

CHAPTER 5

SYSTEM IMPLEMENTATION

5.1.XAMPP

5.1.1. Introduction to XAMPP

XAMPP is a freeware and an open source cross platform web server package. This package contains the Apache HTTP server, MySQL Database, and programming languages as the interpreters such as PHP and Perl Programming language. XAMPP is compatible for Microsoft Windows, Linux, Solaris, and Mac OS X.

5.1.2. System Requirements for Running XAMPP

To run this project, the developed application only needs 3 application in the XAMPP package which is PHP language, MySQL database, and Apache HTTP server. Because of this reason, the system requirement for running the application is similar with the system requirements for running those 3 applications which are:

- 64 MB RAM
- 160 MB free fixed disk
- Windows 98/ME/XP
- Windows NT, 2000, XP Profesional [Recommended]

The thesis team is using Windows Vista as the Operating system and XAMPP can also running very well on Windows Vista

5.1.3. XAMPP Installation

- The first step of the installation is to double click the icon for XAMPP installation.

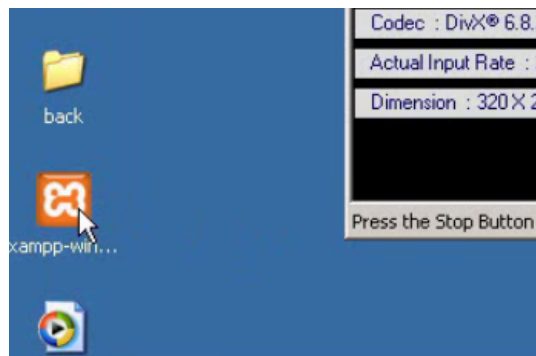


figure 49: step 01 for XAMPP installation

- A window will come up asking for the verification before the installation begin, click run.



figure 50: step 02 for XAMPP installation

- There will be a question asking for the language that is going to be used.



figure 51: step 03 for XAMPP installation

- Another window will come up, click next.



figure 52: step 04 for XAMPP installation

- Choose the directory for the XAMPP application. The default one will be C:\xampp\

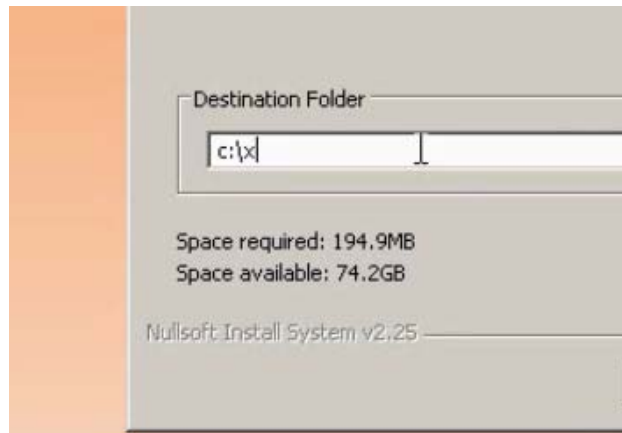


figure 53: step 05 for XAMPP installation

- Another window will come up. The developed application needs Apache and MySQL, so please check both of them then click install.



figure 54: step 06 for XAMPP installation

- Installation Progress

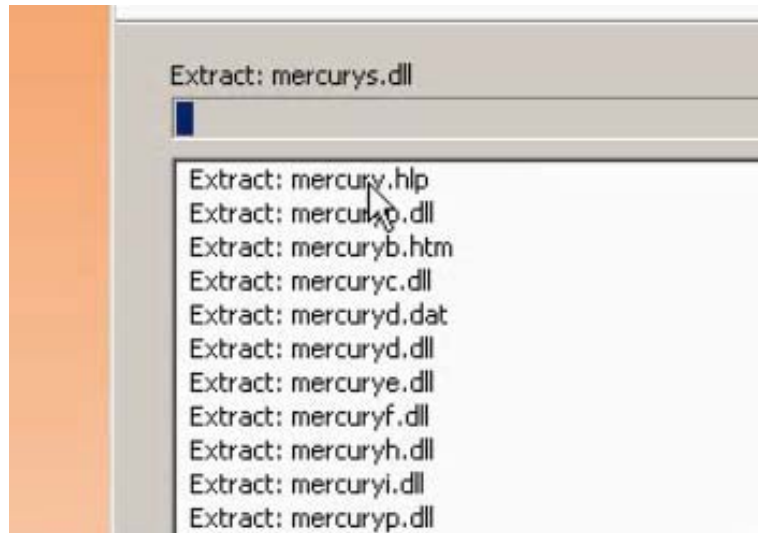


figure 55: step 07 for XAMPP installation

- After the installation completed, there will be a window likes the one below, and asking for running the XAMPP control panel. Click yes.

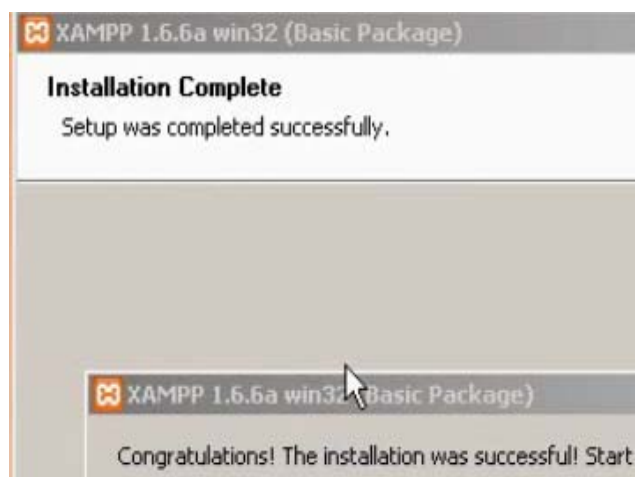


figure 56: step 08 for XAMPP installation

- The XAMPP Control Panel will come up and there will be status for Apache and MySQL.

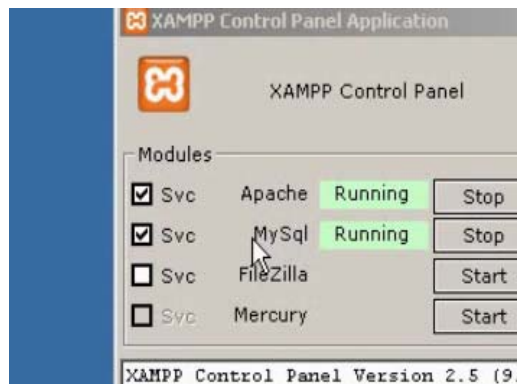


figure 57: step 09 for XAMPP installation

- Congratulations, the installation is completed and to the application, please open a browser and type <http://localhost/xampp/> and the browser will show a page like this:



figure 58: 58 step 10 for XAMPP installation

- You are ready to use the XAMPP Application

5.1.4. Installation for Developed Application

- Open the CD of the application and there will be a folder called “smartergeneration” and a file called “smartergeneration.sql”

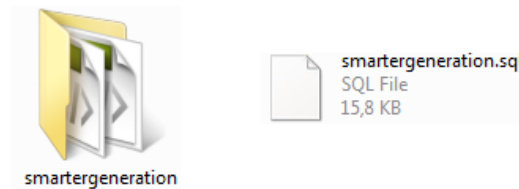


figure 59: smartergeneration installation step 1

- Copy the smartergeneration folder to a folder called “htdocs” in your XAMPP installation directory.
- Open the browser and type on the address bar <http://localhost/phpmyadmin/> then create a new database called “smartergeneration” and click create.

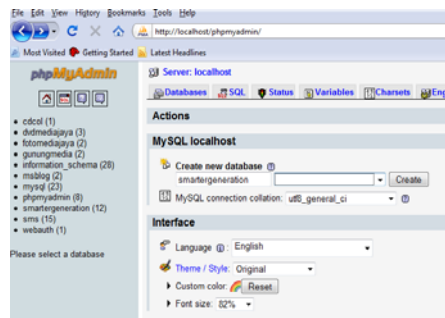


figure 60: smartergeneration installation step 2

- After created database, click import.

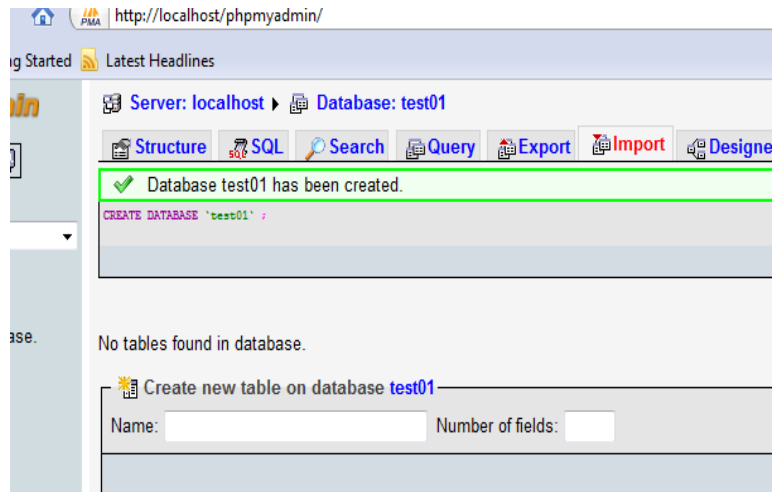


figure 61: smartergeneration installation step 3

- Browse for the smartergeneration.sql file on the installation CD for smartergeneration.com then click go.

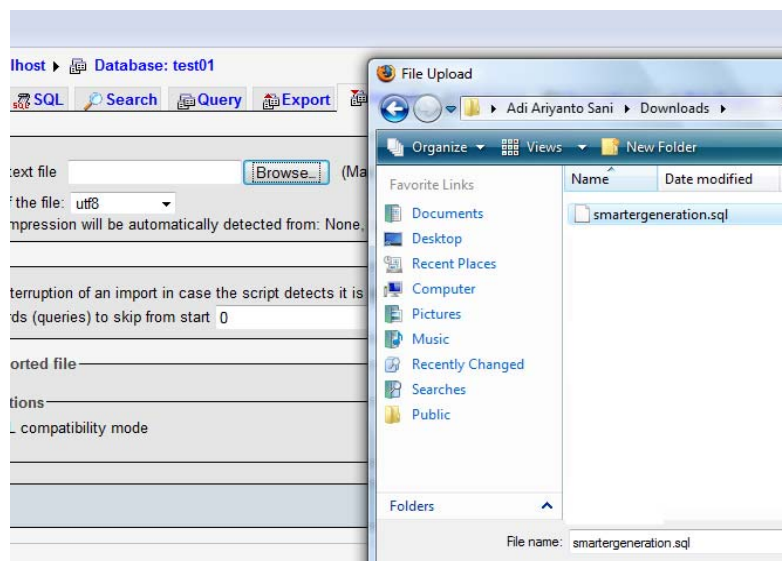


figure 62: smartergeneration installation step 4

- Now the application is ready to use. To start the application just type on the address bar in the browser:

<http://localhost/smartergeneration/>

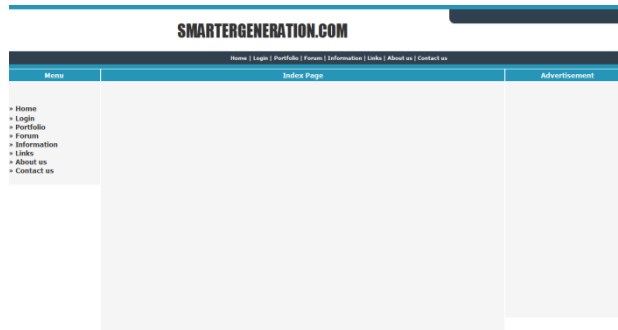


figure 63: smartergeneration installation step 5

- Enjoy the application.

