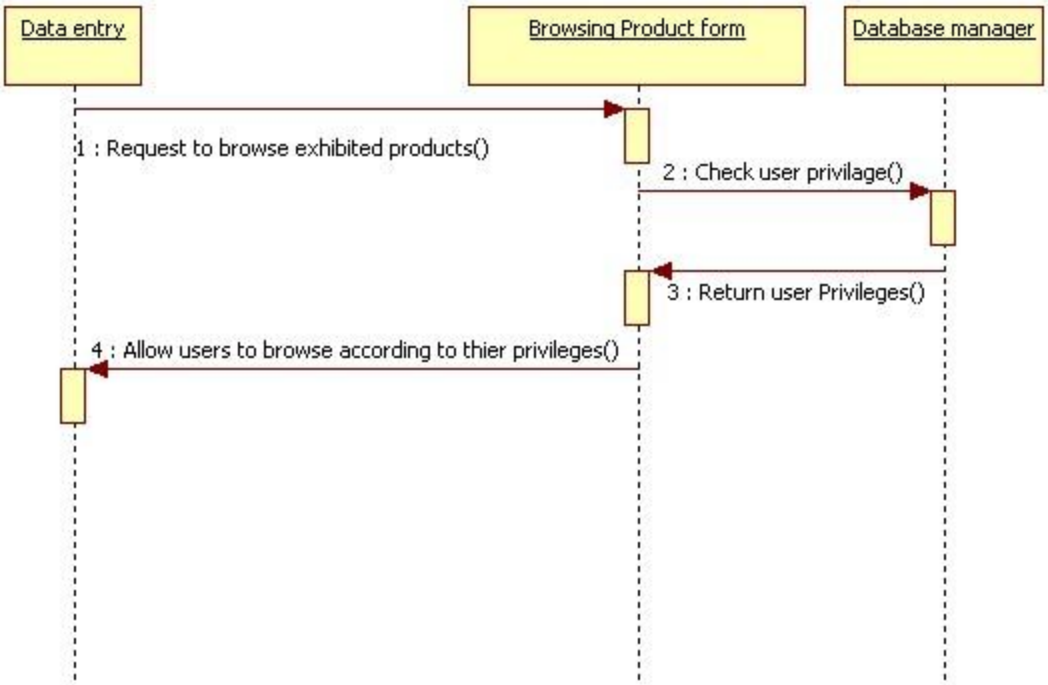

Figure 41 Sequence diagram for browsing exhibited products

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5.2.3 Graphical user interface

Figure 42 Browsing exhibited product data

5.2.4 Unit tests

Name	Test Cases
Display products that has status "Work in progress"	1. Log on the web application 2. Click on "بيانات المنتجات المعروضة" link 3. Select status 'جارى العمل بها' **Expected output:** the page should display all products that has status work in progress
Search for small enterprise	1. Log on the web application 2. Click on "بيانات المنتجات المعروضة" link 3. Set the search term and then click search **Expected output:** the page should display all products which name contains the search term

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5.3 Portlet: Add product Form

Portlet Name	Add product
Portlet Function	It will used for adding new product or edit existing one
Reuse	☐ Written from scratch
Depends on other Portlets?	Yes, Browsing products form at backend
Depends on Database Tables	Yes, Products, Youth_Exhibition, ProjectSpeciality
Source File(s)	backend/ExhibitionAdd.aspx, backend/ExhibitionSave.aspx
Notes	

5.3.1 Component diagram for adding Product form

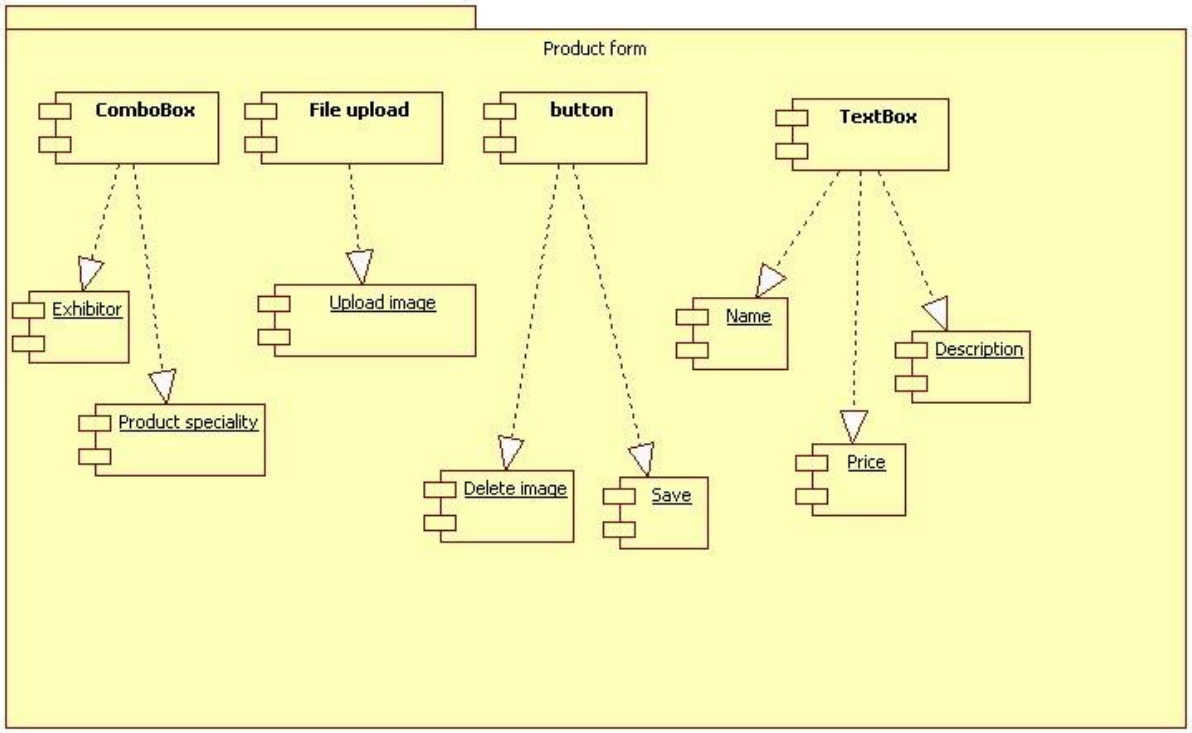

Figure 43 Component diagram for adding product form

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5.3.2 Interaction Diagram

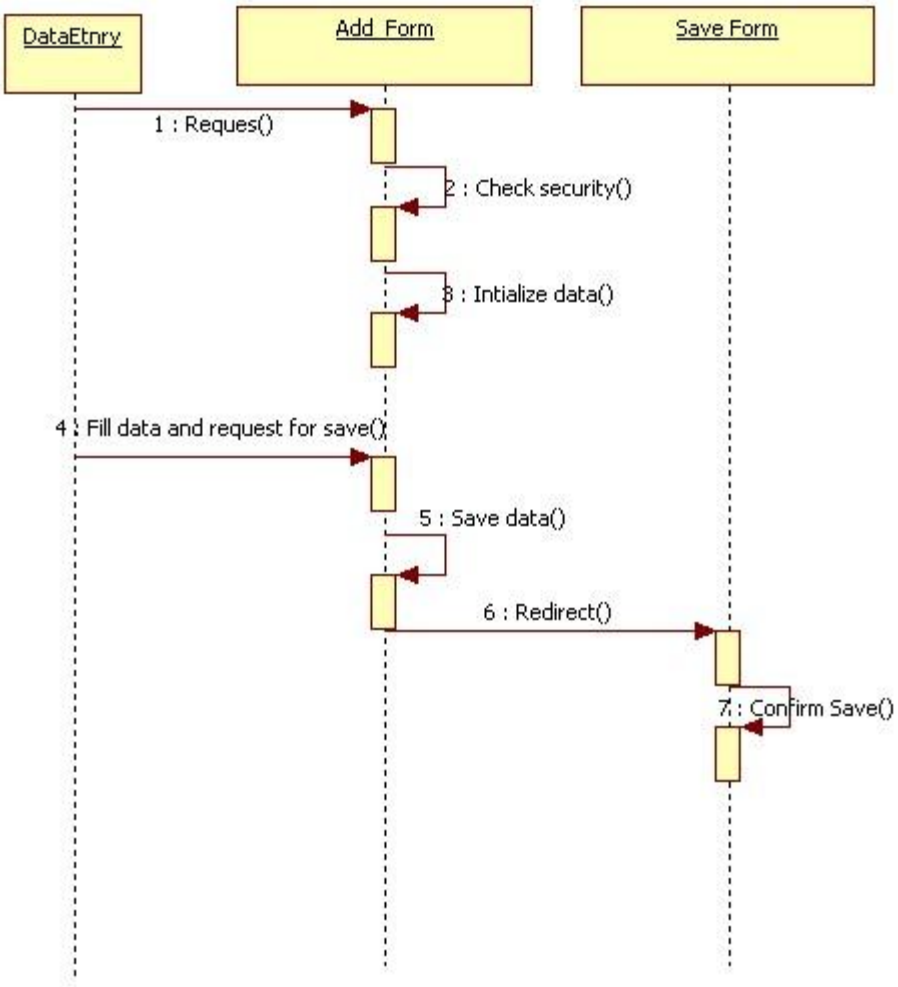

Figure 44 Sequence diagram for adding Product form

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5.3.3 Graphical user interface