5.2.Layout

5.2.1. Administrator

- **Admin Index**

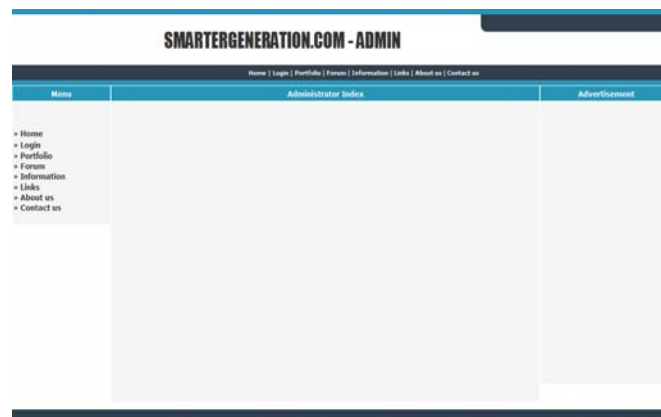


figure 64: admin index page

- **Admin Login Page**

SMARTERGENERATION.COM - ADMIN

Home | Login | Portfolio | Forum | Information | Links | About us | Contact us

Menu	Login Page	Advertisement
<ul style="list-style-type: none"> » Home » Login » Portfolio » Forum » Information » Links » About us » Contact us 	<p>Login ID <input type="text"/></p> <p>Password <input type="password"/></p> <p><input type="button" value="Submit"/></p>	

figure 65: admin login page

- **Admin Control Panel Page**

SMARTERGENERATION.COM - ADMIN

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	Admin Control Panel	Advertisement												
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<p>this panel enable you as an administrator to control access of the student</p> <table border="1"> <thead> <tr> <th>Area</th> <th>Current Status</th> <th>Control</th> </tr> </thead> <tbody> <tr> <td>enrollment</td> <td>open</td> <td>open ▾</td> </tr> <tr> <td>material</td> <td>open</td> <td>open ▾</td> </tr> <tr> <td>assignment</td> <td>open</td> <td>open ▾</td> </tr> </tbody> </table> <p><input type="button" value="Submit"/></p>	Area	Current Status	Control	enrollment	open	open ▾	material	open	open ▾	assignment	open	open ▾	
Area	Current Status	Control												
enrollment	open	open ▾												
material	open	open ▾												
assignment	open	open ▾												

figure 66: admin control panel page

- **Admin Manage User Page**

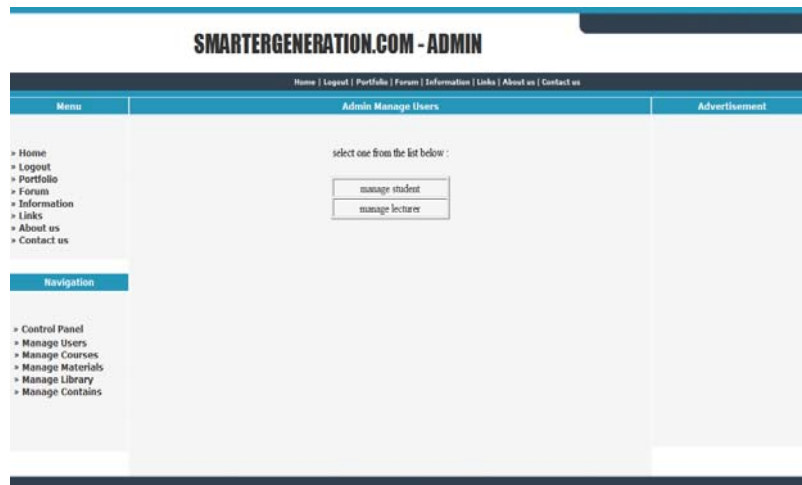


figure 67: admin manage user page

- **Admin Manage Student Page**

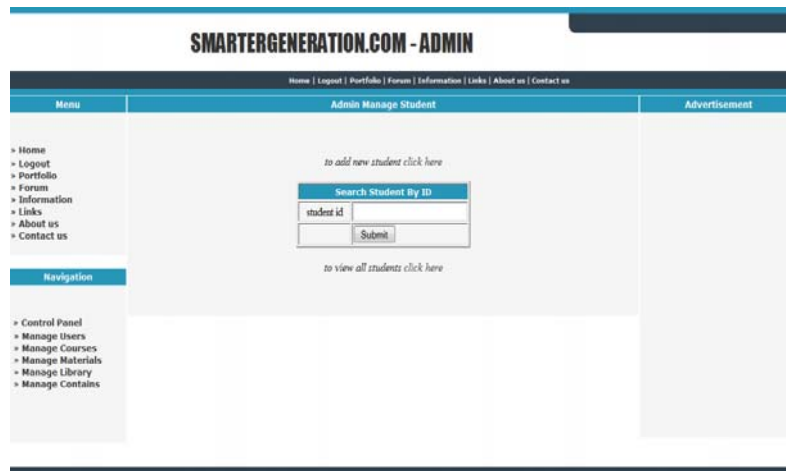


figure 68: admin manage student page

- **Admin Add Student Page**

The screenshot shows the 'Admin Add Student' page. The header includes the site name 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. The left sidebar contains a 'Menu' section with links to Home, Logout, Portfolio, Forum, Information, Links, About us, and Contact us, and a 'Navigation' section with links to Control Panel, Manage Users, Manage Courses, Manage Materials, Manage Library, and Manage Contents. The main content area is titled 'Admin Add Student' and includes a link 'click here to go back to admin manage student'. Below this is a form titled 'Add Student' with fields for Student Number, Password, First Name, Last Name, Major (a dropdown menu currently showing 'computer science'), DOB, Hometown, Address, Email Address, Phone Number, Cell Number, and Picture (with a 'Browse...' button). A 'Submit' button is at the bottom of the form.

figure 69: admin add student page

- **Admin Edit Student Page**

The screenshot shows the 'Admin Edit Student' page. The header and sidebar are identical to the previous page. The main content area is titled 'Admin Edit Student' and includes a link 'click here to go back to admin manage student'. Below this is a form titled 'Edit Student' with a 3D graphic of a city skyline on the left. The form fields are: Student Number (s3191915), First Name (adi), Last Name (ariyanto sani), Major (computer science), DOB (25/06/98), Hometown (jakarta), Address (palmerah utara 115 a), Email Address (adrie_sani@yahoo.co), Phone Number (021-5494441), Cell Number (08129060042), and Picture (with a 'Browse...' button). A 'Submit' button is at the bottom of the form. A pink banner at the bottom of the form area says 'delete this student'.

figure 70: admin edit student page

- Admin View All Student Page

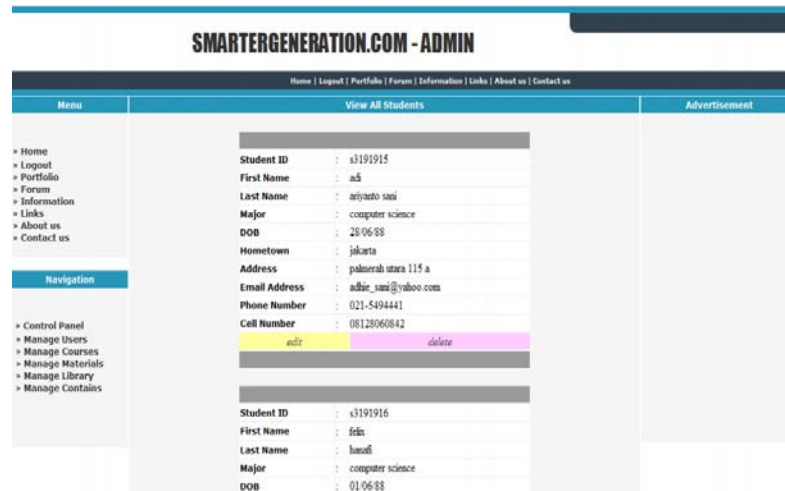


figure 71: admin view all student page

- Admin Manage Lecturer Page

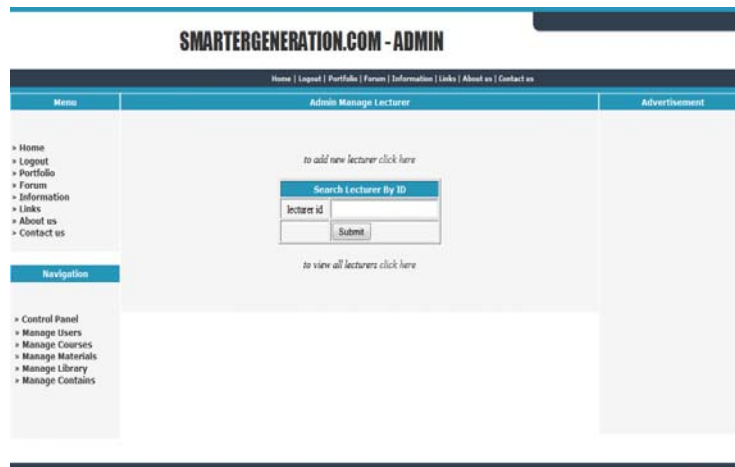


figure 72: admin manage lecturer page

- Admin Add Lecturer Page

The screenshot shows the 'Admin Add Lecturer' page. At the top, there's a header 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. Below this, there's a sidebar with 'Menu' and 'Navigation' sections. The main content area is titled 'Admin Add Lecturer' and contains a link 'click here to go back to admin manage lecturer'. The form for adding a lecturer includes fields for Lecturer Number, Password, First Name, Last Name, DOB, Hometown, Address, Email Address, Phone Number, Cell Number, and a Picture field with a 'Browse...' button. A 'Submit' button is at the bottom.