Figure 45 Snapshot for adding new product form

5.3.4 Unit tests

Name	Test Cases
Add product	Log on the web application 2. Click on "بيانات المنتجات المعروضة" link 3. Click on "إضافة عرض' hyperlink 4. Insert product data **Expected output:** progress indication bar appears until processing finishes, then you're directed to save confirmation page

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5.4 Portlet – Browsing Products at Front-End

Portlet Name	Browsing the exhibited products
Portlet Function	It help internet users to browse the exhibited product at the front-end
Reuse	☐ Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Products, Status ,ProjectSpeciality , Youth_Exhibition
Source File(s)	
Notes	Only the products that has been published will be displayed by this portlet

5.4.1 Component diagram for browsing product at front-end

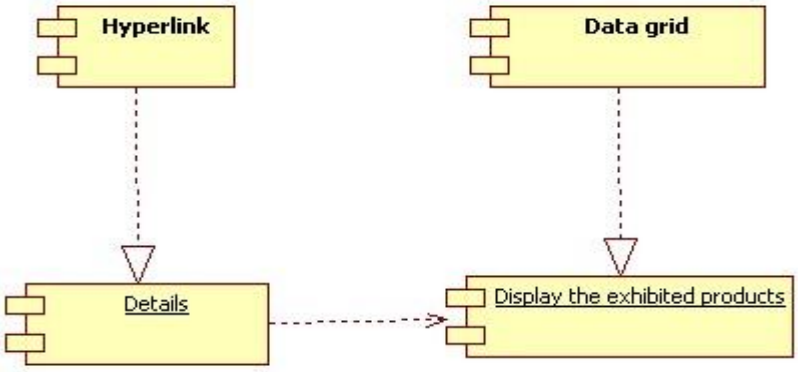

Figure 46 component diagram for browse product at front-end

5.4.2 Graphical User Interface for browsing exhibited products

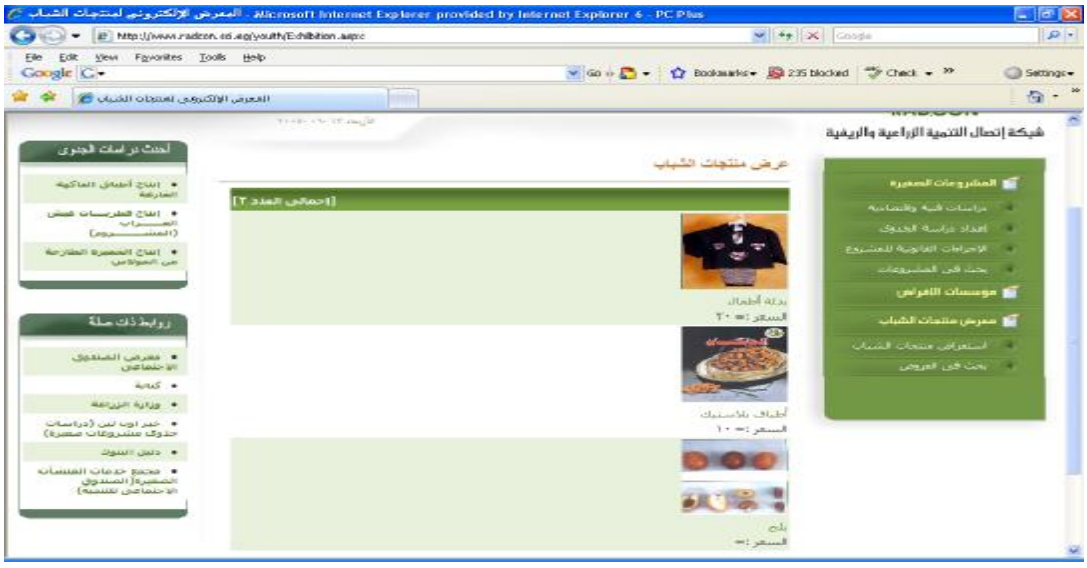

Figure 47 GUI for browsing exhibited products at front-end

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5.4.3 Unit tests

Name	Test Cases
Browse Exhibited products	4. Add product 5. publish it 6. Got to "استعراض منتجات الشباب" page at front end **Expected output:** progress indication bar appears until processing finishes, then you're directed to the result page

5.5 Portlet – Search Exhibited products at Front-End

Portlet Name	Search for the exhibited products
Portlet Function	All internet visitors to search in the exhibited products
Reuse	☐ Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, products, ProjectSpeciality, Youth_Exhibition
Source File(s)	
Notes	Only the products that has been published will be displayed by this portlet

5.5.1 Component diagram for Search Exhibited products

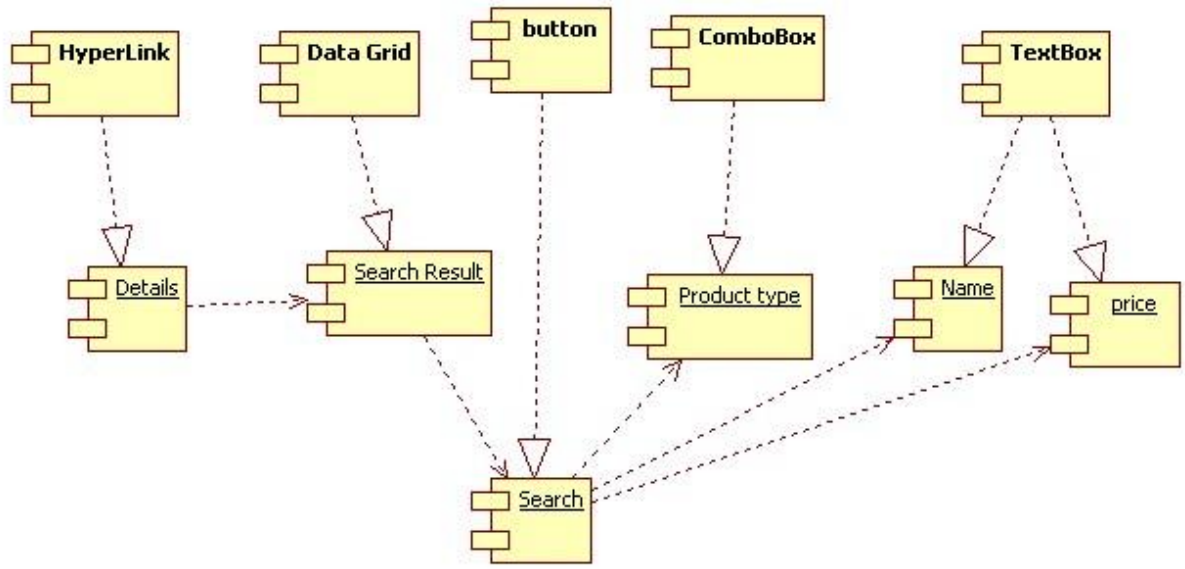

Figure 48 component diagram for search exhibited products form at front-end

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5.5.2 Interaction diagram

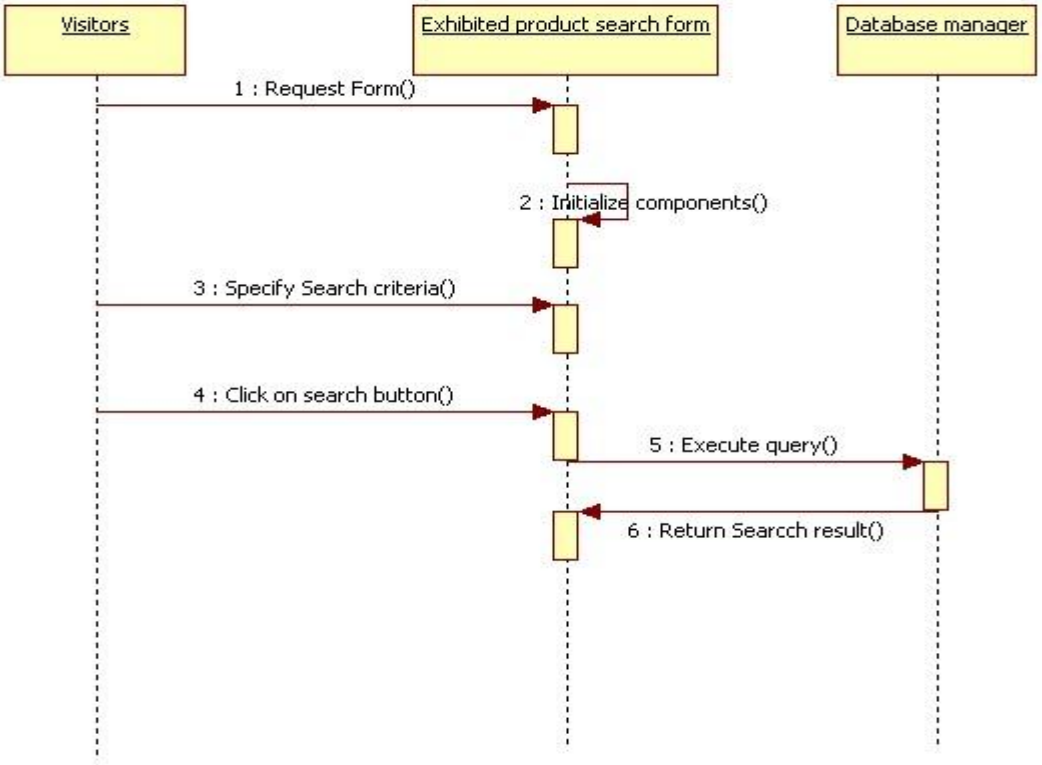

Figure 49 Sequence diagram for search exhibited products

5.5.3 Graphical User Interface for Search Exhibited product

Figure 50 Graphical user interface for exhibited products search

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5.5.4 Unit tests

Name	Test Cases
Search published small enterprise	7. Add exhibited product 8. publish it 9. Got to "بحث فى العروض" page at front end 10. write product name then click search **Expected output:** progress indication bar appears until processing finishes, then you're directed to the result page that contain all product which name contains the search string