figure 73: admin add lecturer page

- Admin Edit Lecturer Page

The screenshot shows the 'Admin Edit Lecturer' page. It features the same header and sidebar as the previous page. The main content area is titled 'Admin Edit Lecturer' and contains a link 'click here to go back to admin manage lecturer'. The form for editing a lecturer includes a profile picture of a person with glasses, and fields for Lecturer Number, First Name, Last Name, DOB, Hometown, Address, Email Address, Phone Number, Cell Number, and a Picture field with a 'Browse...' button. A 'Submit' button is at the bottom.

figure 74: admin edit lecturer page

- Admin View All Lecturer Page

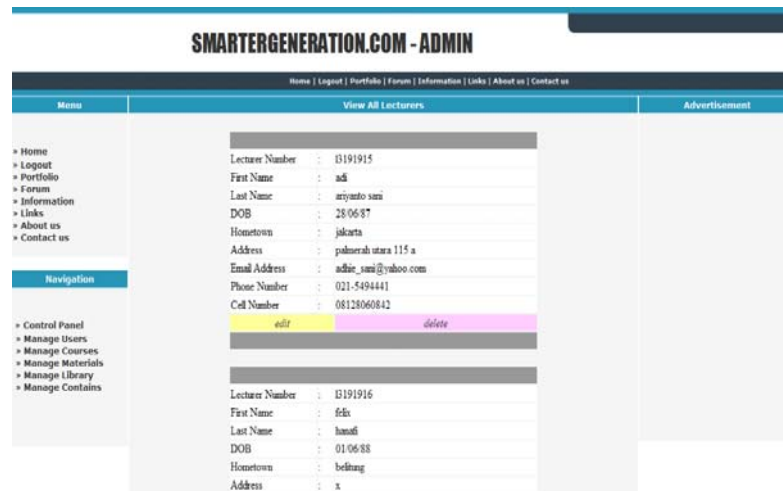


figure 75: admin view all lecturer page

- Admin Manage Courses Page

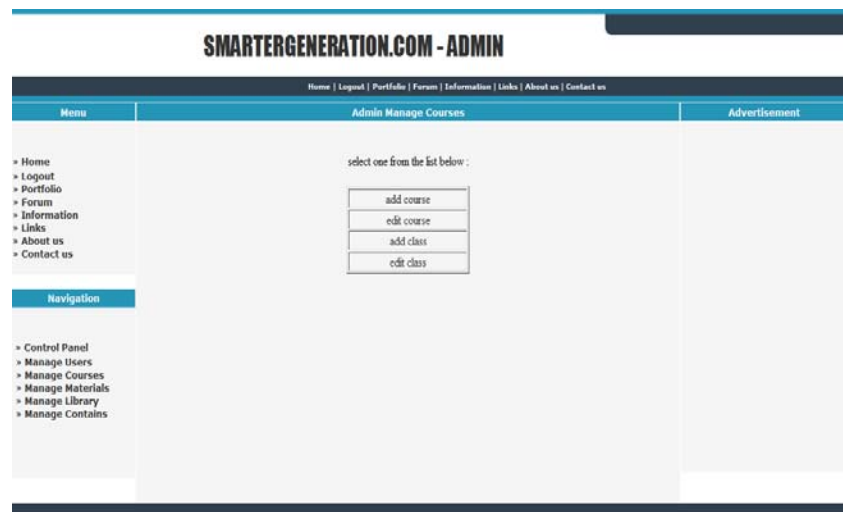


figure 76: admin manage courses page

- Admin Add Course Page

The screenshot shows the 'Admin Add Course' page. The header includes the site name 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. The page is divided into three main sections: Menu, Admin Add Course, and Advertisement. The Menu section on the left contains a list of links: Home, Logout, Portfolio, Forum, Information, Links, About us, and Contact us. Below this is a 'Navigation' section with links: Control Panel, Manage Users, Manage Courses, Manage Materials, Manage Library, and Manage Contents. The Admin Add Course section in the center contains a form titled 'Add Course' with three input fields: Course Number, Course Name, and Course Category. A 'Submit' button is located below the form. The Advertisement section on the right is currently empty.

figure 77: admin add courses page

- Admin Manage Course Page

The screenshot shows the 'Admin Manage Course' page. The header includes the site name 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. The page is divided into three main sections: Menu, Admin Manage Course, and Advertisement. The Menu section on the left contains a list of links: Home, Logout, Portfolio, Forum, Information, Links, About us, and Contact us. Below this is a 'Navigation' section with links: Control Panel, Manage Users, Manage Courses, Manage Materials, Manage Library, and Manage Contents. The Admin Manage Course section in the center contains a form titled 'Search Course By ID' with a 'course id' input field and a 'Submit' button. Above the form is a link 'to add new course click here' and below the form is a link 'to view all courses click here'. The Advertisement section on the right is currently empty.

figure 78: admin manage course page

- **Admin Edit Course Page**

SMARTERGENERATION.COM - ADMIN

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	Admin Edit Course	Advertisement
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<div> <div> Edit Course </div> <div> Course Number : cs201 Course Name : intro to it Course Category : computer science delete this course </div> <div> Submit </div> </div>	
<div> <div>Navigation</div> <ul style="list-style-type: none"> » Control Panel » Manage Users » Manage Courses » Manage Materials » Manage Library » Manage Contains </div>		

figure 79: admin edit course page

- **Admin View All Courses Page**

SMARTERGENERATION.COM - ADMIN

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	View All Courses	Advertisement
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<div> <div> Course Number : cs201 Course Name : intro to it Course Category : computer science edit delete </div> <div> Course Number : cs202 Course Name : java Course Category : computer science edit delete </div> <div> Course Number : mk201 Course Name : marketing fundamental Course Category : marketing edit delete </div> </div>	
<div> <div>Navigation</div> <ul style="list-style-type: none"> » Control Panel » Manage Users » Manage Courses » Manage Materials » Manage Library » Manage Contains </div>		

figure 80: admin view all courses page

- Admin Add Class Page

The screenshot shows the 'Admin Add Class' page. The header includes the site name 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. The page is divided into three main sections: Menu, Admin Add Class, and Advertisement. The Menu section on the left contains a list of links: Home, Logout, Portfolio, Forum, Information, Links, About us, and Contact us. Below this is a 'Navigation' section with links: Control Panel, Manage Users, Manage Courses, Manage Materials, Manage Library, and Manage Contents. The Admin Add Class section in the center contains a form titled 'Add Class' with the following fields: Class ID, Course ID, Lecturer ID, Room, Time, and Category. A 'Submit' button is located below the form. The Advertisement section on the right is currently empty.

figure 81: admin add class page

- Admin Manage Class Page

The screenshot shows the 'Admin Manage Class' page. The header includes the site name 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. The page is divided into three main sections: Menu, Admin Manage Class, and Advertisement. The Menu section on the left contains a list of links: Home, Logout, Portfolio, Forum, Information, Links, About us, and Contact us. Below this is a 'Navigation' section with links: Control Panel, Manage Users, Manage Courses, Manage Materials, Manage Library, and Manage Contents. The Admin Manage Class section in the center contains a form titled 'Search Class By ID' with a 'class id' input field and a 'Submit' button. Above the form is the text 'to add new class click here' and below the form is the text 'to view all classes click here'. The Advertisement section on the right is currently empty.

figure 82: admin manage class page

- Admin Edit Class Page

The screenshot shows the 'Admin Edit Class' page. The header includes the site name 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. The page is divided into three main sections: Menu, Admin Edit Class, and Advertisement.

Menu:

- » Home
- » Logout
- » Portfolio
- » Forum
- » Information
- » Links
- » About us
- » Contact us

Navigation:

- » Control Panel
- » Manage Users
- » Manage Courses
- » Manage Materials
- » Manage Library
- » Manage Contents

Admin Edit Class:

Edit Class

Class ID :	pac01
Course ID :	cs201
Lecturer ID :	l191914
Room :	309
Time :	monday 09.20 - 13.20
Category :	computer science
delete this class	

figure 83: edit class page

- Admin View All Classes Page

The screenshot shows the 'Admin View All Classes' page. The header includes the site name 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. The page is divided into three main sections: Menu, View All Classes, and Advertisement.

Menu:

- » Home
- » Logout
- » Portfolio
- » Forum
- » Information
- » Links
- » About us
- » Contact us

Navigation:

- » Control Panel
- » Manage Users
- » Manage Courses
- » Manage Materials
- » Manage Library
- » Manage Contents

View All Classes:

Class ID : l191914	
Course ID : cs201	
Lecturer : edwin elias	
Category : computer science	
edit	delete

Class ID : l191916	
Course ID : cs202	
Lecturer : felix hanafi	
Category : computer science	
edit	delete

Class ID : l191916	
Course ID : msk201	
Lecturer : felix hanafi	

figure 84: admin view all classes page

- **Admin Manage Materials Page**

The screenshot shows the 'Admin Manage Materials' page. The header includes the site name 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. The page is divided into three main sections: Menu, Admin Manage Materials, and Advertisement.

Menu:

- » Home
- » Logout
- » Portfolio
- » Forum
- » Information
- » Links
- » About us
- » Contact us

Navigation:

- » Control Panel
- » Manage Users
- » Manage Courses
- » Manage Materials
- » Manage Library
- » Manage Contains

Admin Manage Materials:

select one from the list below :

upload material

edit material

figure 85: admin manage materials page

- **Admin Upload Material Page**

The screenshot shows the 'Admin Upload Material' page. The header includes the site name 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. The page is divided into three main sections: Menu, Admin Upload Material, and Advertisement.

Menu:

- » Home
- » Logout
- » Portfolio
- » Forum
- » Information
- » Links
- » About us
- » Contact us

Navigation:

- » Control Panel
- » Manage Users
- » Manage Courses
- » Manage Materials
- » Manage Library
- » Manage Contains

Admin Upload Material:

Upload Material

Material ID :

Material Name :

Type : material ▼

Course ID :

Material

figure 86: admin upload material page

- Admin Manage Material Page

The screenshot shows the 'Admin Manage Material' page. At the top, there's a header with the site name and navigation links. Below this, a sidebar on the left contains a 'Menu' and a 'Navigation' section. The main content area is titled 'Admin Manage Material' and features a search form labeled 'Search Material By ID'. The form has a text input field for 'material id' and a 'Submit' button. Above the form is a link 'to add new material click here' and below it is a link 'to view all materials click here'. An 'Advertisement' placeholder is on the right.

Menu	Admin Manage Material	Advertisement
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<p>to add new material click here</p> <div> <div>Search Material By ID</div> <div> <input type="text" value="material id"/> <input type="button" value="Submit"/> </div> </div> <p>to view all materials click here</p>	

figure 87: admin manage material page

- Admin Edit Material Page

The screenshot shows the 'Admin Edit Material' page. It has a similar layout to the previous page, with a sidebar and a main content area. The main content area is titled 'Admin Edit Material' and contains a form for editing material details. The form fields are: 'Material ID' (m01), 'Material Name' (material kk), 'Type' (video), 'Course ID' (cs202), and 'Path' (uploaded_material/5d0). Below these fields is a pink button labeled 'delete this material' and a 'Submit' button. An 'Advertisement' placeholder is on the right.

Menu	Admin Edit Material	Advertisement
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<div> <div>Edit Material</div> <div> <div>Material ID :</div> <div>m01</div> </div> <div> <div>Material Name :</div> <div>material kk</div> </div> <div> <div>Type :</div> <div>video ▾</div> </div> <div> <div>Course ID :</div> <div>cs202</div> </div> <div> <div>Path :</div> <div>uploaded_material/5d0</div> </div> <div>delete this material</div> <div>Submit</div> </div>	

figure 88: admin edit material page

- **Admin View All Materials Page**

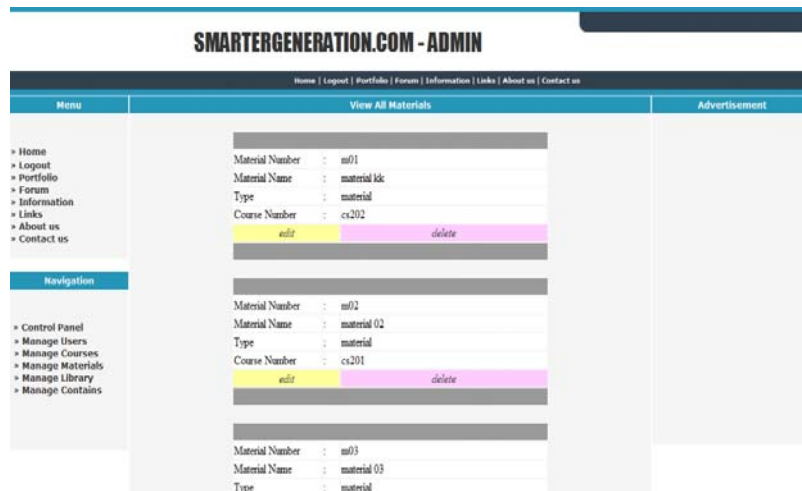


figure 89: admin view all materials page

- **Admin Library Page**

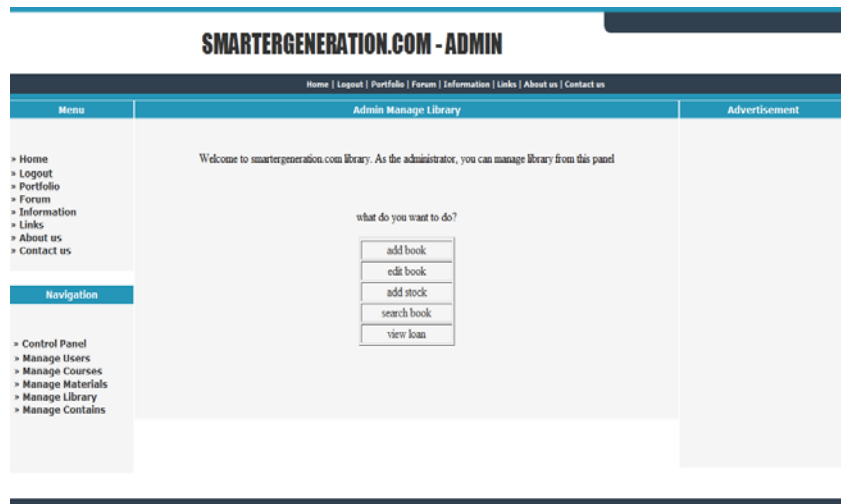


figure 90: admin library page

- Admin Library – Add Book Page

The screenshot shows the 'Admin Add New Book' page. The header includes the site name 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. The page is divided into three columns: Menu, Admin Add New Book, and Advertisement. The Menu column contains a list of links (Home, Logout, Portfolio, Forum, Information, Links, About us, Contact us) and a Navigation section with links (Control Panel, Manage Users, Manage Courses, Manage Materials, Manage Library, Manage Contents). The Admin Add New Book column contains a form titled 'Add New Book' with fields for Book ID, Title, Author, Category, and Stock, each followed by a colon and a text input field. A 'Submit' button is located below the form. The Advertisement column is empty.

figure 91: admin add book page

- Admin Library – Manage Book Page

The screenshot shows the 'Admin Manage Book' page. The header includes the site name 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. The page is divided into three columns: Menu, Admin Manage Book, and Advertisement. The Menu column contains a list of links (Home, Logout, Portfolio, Forum, Information, Links, About us, Contact us) and a Navigation section with links (Control Panel, Manage Users, Manage Courses, Manage Materials, Manage Library, Manage Contents). The Admin Manage Book column contains a form titled 'Search Book By ID' with a 'book id' label and a text input field, followed by a 'Submit' button. Above the form is the text 'to add new book click here' and below the form is the text 'to view all books click here'. The Advertisement column is empty.

figure 92: admin manage book page

- Admin Library – Edit Book Page

The screenshot shows the 'Admin Edit Book' page. The header includes the site name 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. The page is divided into three main sections: Menu, Admin Edit Book, and Advertisement.

Menu:

- » Home
- » Logout
- » Portfolio
- » Forum
- » Information
- » Links
- » About us
- » Contact us

Navigation:

- » Control Panel
- » Manage Users
- » Manage Courses
- » Manage Materials
- » Manage Library
- » Manage Contents

Admin Edit Book:

Edit Book

Book ID	: b01
Title	: java programming
Author	: loney mclinton
Category	: computer science

[delete this book](#)

figure 93: admin edit book page

- Admin Library – View All Books Page

The screenshot shows the 'Admin View All Books' page. The header includes the site name 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. The page is divided into three main sections: Menu, View All Books, and Advertisement.

Menu:

- » Home
- » Logout
- » Portfolio
- » Forum
- » Information
- » Links
- » About us
- » Contact us

Navigation:

- » Control Panel
- » Manage Users
- » Manage Courses
- » Manage Materials
- » Manage Library
- » Manage Contents

View All Books:

Book Number	: b01	
Title	: java programming	
Author	: loney mclinton	
Category	: computer science	
Stock	: 12	
edit	delete	<input type="button" value="add borrower"/>

Book Number	: b02	
Title	: marketing fundamental	
Author	: dominique	
Category	: marketing	
Stock	: 6	
edit	delete	<input type="button" value="add borrower"/>

figure 94: admin view all books page

- Admin Library – Update Stock Page

SMARTERGENERATION.COM - ADMIN

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	Admin Add Stock	Advertisement
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<p>Add Stock</p> <p>Book ID : b01</p> <p>Title : java programming</p> <p>Author : loney malaton</p> <p>Category : computer science</p> <p>Current Stock : 12</p> <p>Add Stock :</p> <p><input type="button" value="Submit"/></p>	

Navigation

- » Control Panel
- » Manage Users
- » Manage Courses
- » Manage Materials
- » Manage Library
- » Manage Contents

figure 95: admin update stock page

- Admin Library – Search Book Page

SMARTERGENERATION.COM - ADMIN

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	Admin Search Book	Advertisement
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<p>how do you want to search?</p> <p>by book id</p> <p>by title</p> <p>by author</p> <p>by category</p>	

Navigation

- » Control Panel
- » Manage Users
- » Manage Courses
- » Manage Materials
- » Manage Library
- » Manage Contents

figure 96: admin search book page

- Admin Library – Search Book by Selected Key Page

The screenshot shows the 'Admin Search Book' page. At the top, there's a header 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. Below the header, there's a sidebar with a 'Menu' section containing links to Home, Logout, Portfolio, Forum, Information, Links, About us, and Contact us. A 'Navigation' section contains links to Control Panel, Manage Users, Manage Courses, Manage Materials, Manage Library, and Manage Contents. The main content area is titled 'Admin Search Book' and contains a search form. The form has a 'SEARCH' button and a 'book id' input field. Below the input field is a 'Submit' button. Above the form, there's a link 'click here to go back to search menu'. Below the form, there's a link 'to view all books click here'. The right sidebar is labeled 'Advertisement'.

figure 97: admin search book by selected key page

- Admin Library – Search Book Result Page

The screenshot shows the 'Search by Author' result page. At the top, there's a header 'SMARTERGENERATION.COM - ADMIN' and a navigation bar with links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. Below the header, there's a sidebar with a 'Menu' section containing links to Home, Logout, Portfolio, Forum, Information, Links, About us, and Contact us. A 'Navigation' section contains links to Control Panel, Manage Users, Manage Courses, Manage Materials, Manage Library, and Manage Contents. The main content area is titled 'Search by Author' and contains a table with search results. The table has columns for Book ID, Title, Author, Category, and Available Stock. The results show a book with ID 'b03', Title 'c++', Author 'erwin adi', Category 'computer science', and Available Stock '9'. Below the table is an 'add borrower' button. The right sidebar is labeled 'Advertisement'.