6 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	

6.1 Class diagram for related links

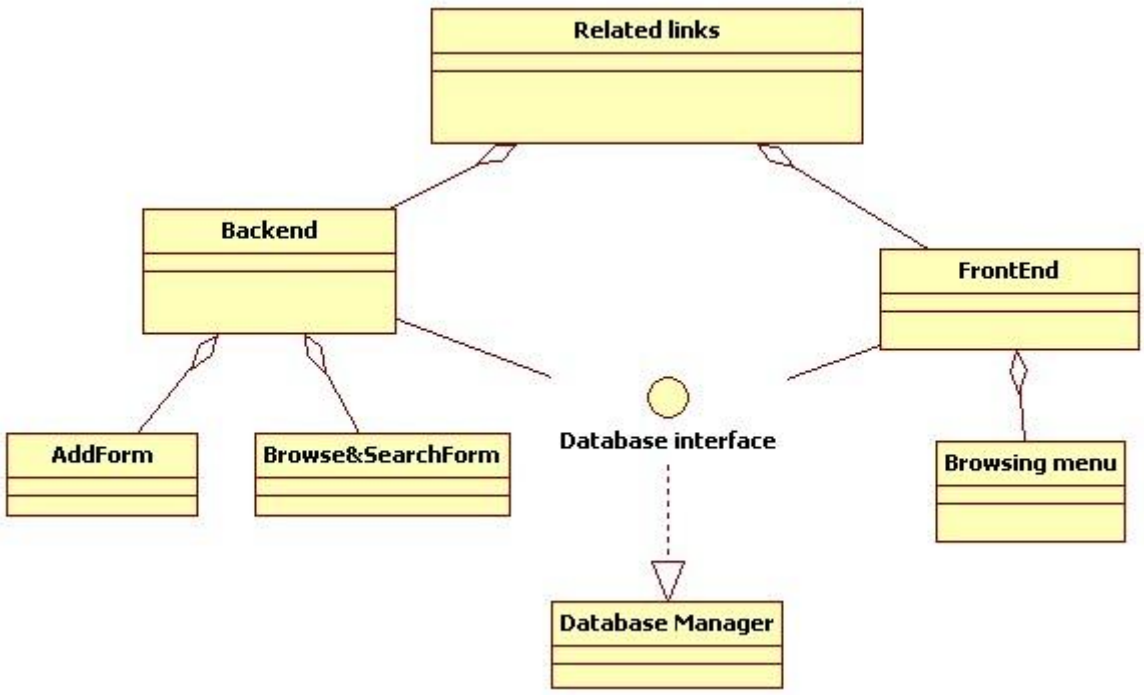

Figure 51 Class diagram for related links

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6.2 Portlet: Browsing related links form at backend

Portlet Name	Browsing related links
Portlet Function	It will be used to help the data entry users and the administrator to navigate the related links data .It will contains a link for adding new related link and it will contains a set of links to manage the work flow of the related links
Reuse	☐ Written from scratch
Depends on other Portlets	no
Depends on Database Tables	Yes, RelatedLink, Users, Status
Source File(s)	backend/RelatedLinks.aspx
Notes	

6.2.1 Component diagram for browsing related links

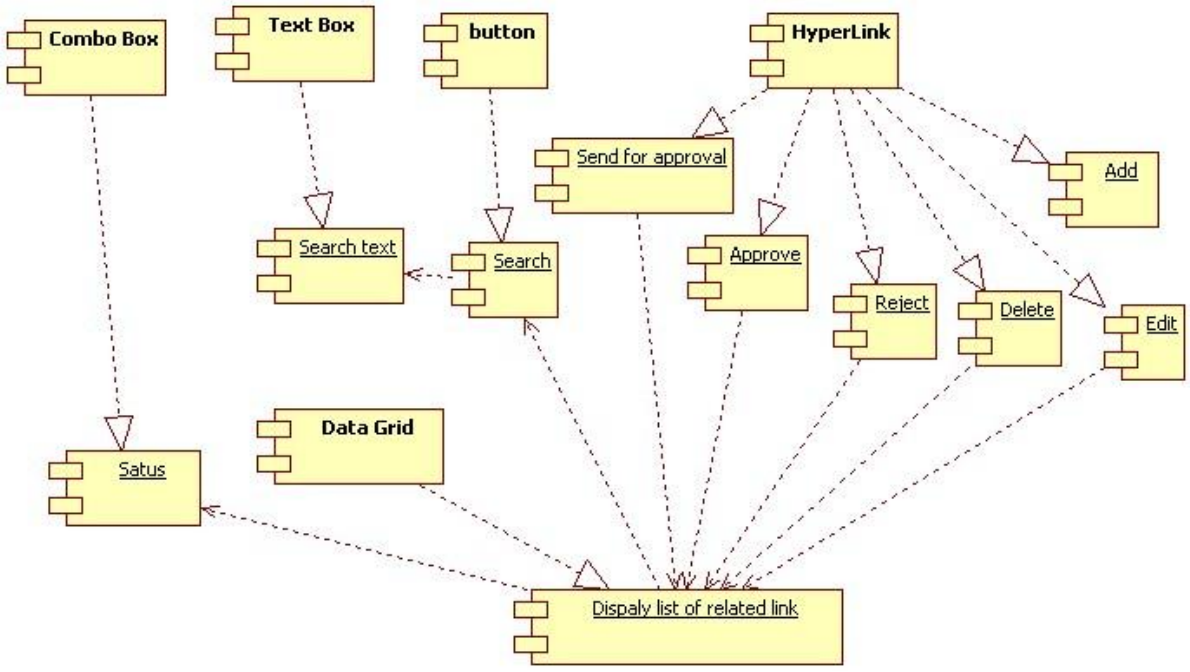

Figure 52 Component diagram for browsing Related links

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6.2.2 Interaction diagram for browsing related links

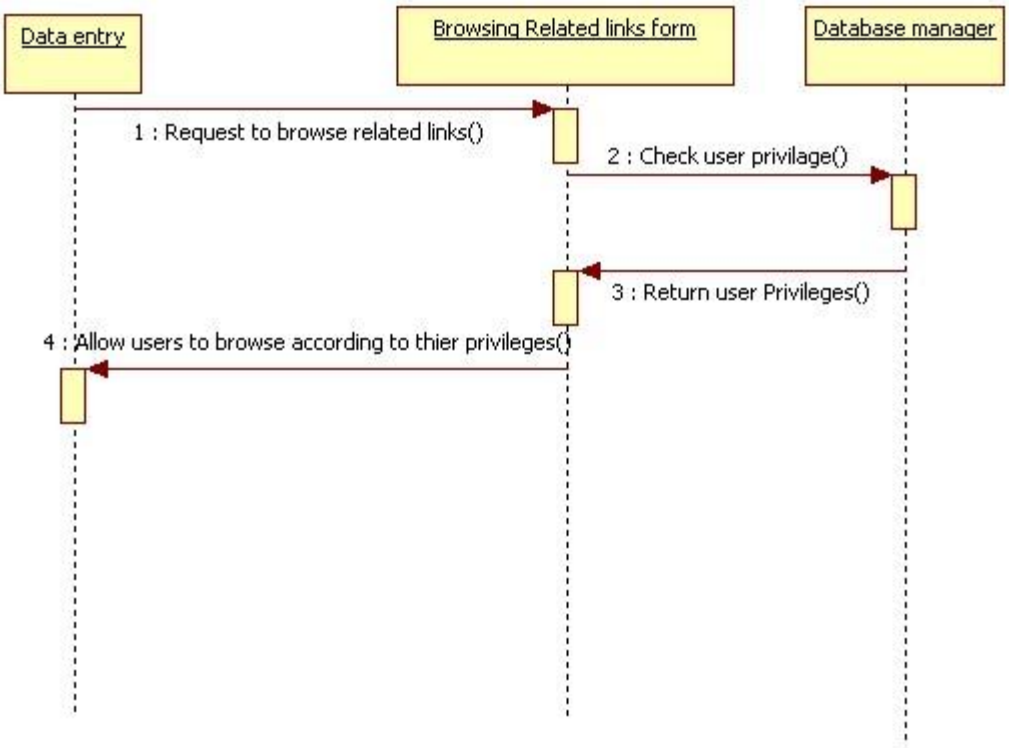

Figure 53 Sequence diagram for browsing related links

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6.2.3 Graphical user interface

Figure 54 Graphical user interface for Browsing related links

6.2.4 Unit tests

Name	Test Cases
Display related links that has status "published"	1. Log on the web application 2. Click on "مواقع ذات صلة" link 3. Select status 'تمت الموافقة على 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 "مواقع ذات صلة" 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

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6.3 Portlet: Add Related link form

Portlet Name	Add related link
Portlet Function	It will be used for adding new related link or edit existing one
Reuse	☐ Written from scratch
Depends on other Portlets	Yes, Browsing related links form at backend
Depends on Database Tables	Yes, RelatedLink
Source File(s)	LendingAdd.aspx, lendingSaved.aspx
Notes	

6.3.1 Component diagram for adding related link form

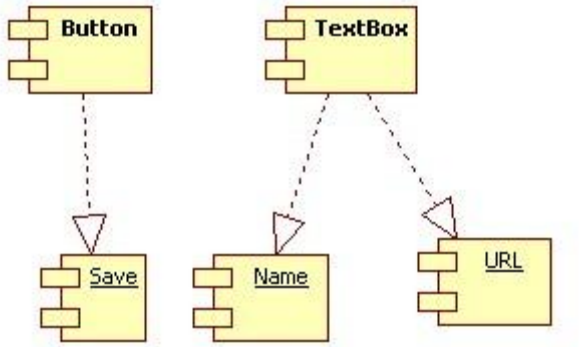

Figure 55 Component diagram for adding Related links

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6.3.2 Interaction Diagram

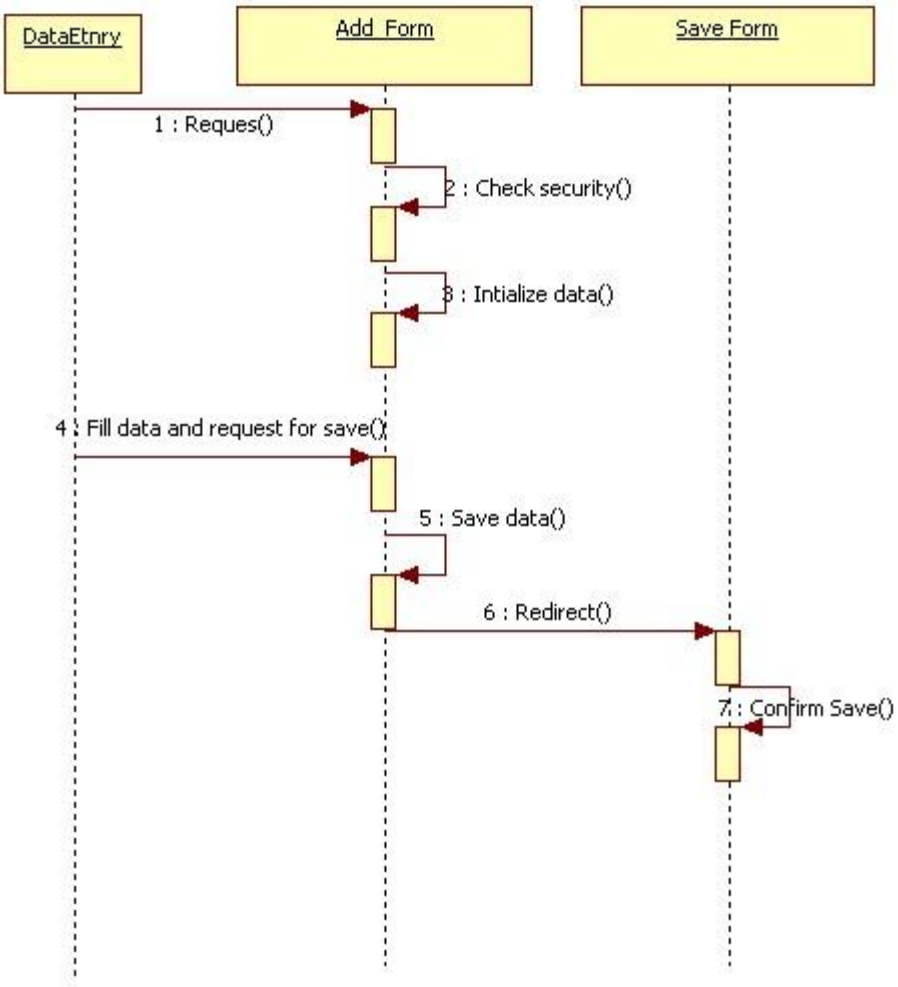

Figure 56 Sequence diagram for adding related links

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6.3.3 Graphical user interface

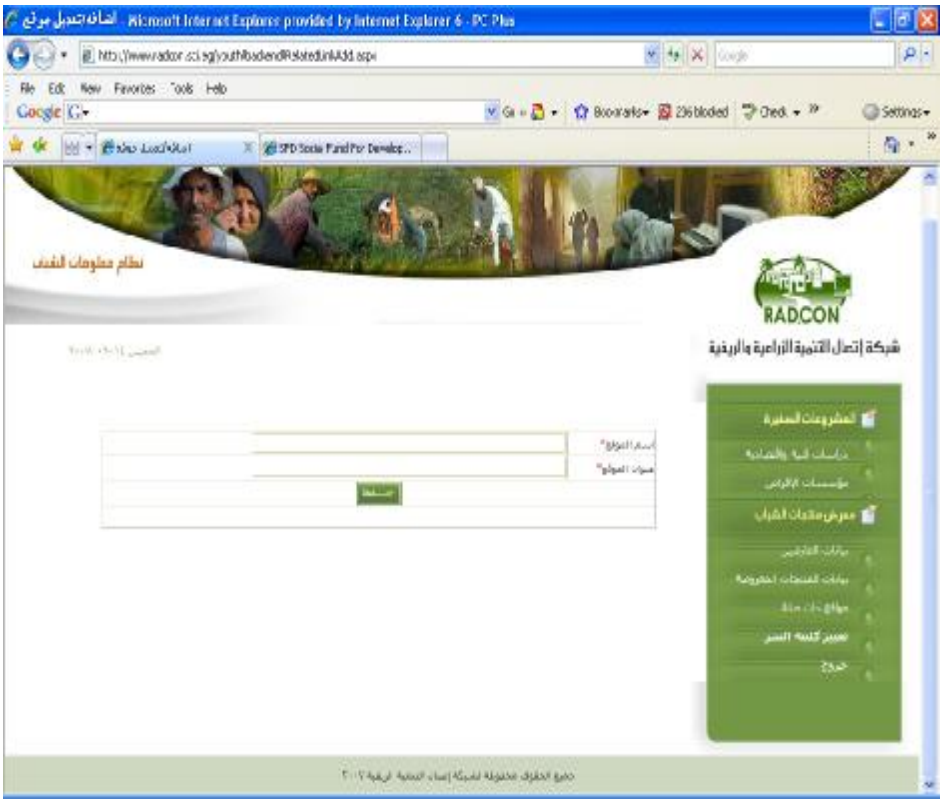

Figure 57 Snapshot for adding related links form

6.3.4 Unit tests

Name	Test Cases
add Lending institutions	1. log on the web application 2. Click on “مواقع ذات صلة” link 3. Click on “إضافة موقع جديد ' hyperlink 4. Insert lending institutions data **Expected output:** progress indication bar appears until processing finishes, then you’re directed to the save confirmation page

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6.4 Portlet – Related link menu

Portlet Name	Related link menu
Portlet Function	It will be used to display the related links at the font-end as a menu in the left side of the front-end for each page
Reuse	☐ 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