figure 98: admin search book result page

- **Admin Library – View Borrower Page**

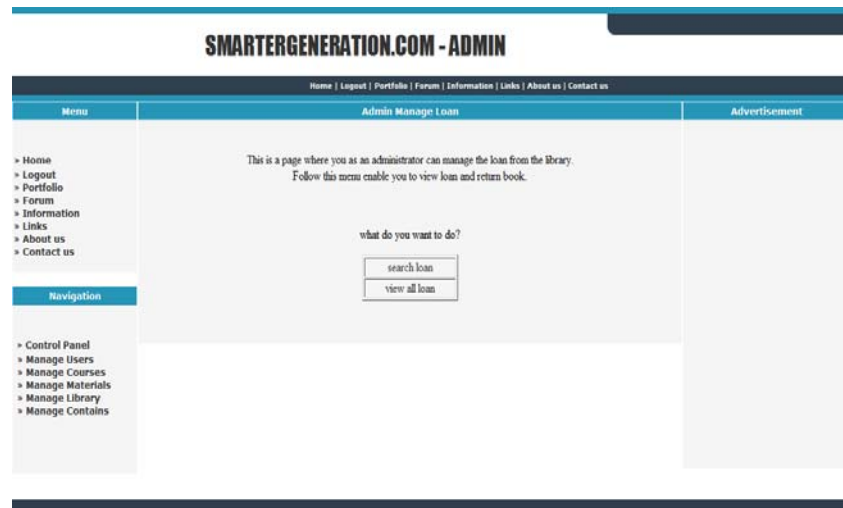


figure 99: admin view borrower page

- **Admin Library – View Search Loan Page**

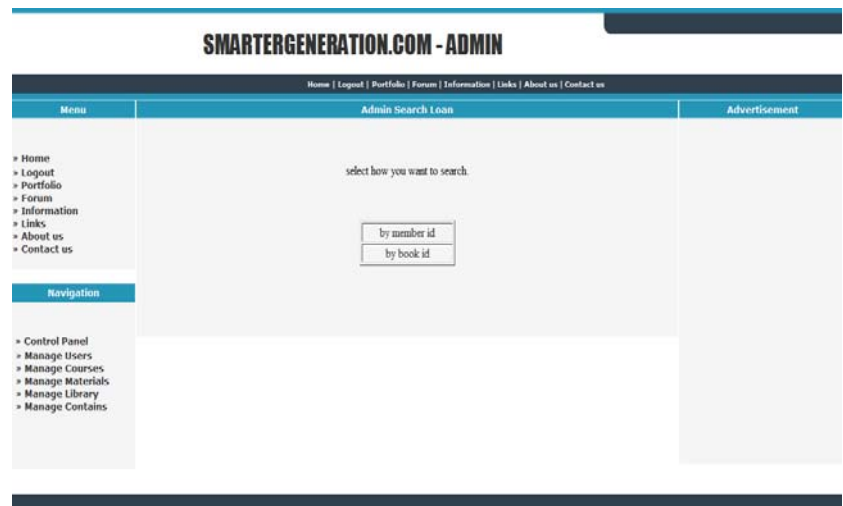


figure 100: admin view search loan page

- **Admin Library – View Search Loan by Selected Key Page**

SMARTERGENERATION.COM - ADMIN

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	Admin Search Loan by Member ID	Advertisement
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<div> <div>Enter Member ID</div> <div> <input type="text" value="member id"/> <input type="button" value="Submit"/> </div> </div> <p><i>to view all loan click here</i></p>	
<div>Navigation</div> <ul style="list-style-type: none"> » Control Panel » Manage Users » Manage Courses » Manage Materials » Manage Library » Manage Contents 		

figure 101: admin view search loan by selected key page

- **Admin Library – View Search Book Loan Result Page**

SMARTERGENERATION.COM - ADMIN

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	Search Loan By Member ID	Advertisement
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<div> <div>Search Loan By Member ID</div> <div> <div>Loan ID : 7</div> <div>Member ID : s3191915</div> <div>Book ID : b01</div> <div><input type="button" value="return book"/></div> </div> </div>	
<div>Navigation</div> <ul style="list-style-type: none"> » Control Panel » Manage Users » Manage Courses » Manage Materials » Manage Library » Manage Contents 		

figure 102: admin view search book loan result page

- **Admin Library – View All Loans Page**

Menu	View All Loan	Advertisement
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<p>Loan ID : 10</p> <p>Member ID : s3191914</p> <p>Book ID : b01</p> <p><input type="button" value="return book"/></p> <p>Loan ID : 7</p> <p>Member ID : s3191915</p> <p>Book ID : b01</p> <p><input type="button" value="return book"/></p> <p>Loan ID : 8</p> <p>Member ID : i3191914</p> <p>Book ID : b02</p> <p><input type="button" value="return book"/></p>	

figure 103: admin view all loans page

- **Admin Library – Manage Category Page**

Menu	Admin Manage Category	Advertisement				
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<p>these are the majors that available for smartergeneration.com</p> <table border="1"> <tr><td>accounting</td></tr> <tr><td>computer science</td></tr> <tr><td>marketing</td></tr> <tr><td>music</td></tr> </table> <p>to manage the majors, use panel below</p> <div> <div> <p>Add New Major</p> <input type="text"/> <p><input type="button" value="Submit"/></p> </div> <div> <p>Delete Major</p> <p>accounting ▼</p> <p><input type="button" value="Submit"/></p> </div> </div>	accounting	computer science	marketing	music	
accounting						
computer science						
marketing						
music						

figure 104: admin manage category page

5.2.2. Student

- Student Index

The screenshot shows the 'Student Index' page. At the top, the website name 'SMARTERGENERATION.COM' is displayed. Below it, a navigation bar contains links: Home | Login | Portfolio | Forum | Information | Links | About us | Contact us. The main content area is divided into three sections:

- Menu:** A vertical list of links: Home, Login, Portfolio, Forum, Information, Links, About us, and Contact us.
- Login Page:** A central form with fields for 'Login ID' and 'Password', and a 'Submit' button.
- Advertisement:** A large, empty rectangular area on the right side of the page.

figure 105: student index page

- Student Profile Page

The screenshot shows the 'Student Profile' page. At the top, the website name 'SMARTERGENERATION.COM' is displayed. Below it, a navigation bar contains links: Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us. The main content area is divided into three sections:

- Menu:** A vertical list of links: Home, Logout, Portfolio, Forum, Information, Links, About us, and Contact us.
- Navigation:** A vertical list of links: Profile, Edit Profile, Edit Password, View Classes, View Materials, Upload Task, and Library.
- Profile Information:** A central area containing a 3D image of a cityscape and a table of personal details.

Student ID	: s3191915
First Name	: adi
Last Name	: ariyanto sani
Major	: computer science
DOB	: 28/06/88
Hometown	: jakarta
Address	: palmerah utara 115 a
Email Address	: adier_sani@yahoo.com
Phone Number	: 021-5494441
Cell Number	: 08128060842

figure 106: student profile page

• Student Edit Profile Page

SMARTERGENERATION.COM

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us


Menu	Edit Profile	Advertisement
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<div>  </div> <p>Student Number : s3191915</p> <p>First Name : adi</p> <p>Last Name : ariyanto sani</p> <p>Major : computer science</p> <p>DOB : 28/06/88</p> <p>Hometown : jakarta</p> <p>Address : palmerah utara 115 a</p> <p>Email Address : adhie_sani@yahoo co</p> <p>Phone Number : 021-5494441</p> <p>Cell Number : 08128060842</p> <p>Picture : <input type="button" value="Browse..."/></p> <p><input type="button" value="Submit"/></p>	

figure 107: student edit profile page

• Student Edit Password Page

SMARTERGENERATION.COM

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	Change Password	Advertisement
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<p>Username : s3191915</p> <p>Old Password : <input type="password"/></p> <p>New Password : <input type="password"/></p> <p>Confirm Password : <input type="password"/></p> <p><input type="button" value="Submit"/></p>	

figure 108: student edit password page

- Student View Taken Class Page

SMARTERGENERATION.COM

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	View Taken Classes	Advertisement																				
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<p>to view your schedule click here</p> <table border="1"> <tr><td>Class ID</td><td>pac01</td></tr> <tr><td>Course ID</td><td>cs201</td></tr> <tr><td>Lecturer ID</td><td>3191914</td></tr> <tr><td>Category</td><td>computer science</td></tr> <tr> <td>view class detail</td> <td>drop class</td> </tr> </table> <table border="1"> <tr><td>Class ID</td><td>pac03</td></tr> <tr><td>Course ID</td><td>cs204</td></tr> <tr><td>Lecturer ID</td><td>3191916</td></tr> <tr><td>Category</td><td>computer science</td></tr> <tr> <td>view class detail</td> <td>drop class</td> </tr> </table>	Class ID	pac01	Course ID	cs201	Lecturer ID	3191914	Category	computer science	view class detail	drop class	Class ID	pac03	Course ID	cs204	Lecturer ID	3191916	Category	computer science	view class detail	drop class	
Class ID	pac01																					
Course ID	cs201																					
Lecturer ID	3191914																					
Category	computer science																					
view class detail	drop class																					
Class ID	pac03																					
Course ID	cs204																					
Lecturer ID	3191916																					
Category	computer science																					
view class detail	drop class																					

Navigation

- » Profile
- » Edit Profile
- » Edit Password
- » View Classes
- » Taken Classes
- » View Materials
- » Upload Task
- » Library

figure 111: view taken class page

- Student View Taken Class Schedule Page

SMARTERGENERATION.COM

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	View Taken Classes	Advertisement																				
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<p>please make sure there is no time collision between schedule</p> <table border="1"> <tr><td>Class ID</td><td>pac01</td></tr> <tr><td>Course ID</td><td>cs201</td></tr> <tr><td>Room</td><td>309</td></tr> <tr><td>Time</td><td>monday 09:20 - 13:20</td></tr> <tr> <td>view class detail</td> <td>drop class</td> </tr> </table> <table border="1"> <tr><td>Class ID</td><td>pac03</td></tr> <tr><td>Course ID</td><td>cs204</td></tr> <tr><td>Room</td><td>303</td></tr> <tr><td>Time</td><td>monday 09:20 - 10:20</td></tr> <tr> <td>view class detail</td> <td>drop class</td> </tr> </table>	Class ID	pac01	Course ID	cs201	Room	309	Time	monday 09:20 - 13:20	view class detail	drop class	Class ID	pac03	Course ID	cs204	Room	303	Time	monday 09:20 - 10:20	view class detail	drop class	
Class ID	pac01																					
Course ID	cs201																					
Room	309																					
Time	monday 09:20 - 13:20																					
view class detail	drop class																					
Class ID	pac03																					
Course ID	cs204																					
Room	303																					
Time	monday 09:20 - 10:20																					
view class detail	drop class																					

Navigation

- » Profile
- » Edit Profile
- » Edit Password
- » View Classes
- » Taken Classes
- » View Materials
- » Upload Task
- » Library

figure 112: student view taken class schedule page

- **Student View Materials Page**

SMARTERGENERATION.COM

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	View Materials	Advertisement																				
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<table border="1"> <tr><td>Course ID</td><td>cs201</td></tr> <tr><td>Course Name</td><td>intro to it</td></tr> <tr><td colspan="2">view materials by this course</td></tr> <tr><td colspan="2">view flash materials by this course</td></tr> <tr><td colspan="2">view videos by this course</td></tr> </table> <table border="1"> <tr><td>Course ID</td><td>cs204</td></tr> <tr><td>Course Name</td><td>flash</td></tr> <tr><td colspan="2">view materials by this course</td></tr> <tr><td colspan="2">view flash materials by this course</td></tr> <tr><td colspan="2">view videos by this course</td></tr> </table>	Course ID	cs201	Course Name	intro to it	view materials by this course		view flash materials by this course		view videos by this course		Course ID	cs204	Course Name	flash	view materials by this course		view flash materials by this course		view videos by this course		
Course ID	cs201																					
Course Name	intro to it																					
view materials by this course																						
view flash materials by this course																						
view videos by this course																						
Course ID	cs204																					
Course Name	flash																					
view materials by this course																						
view flash materials by this course																						
view videos by this course																						