6.4.1 Component diagram for related link menu

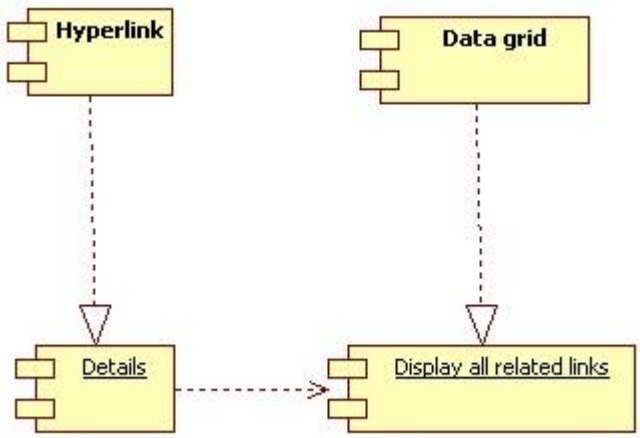

Figure 58 Component diagram for related link menu

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6.4.2 Interaction diagram

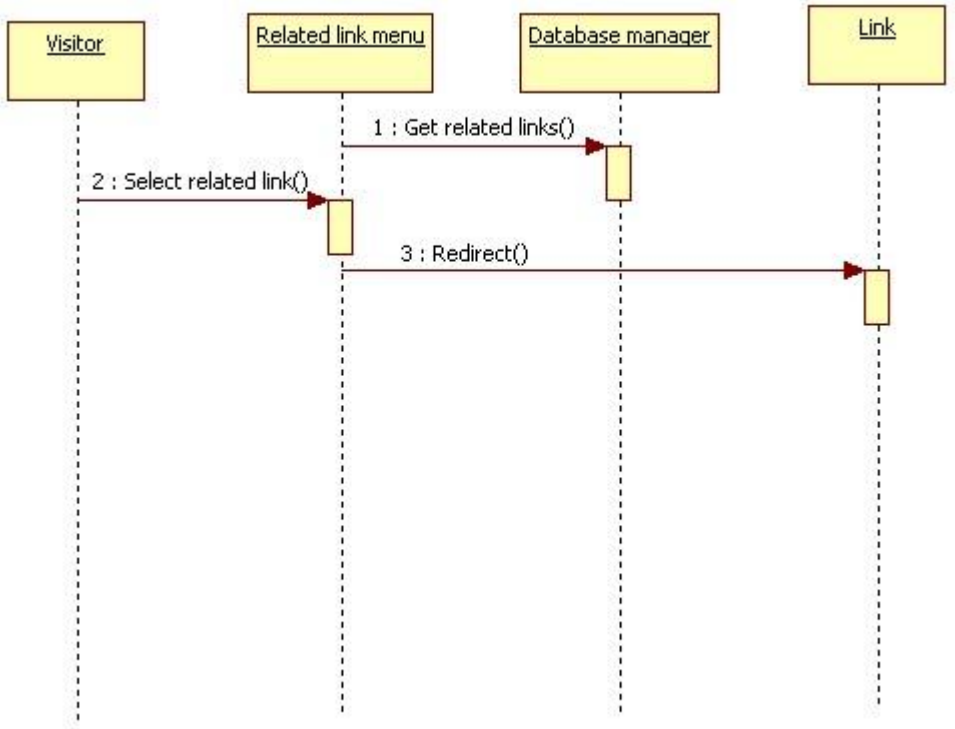

Figure 59 Sequence diagram for related link menu

6.4.3 Graphical user interface

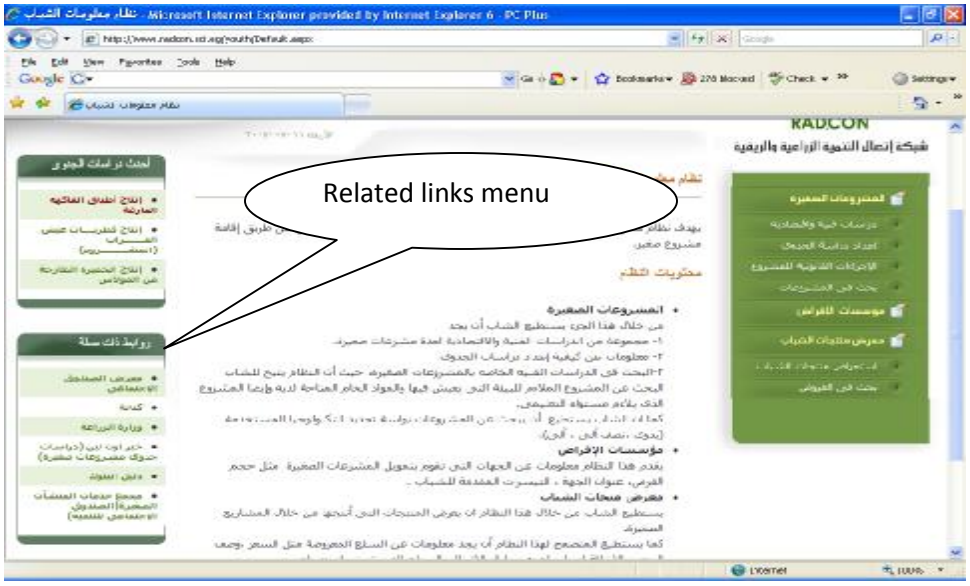

Figure 60 the graphical user interface for related link menu

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6.4.4 Unit tests

Name	Test Cases
Browse published lending institutions	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 Sub Module – Basic Data (Small enterprise activities)

Module Name	Basic data(small enterprise activities)
Module Description	Administrator will use this sub module for editing basic data for the small enterprises activities
Reuse	Written from scratch
Notes	

7.1 Class diagram for basic data (small enterprise activities)

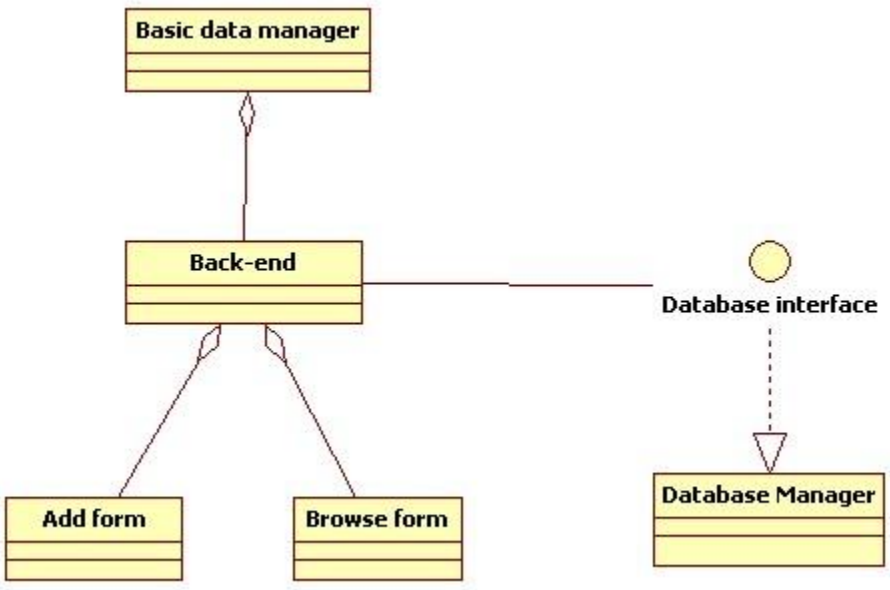

Figure 61 Class diagram for basic data

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7.2 Portlet: Browsing small enterprise activities

Portlet Name	Browsing small enterprise activities
Portlet Function	It will be used by the administrator for managing the basic data of small enterprise activities
Reuse	☐ Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, ProjectSpeciality , Users
Source File(s)	backend/ ProjectActivities.aspx
Notes	

7.2.1 Component diagram for browsing small enterprise activities

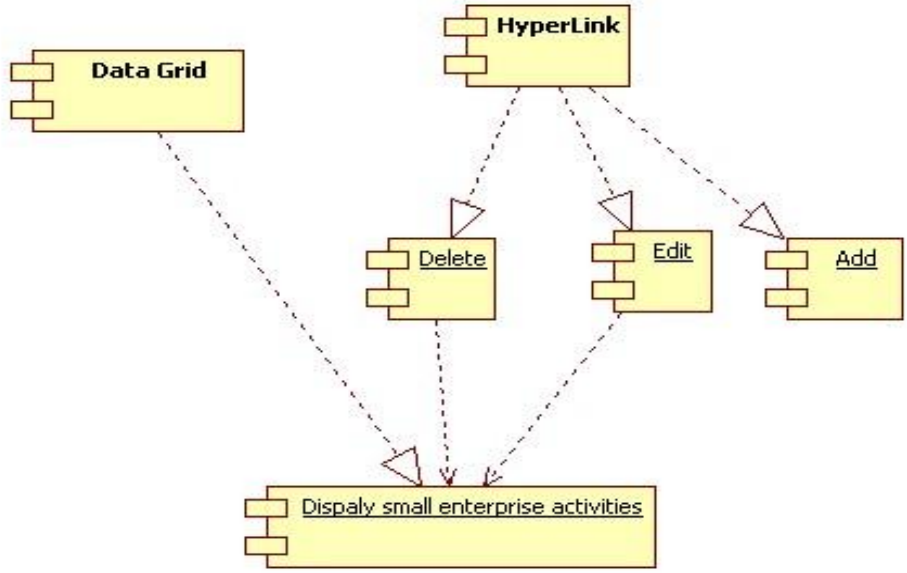

Figure 62 Component diagram for browsing small enterprise activities

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7.2.2 Interaction diagram

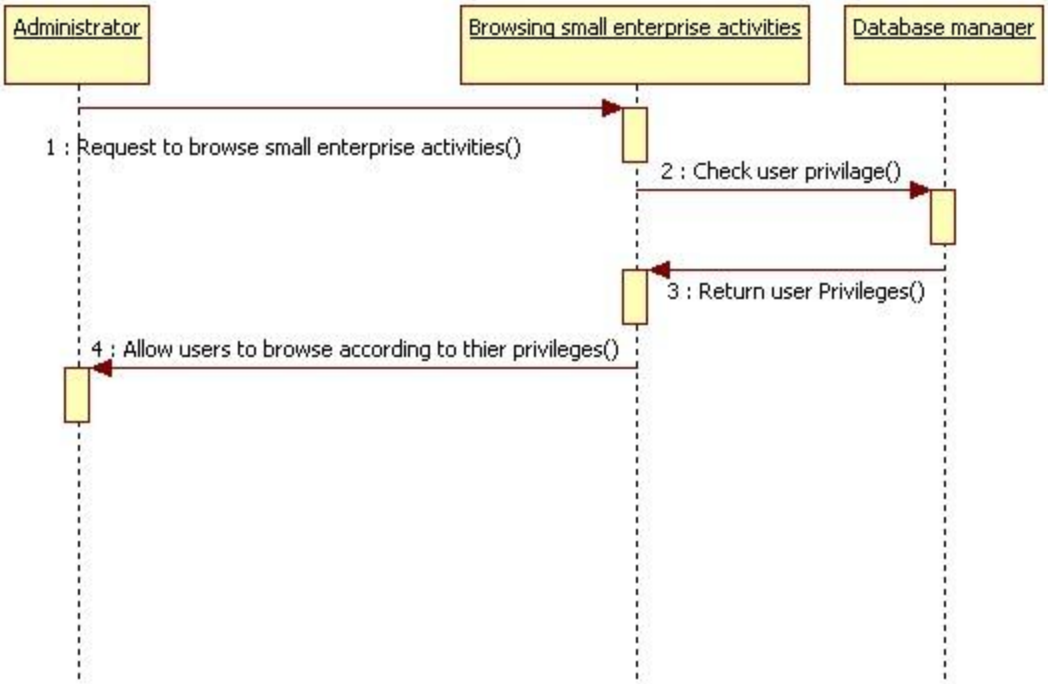

Figure 63 Sequence diagram for browsing small enterprise activities

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7.2.3 Graphical user interface