Navigation

- » Profile
- » Edit Profile
- » Edit Password
- » View Classes
- » Taken Classes
- » View Materials
- » Upload Task
- » Library

figure 113: student view materials page

- **Student View Download-able Material Page**

SMARTERGENERATION.COM

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	View Material cs201	Advertisement												
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<table border="1"> <tr><td>Material ID</td><td>m02</td></tr> <tr><td>Material Name</td><td>material 02</td></tr> <tr><td colspan="2">download this material</td></tr> </table> <table border="1"> <tr><td>Material ID</td><td>m03</td></tr> <tr><td>Material Name</td><td>material 03</td></tr> <tr><td colspan="2">download this material</td></tr> </table>	Material ID	m02	Material Name	material 02	download this material		Material ID	m03	Material Name	material 03	download this material		
Material ID	m02													
Material Name	material 02													
download this material														
Material ID	m03													
Material Name	material 03													
download this material														

Navigation

- » Profile
- » Edit Profile
- » Edit Password
- » View Classes
- » Taken Classes
- » View Materials
- » Upload Task
- » Library

figure 114: student view download-able material page

- Student View Flash Materials Page

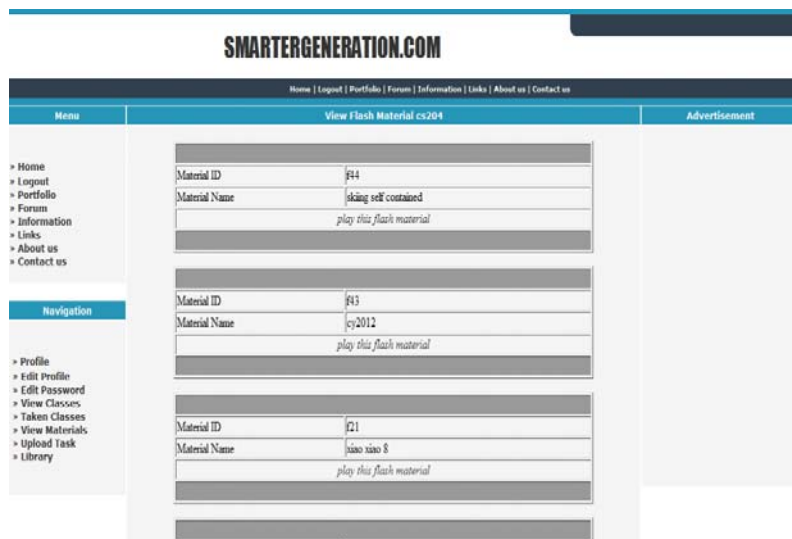


figure 115: student view flash material page

- Student View Video Materials Page

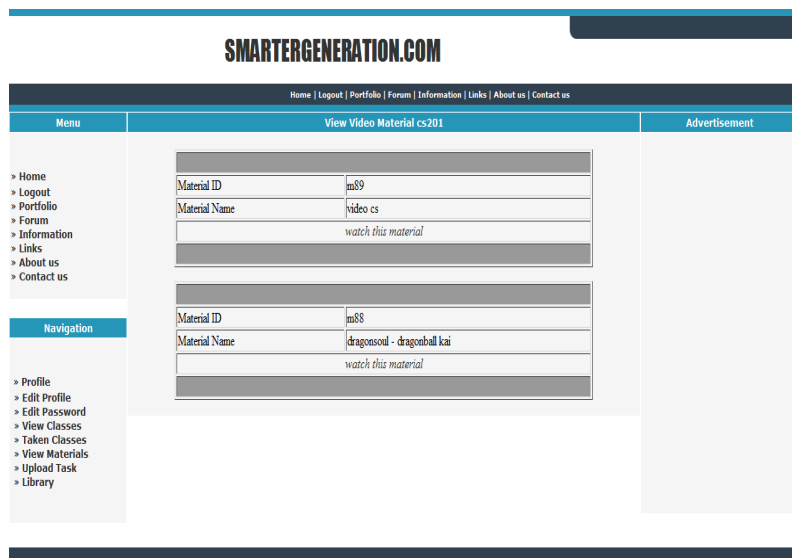


figure 116: student view video material page

- **Student Play Flash Material Page**

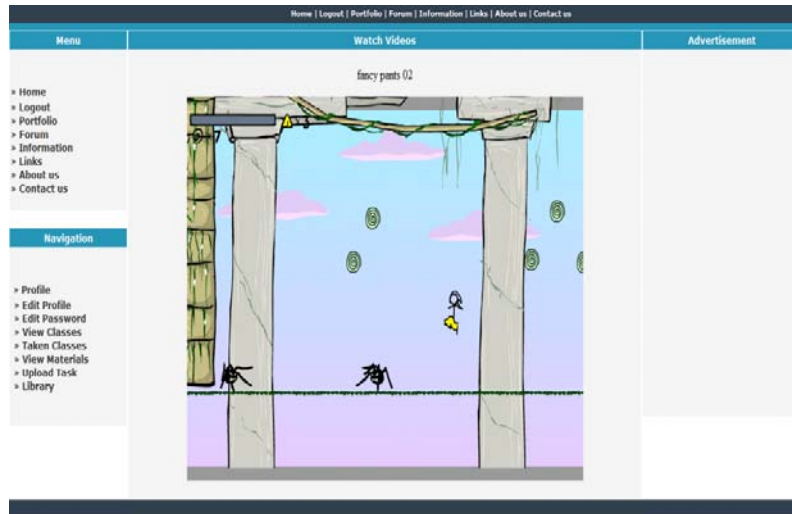


figure 117: student play flash material page

- **Student Watch Video Material Page**

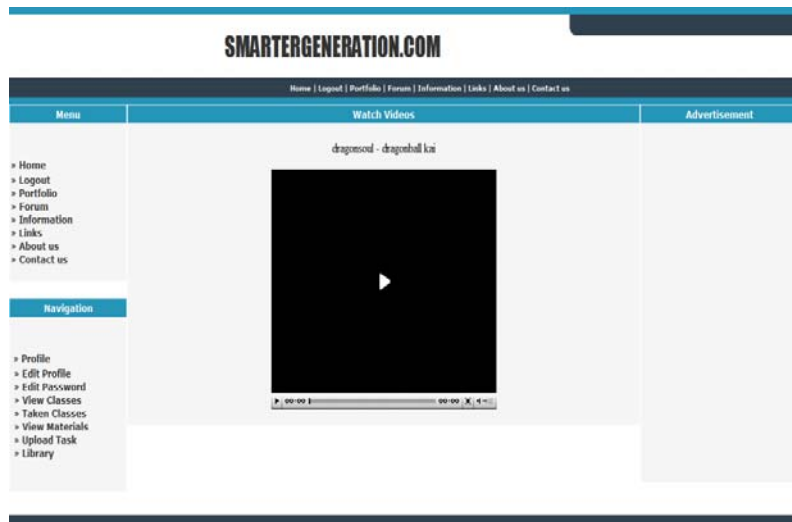


figure 118: student watch video material page

- **Student Upload Assignment Page**

SMARTERGENERATION.COM

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	View Class Detail	Advertisement												
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<table border="1"> <tr> <td>Class ID</td> <td>pac01</td> </tr> <tr> <td>Course Name</td> <td>intro to it</td> </tr> <tr> <td>view class detail</td> <td>upload assignment for this class</td> </tr> </table> <table border="1"> <tr> <td>Class ID</td> <td>pac03</td> </tr> <tr> <td>Course Name</td> <td>flash</td> </tr> <tr> <td>view class detail</td> <td>upload assignment for this class</td> </tr> </table> <p>to view uploaded assignments click here</p>	Class ID	pac01	Course Name	intro to it	view class detail	upload assignment for this class	Class ID	pac03	Course Name	flash	view class detail	upload assignment for this class	
Class ID	pac01													
Course Name	intro to it													
view class detail	upload assignment for this class													
Class ID	pac03													
Course Name	flash													
view class detail	upload assignment for this class													

Navigation

- » Profile
- » Edit Profile
- » Edit Password
- » View Classes
- » Taken Classes
- » View Materials
- » Upload Task
- » Library

figure 119: student upload assignment page

- **Student Upload Assignment File Page**

SMARTERGENERATION.COM

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	Upload Assignment	Advertisement						
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<table border="1"> <tr> <td>Assignment Name :</td> <td></td> </tr> <tr> <td>Class ID :</td> <td>pac01</td> </tr> <tr> <td>File :</td> <td><input type="button" value="Browse..."/></td> </tr> </table> <p><input type="button" value="Submit"/></p>	Assignment Name :		Class ID :	pac01	File :	<input type="button" value="Browse..."/>	
Assignment Name :								
Class ID :	pac01							
File :	<input type="button" value="Browse..."/>							

Navigation

- » Profile
- » Edit Profile
- » Edit Password
- » View Classes
- » Taken Classes
- » View Materials
- » Upload Task
- » Library

figure 120: student upload assignment file page

- Student View Uploaded Assignment Page

SMARTERGENERATION.COM

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	View Uploaded Assignments	Advertisement												
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<table border="1"> <tr> <td>Class ID</td> <td>pac01</td> </tr> <tr> <td>Course Name</td> <td>intro to it</td> </tr> <tr> <td colspan="2">view uploaded assignments by this course</td> </tr> </table> <table border="1"> <tr> <td>Class ID</td> <td>pac03</td> </tr> <tr> <td>Course Name</td> <td>flash</td> </tr> <tr> <td colspan="2">view uploaded assignments by this course</td> </tr> </table>	Class ID	pac01	Course Name	intro to it	view uploaded assignments by this course		Class ID	pac03	Course Name	flash	view uploaded assignments by this course		
Class ID	pac01													
Course Name	intro to it													
view uploaded assignments by this course														
Class ID	pac03													
Course Name	flash													
view uploaded assignments by this course														
<p>Navigation</p> <ul style="list-style-type: none"> » Profile » Edit Profile » Edit Password » View Classes » Taken Classes » View Materials » Upload Task » Library 														

figure 121: student view uploaded assignment page

- Student View Uploaded Assignment File Page

SMARTERGENERATION.COM

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu	Course Uploaded Assignments	Advertisement						
<ul style="list-style-type: none"> » Home » Logout » Portfolio » Forum » Information » Links » About us » Contact us 	<table border="1"> <tr> <td>Assignment Name</td> <td>assignment 01</td> </tr> <tr> <td>Class</td> <td>pac01</td> </tr> <tr> <td colspan="2">delete this assignment</td> </tr> </table>	Assignment Name	assignment 01	Class	pac01	delete this assignment		
Assignment Name	assignment 01							
Class	pac01							
delete this assignment								
<p>Navigation</p> <ul style="list-style-type: none"> » Profile » Edit Profile » Edit Password » View Classes » Taken Classes » View Materials » Upload Task » Library 								

figure 122: student view uploaded assignment file page

- **Student Library Page**

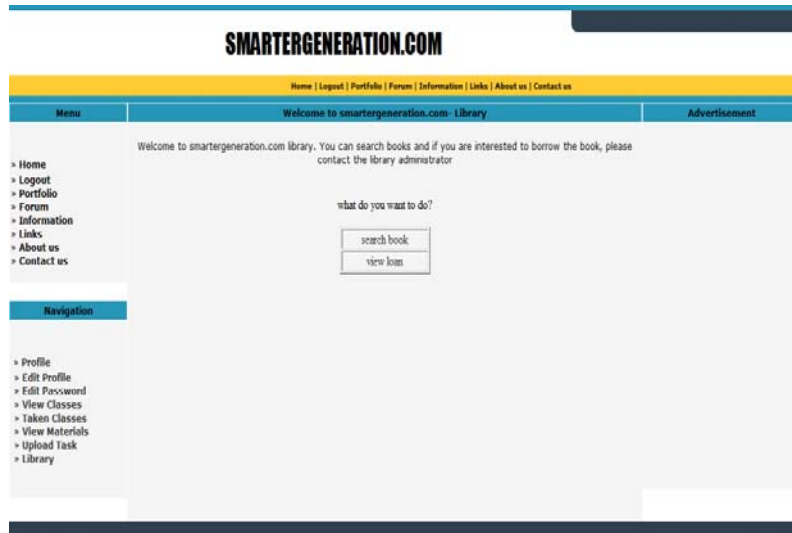


figure 123: student library page

- **Student Library – Search Book Page**

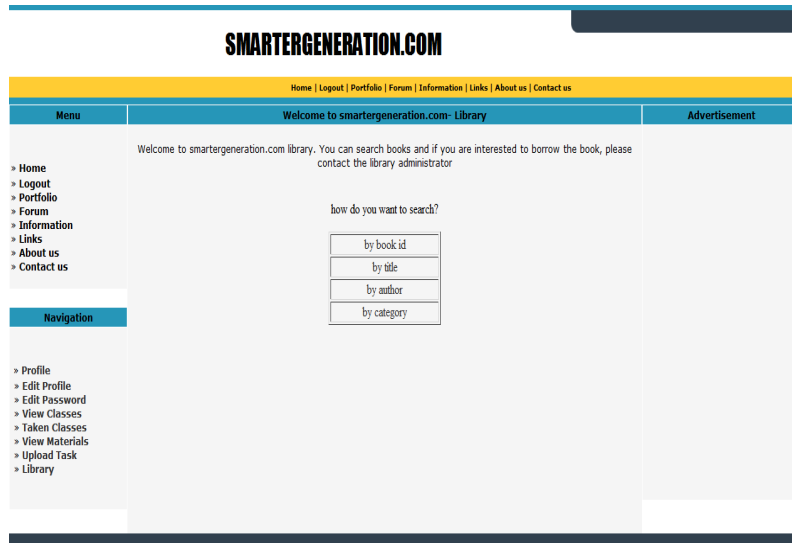


figure 124: student search book page

- Student Library – Search by Selected Key

SMARTERGENERATION.COM

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu: Welcome to smartergeneration.com- Library

Advertisement

Welcome to smartergeneration.com library. You can search books and if you are interested to borrow the book, please contact the library administrator

SEARCH

book id

[click here to go back to search menu](#)

Navigation:

- » Profile
- » Edit Profile
- » Edit Password
- » View Classes
- » Taken Classes
- » View Materials
- » Upload Task
- » Library

figure 125: student search by selected key page

- Student Library – Search Book Result

SMARTERGENERATION.COM

Home | Logout | Portfolio | Forum | Information | Links | About us | Contact us

Menu: Welcome to smartergeneration.com- Library

Advertisement

Welcome to smartergeneration.com library. You can search books and if you are interested to borrow the book, please contact the library administrator

Book ID :	b03
Title :	c++
Author :	erwin edi
Category :	computer science
Available Stock :	9

Navigation:

- » Profile
- » Edit Profile
- » Edit Password
- » View Classes
- » Taken Classes
- » View Materials
- » Upload Task
- » Library

figure 126: student search book result page

- **Student Library – View Loan**

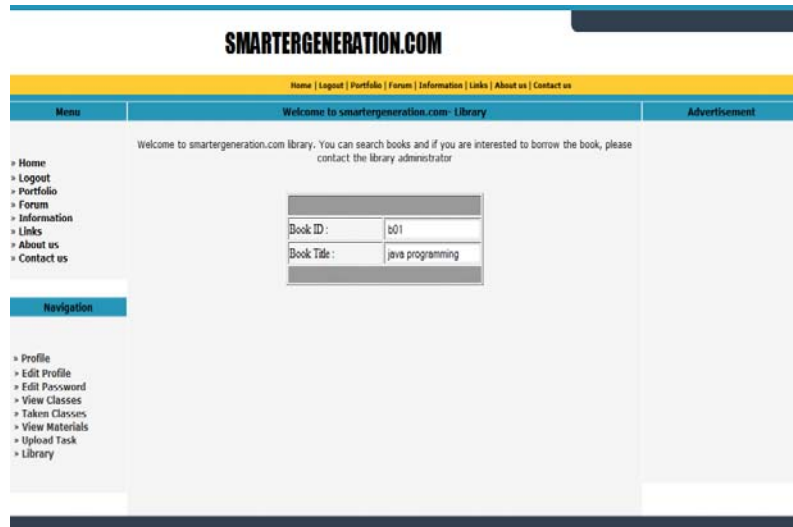


figure 127: student view loan page

5.3.Gammu Installation

Gammu is a modul that can be integrated with any type of programming language [23]. Gammu enables insertion the information from the cellular phone into the database. These are the requirements for Gammu execution for the developed application by the thesis team:

- Gammu for Windows
- Cellular phone or GSM Modem and supported USB Cable [the thesis team use the Nokia 3120 and the DKU 5 cable]
- The Driver for the Cellular Phone or The GSM Modem
- Apache and MySQL [the thesis team using the XAMPP which already includes these both application]

After the requirements above were fulfilled, the first step to be done is to locate the Gammu Modul by extracting the zip files to C:\ drive. Second, modify the gammurc file by change the PORT number with the current PORT of the modem or cellular phone and also change the connection depends with the USB cable that is used. The thesis team used the DKU 5 and the connection type is fbuspl2303. Third, modify the smsdrc file by changing the connection access to the database.

After done with all steps above, the next step to do is to import database mysql.sql. The last step is to check whether the Gammu recognized the cellular phone or not. Go to command prompt and go to the path where the Gammu files located and type `gammu -identify`. If the information of the cellular phone with the IMEI number are there, then Gammu recognize the cellular phone/modem.

The next Step is to execute the sms service by type `gammu -smsd MYSQL smsdrc`. Now every message that goes to the cellular phone will be saved into the destination database in the inbox table.

5.4.Satisfaction Measurement Survey

The thesis team used surveying method to gather information about the use of e-learning system. The survey involved people that are familiar with the online course management system and web portal using website. The

information gathered will be very useful for thesis team to measure the results from the development process on chapter 4 of this thesis.

To gather the information needed, the thesis team used survey method by distributing questionnaire. The questionnaire was taken places on BiNus International University on 7th June 2009 and was executed by all thesis members.

The questionnaire itself was focused on the measurement of the technical requirements that were achieved from the development of the thesis team. The questionnaire is attached to this thesis at the appendix page.

As attached on the appendix [please see the appendix B], there are 7 questions that require the respondents to give score for each question. The scale of the score is using number 1 to 4 which means:

- 1 = completely disagree
- 2 = disagree
- 3 = agree
- 4 = completely agree

- **Result for Question Number 1**

Statement: The website has friendly user interface

Result:

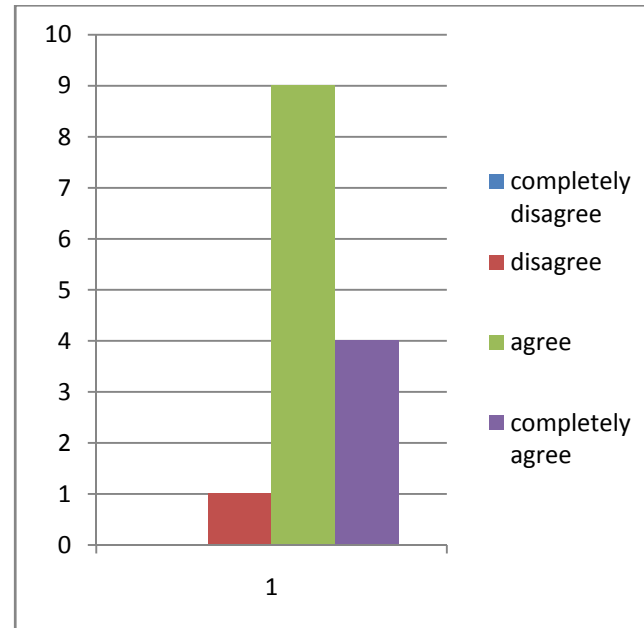


figure 128: result for question number 1

As showed on figure 125, the thesis team has achieved the friendly user interface requirements as stated on chapter 3 of this thesis paper. From 14 respondents of this questionnaire, 9 respondents completely agreed that the system developed by the thesis team has friendly user interface, 4 respondents agreed that the system has friendly user interface, and 1 respondent disagreed.