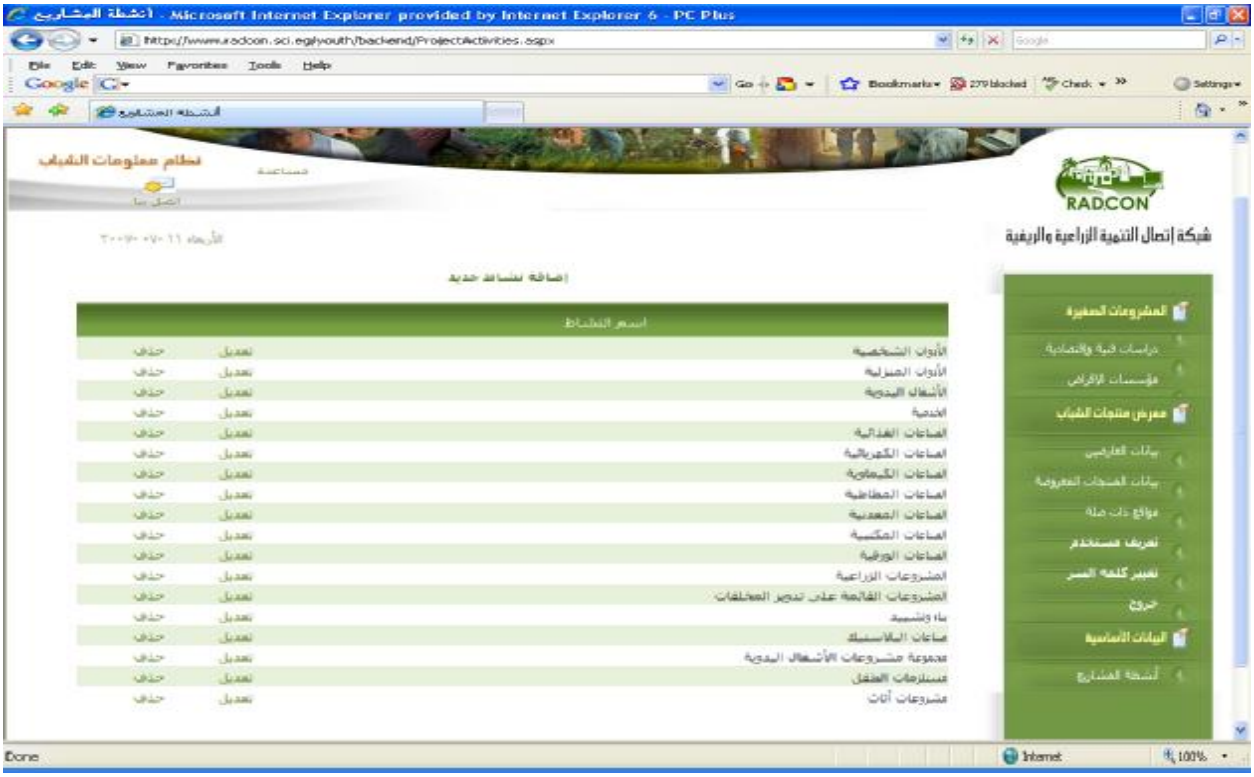

Figure 64 browsing small enterprise activities

7.2.4 Unit tests

Name	Test Cases
Display small enterprises activities	1. Log on the web application 2. Click on "أنشطة المشاريع" link **Expected output:** the page should display small enterprise activities

7.3 Portlet: Add small enterprise activity

Portlet Name	Add small enterprise activity
Portlet Function	It will be used for adding new activity for the small enterprises
Reuse	☐ Written from scratch
Depends on other Portlets?	Yes, Browsing basic data (small enterprise activities)
Depends on Database Tables	Yes, ProjectSpeciality
Source File(s)	backend/ProjectActivityAdd.aspx
Notes	

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7.3.1 Component diagram for adding small enterprise activity

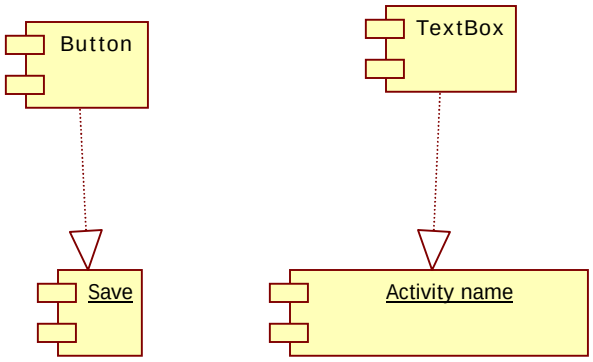

Figure 65 Component diagram for adding small enterprise activity

7.3.2 Interaction Diagram

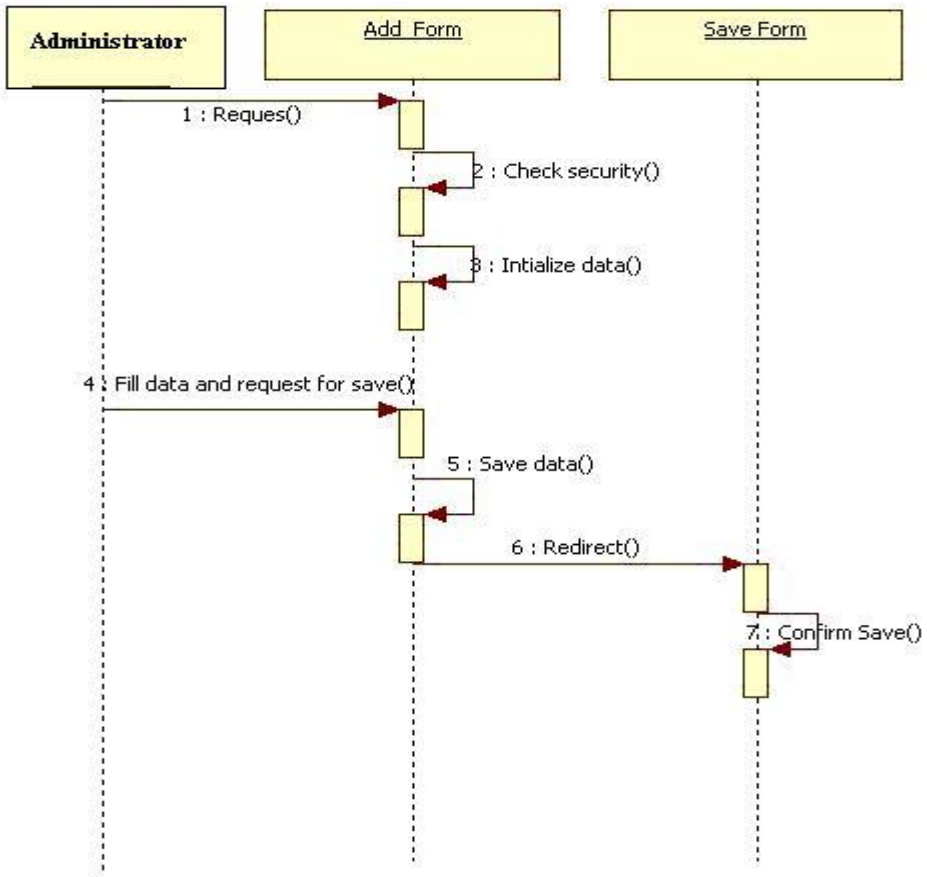

Figure 66 sequence diagram for adding small enterprise activities

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7.3.3 Graphical user interface

Figure 67 Snapshot for adding small enterprise activity

7.3.4 Unit tests

Name	Test Cases
add small enterprise activity	Log on the web application 2. Click on "أنشطة المشاريع" link 3. Click on "ضافة نشاط جديد ' hyperlink 4. Insert small enterprise activity data **Expected output:** progress indication bar appears until processing finishes, then you're directed to save confirmation page

8 Sub Module – Users

Module Name	Users
Module Description	Administrator will use this sub module for editing users data and adding new users
Reuse	Written from scratch
Notes	