- **Result for Question Number 2**

Statement: The features supports for education process

Result:

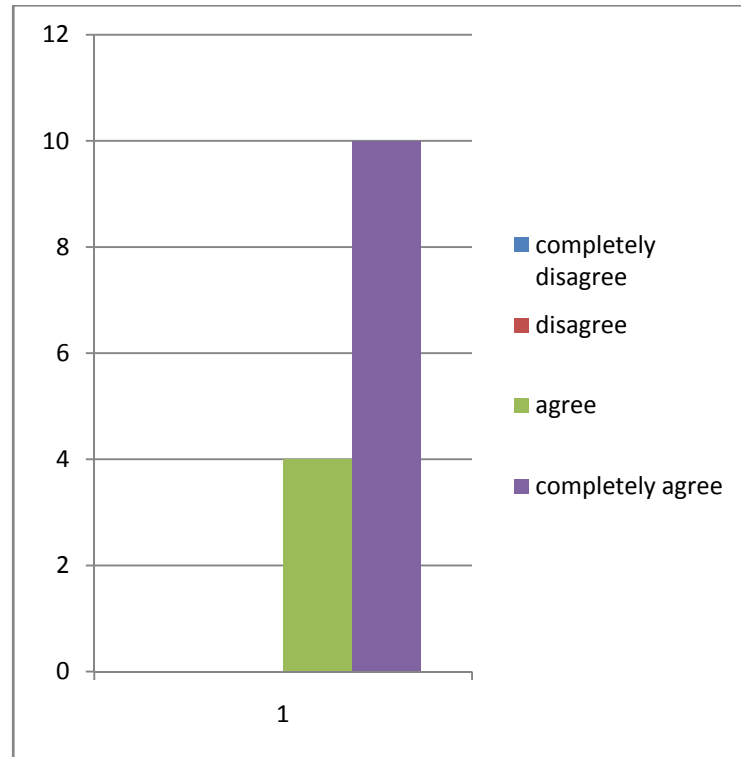


figure 129: result for question number 2

As showed on figure 126, the thesis team has achieved in implementing supporting features for education process for the system. From 14 respondents of this questionnaire, 10 respondents completely agreed that the system developed by the thesis team has features that support the education process, 4 respondents agreed, and no respondent gave negative point of view for this statement.

- **Result for Question Number 3**

Statement: The validation message after every execution is helpful

Result:

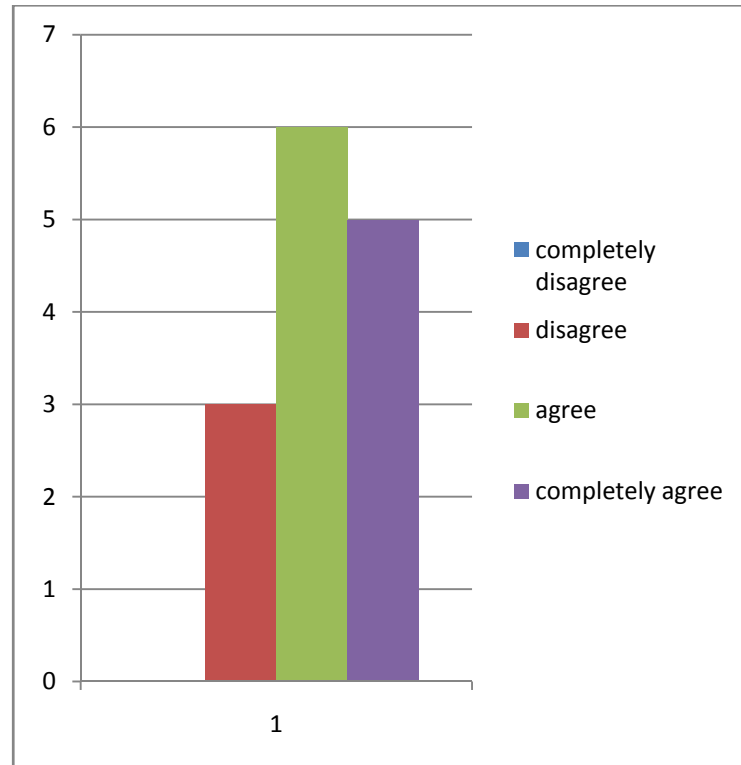


figure 130: result for question number 3

As showed on figure 127, the thesis team has achieved in implementing validation message features after every execution in the system which is very helpful for the users. From 14 respondents of this questionnaire, 5 respondents completely agreed with the statement that the validation message after every execution is helpful, 6 respondents agreed, and 3 respondents disagree about the statement.

- **Result for Question Number 4**

Statement: Arrangement information displayed on screen is good

Result:

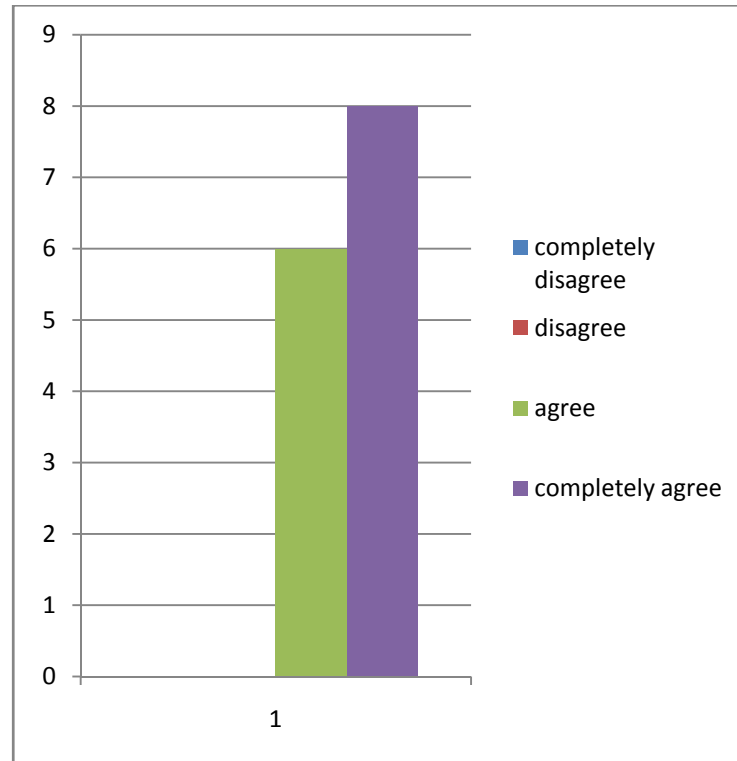


figure 131: result for question number 4

As showed on figure 128, the thesis team has achieved good arrangements for information displayed on the screen. From 14 respondents of this questionnaire, 8 respondents completely agreed with the statement that the developed system has good arrangement for information displayed on every page, 6 respondents agreed, and no respondent gave negative point of view for this statement.

- **Result for Question Number 5**

Statement: It is easy to find out how the website works and easy to memorize it

Result:

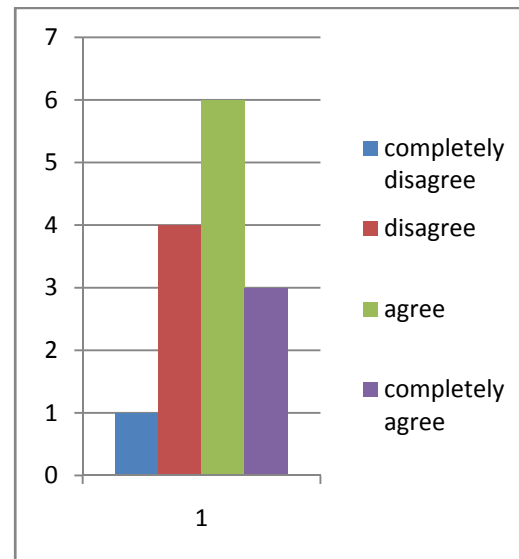


figure 132: result for question number 5

As shown on figure 129, most of the respondents agreed that they can easily find out how to works the website and also agreed that it is easy to memorize it. Some of the respondents also show their disagreement of the statement for question number 5. The thesis team achievement still shows some success reminding that the number of the respondents who agreed is larger than who did not. This indicator will be very useful for the further development of this thesis project that the system still need some modification for the complexities of using the website.

- **Result for Question Number 6**

Statement: The website has good access control

Result:

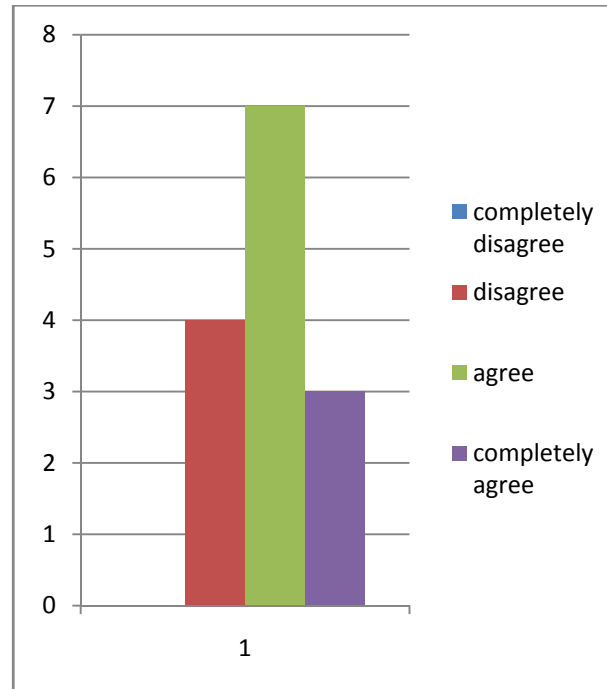


figure 133: result for question number 6

The thesis team also gave the respondents chances to be the administrator and the super administrator to measure the access control of the system. The result from the questionnaire as shown above on figure 130 tells that most of the respondents agree that the system developed by the thesis team has achieved a good access control. From 14 respondents involved, 3 respondents completely agreed with that the system has a good access control, 7 respondents agreed, and 4 respondents disagreed with the statement.

- **Result for Question Number 7**

Statement: The overall quality of this website is good

Result:

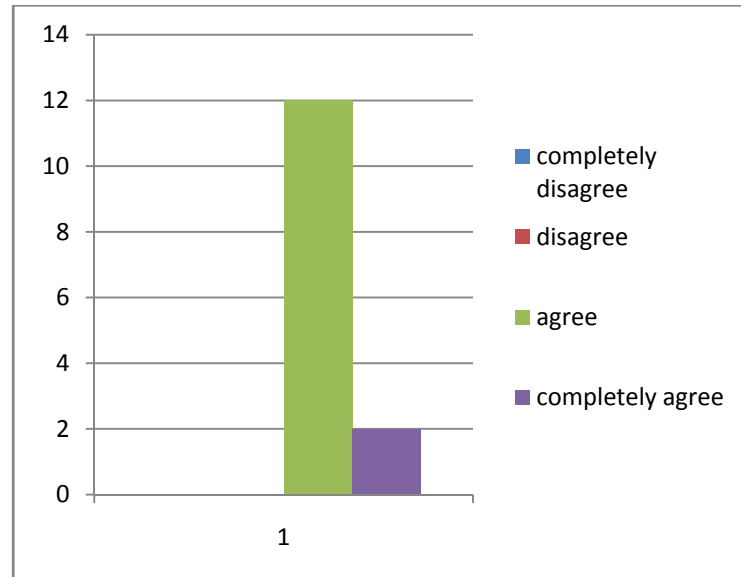


figure 134: result for question number 7

The last question from the satisfaction measurement questionnaire is to measure the overall quality of the website. As shown on figure 131, there are 14 respondents that are involved in these questionnaire 12 respondents agreed that the website developed by the thesis team has good quality and 2 respondents are completely agreed with this statement.