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8.1 Class diagram for Users

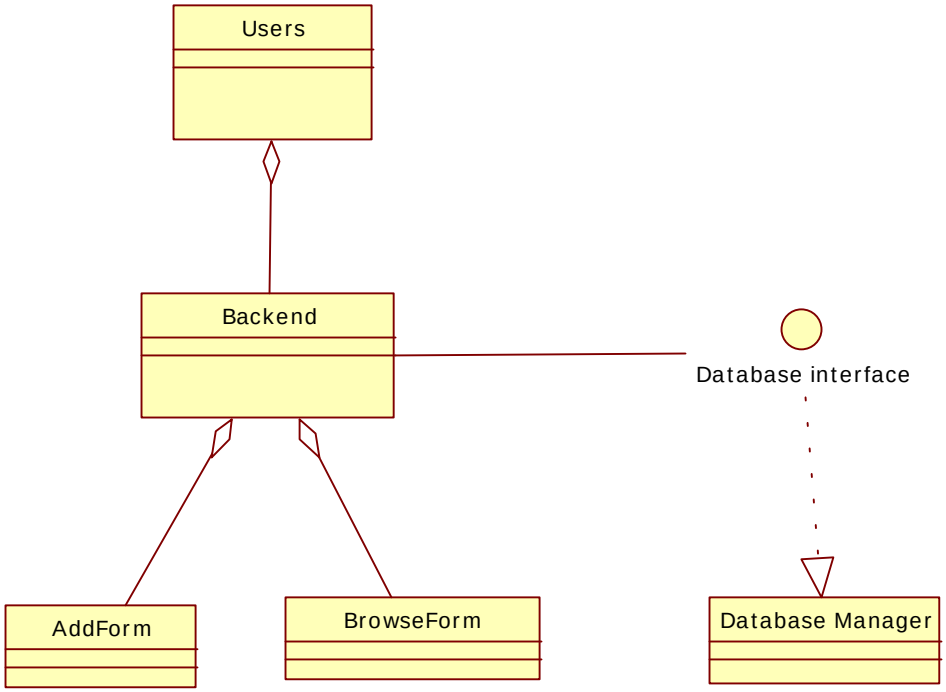

Figure 68 Class diagram for Users

8.2 Portlet: Browsing users

Portlet Name	Browsing users
Portlet Function	It will be used by the administrator for managing the users data
Reuse	☐ Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Users
Source File(s)	backend/Users.aspx
Notes	

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8.2.1 Component diagram for browsing users data

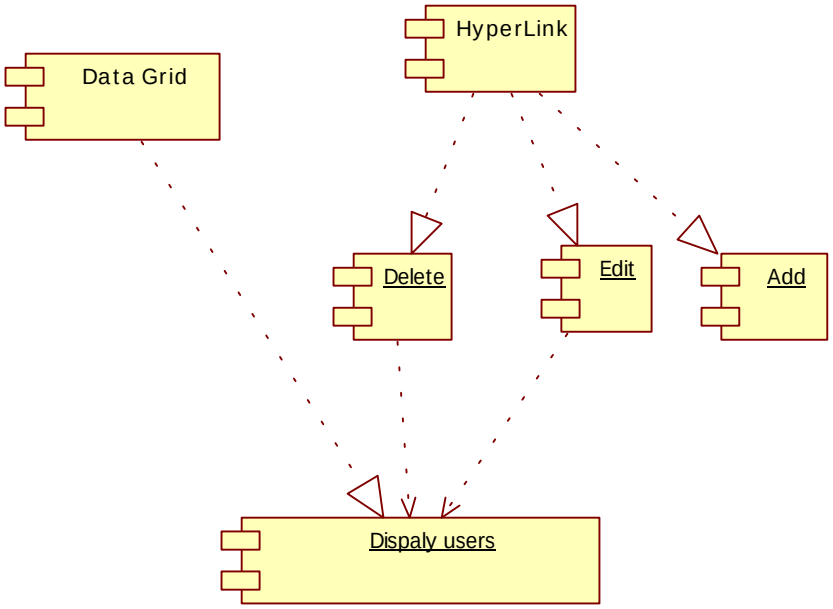

Figure 69 Component diagram for browsing users

8.2.2 Interaction diagram

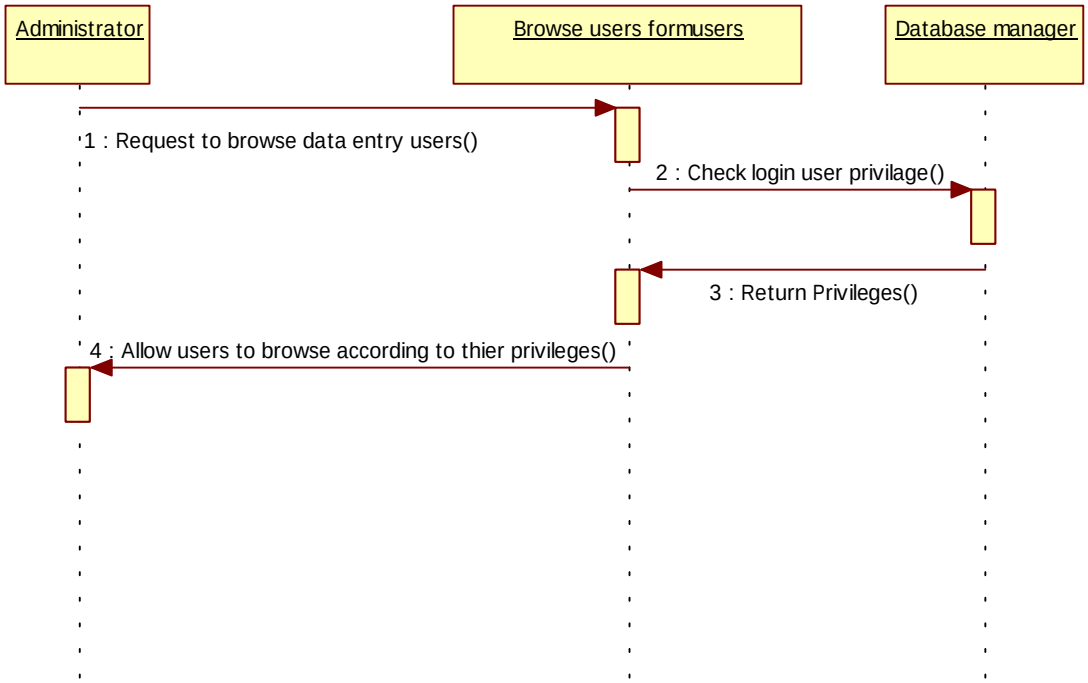

Figure 70 Sequence diagram for browsing users data

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8.2.3 Graphical user interface

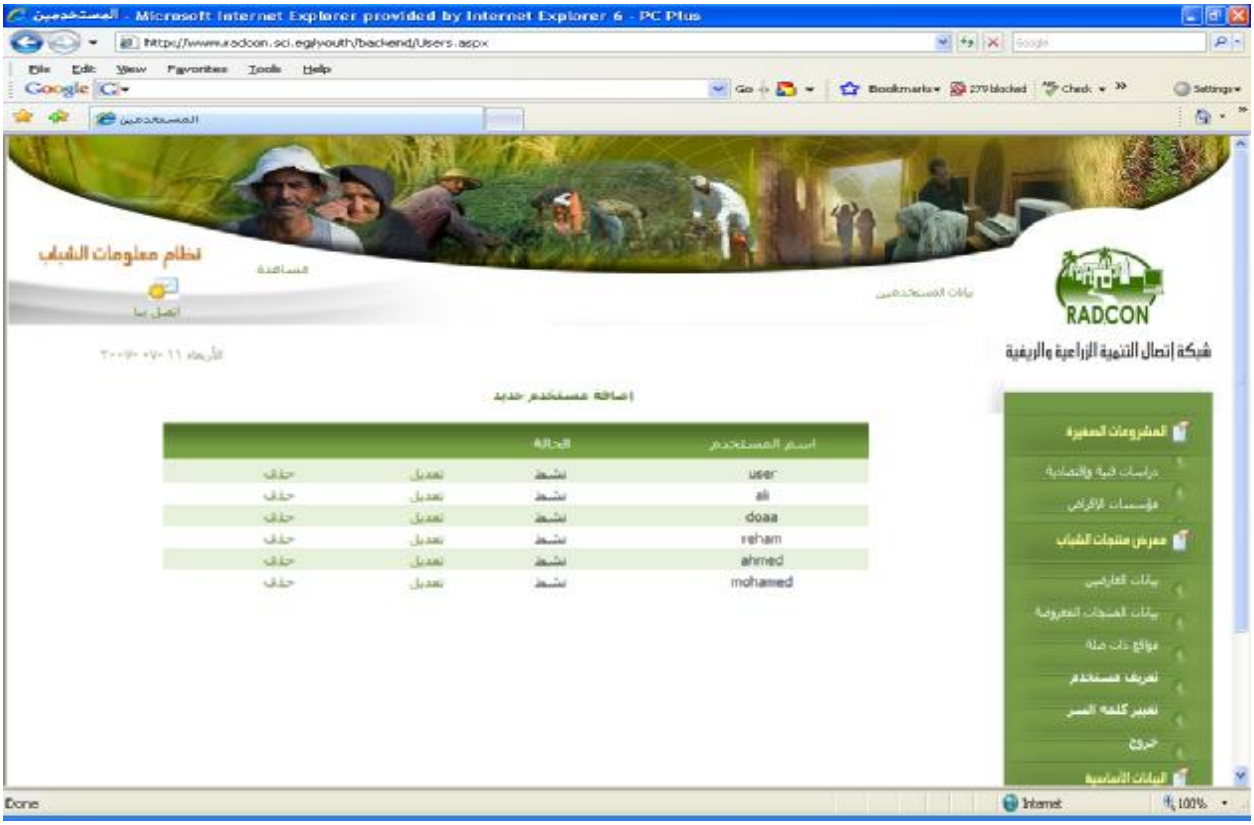

Figure 71 the Graphical user interface for browsing users

8.2.4 Unit tests

Name	Test Cases
Display users	1. Log on the web application 2. Click on "تعريف مستخدم" link **Expected output:** the page should display all the defined users

8.3 Portlet: Add new user

Portlet Name	Add new user
Portlet Function	Administrator will use this portlet for adding new user
Reuse	☐ Written from scratch
Depends on other Portlets?	Yes, Browsing users
Depends on Database Tables	Yes, Users
Source File(s)	backend/UsersInsert.aspx
Notes	

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8.3.1 Component diagram for adding new users

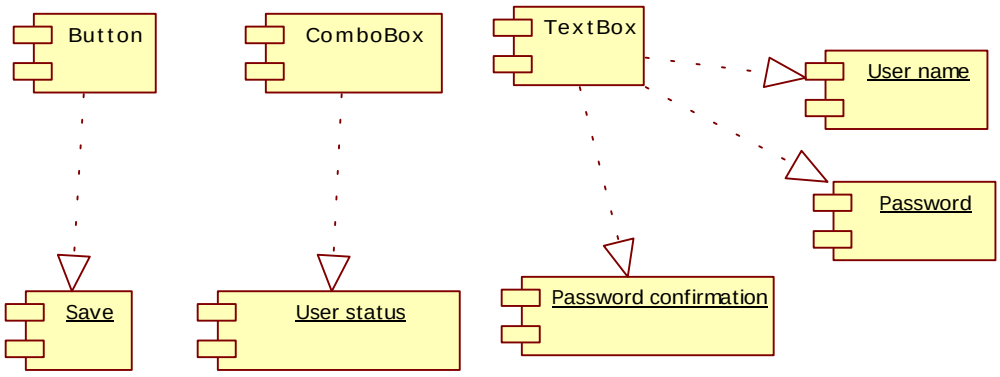

Figure 72 Component diagram for adding users

8.3.2 Interaction Diagram

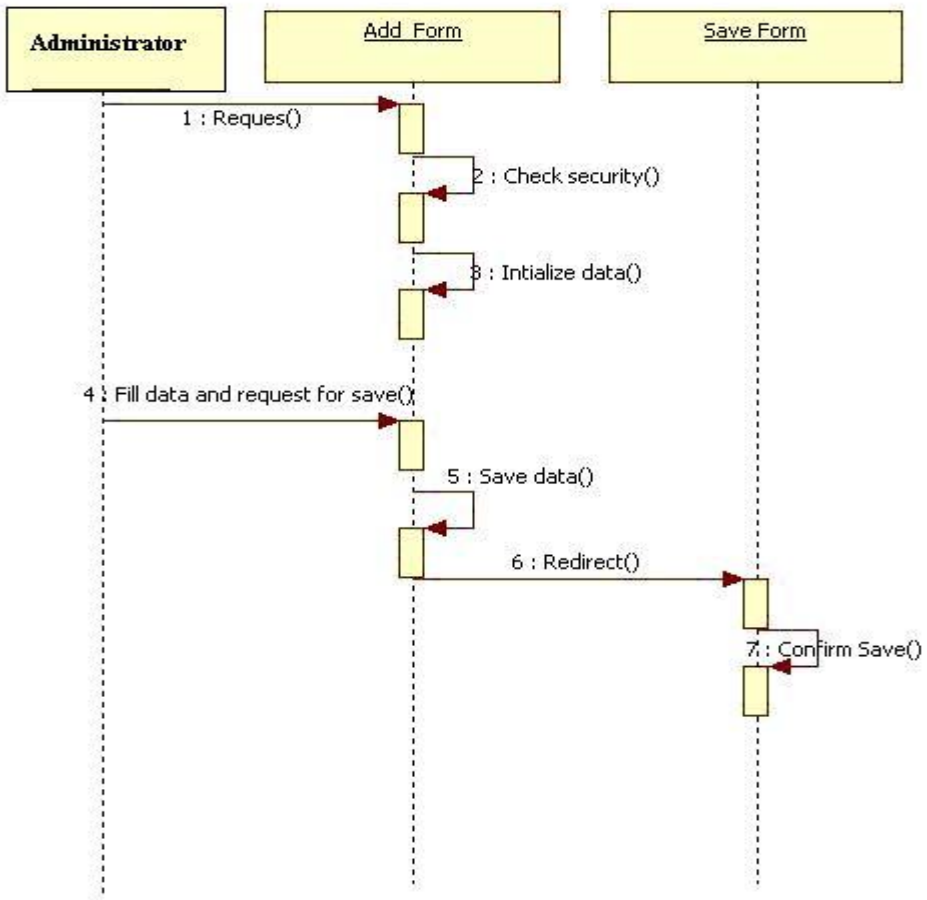

Figure 73 Sequence diagram for adding new user

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8.3.3 Graphical user interface

Figure 74 Snapshot for adding new users form

8.3.4 Unit tests

Name	Test Cases
add new user	Log on the web application 2. Click on "تعريف مستخدم" link 3. Click on "ضافة مستخدمجديد ' hyperlink 4. Insert small enterprise activity data **Expected output:** progress indication bar appears until processing finishes, then you're directed to save confirmation page

8.4 Portlet: Change password

Portlet Name	Change password
Portlet Function	The data entry or the administrator will use it for changing the password
Reuse	☐ Written from scratch
Depends on other Portlets?	no
Depends on Database Tables	Yes, Users
Source File(s)	backend/ChangePassword.aspx
Notes	

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8.4.1 Component diagram for changing password

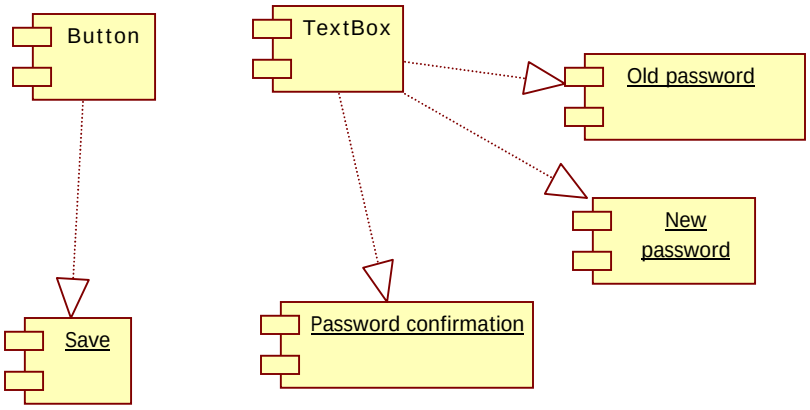

Figure 75 Component diagram for changing password

8.4.2 Interaction Diagram

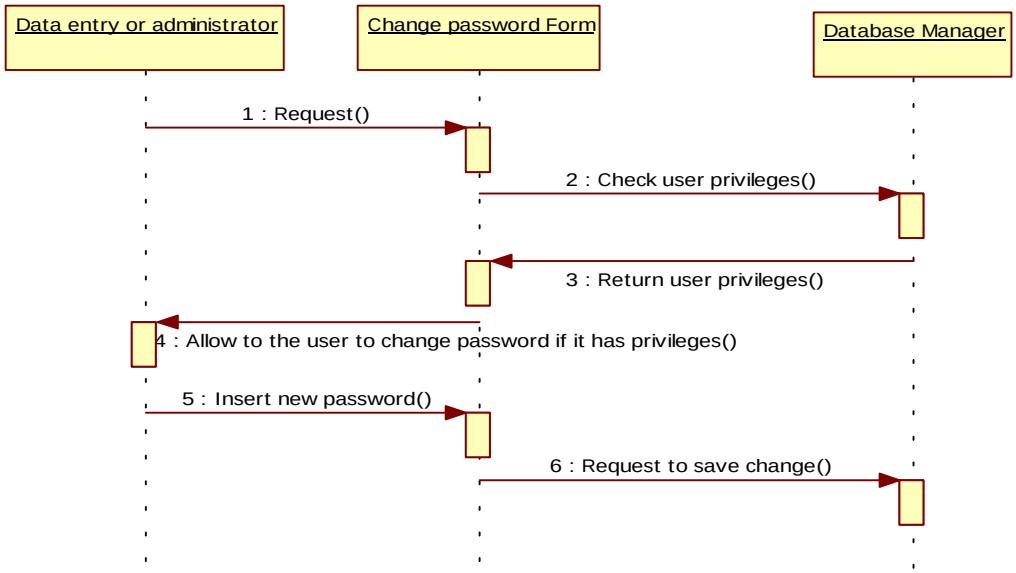

Figure 76 Sequence diagram for changing user password

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8.4.3 Graphical user interface

Figure 77 Snapshot for changing password form

8.4.4 Unit tests

Name	Test Cases
Change password	Log on the web application 2. Click on "تغيير كلمة السر" link 3. change the password 4. click save **Expected output:** progress indication bar appears until processing finishes, then you're received confirmation message for save

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