



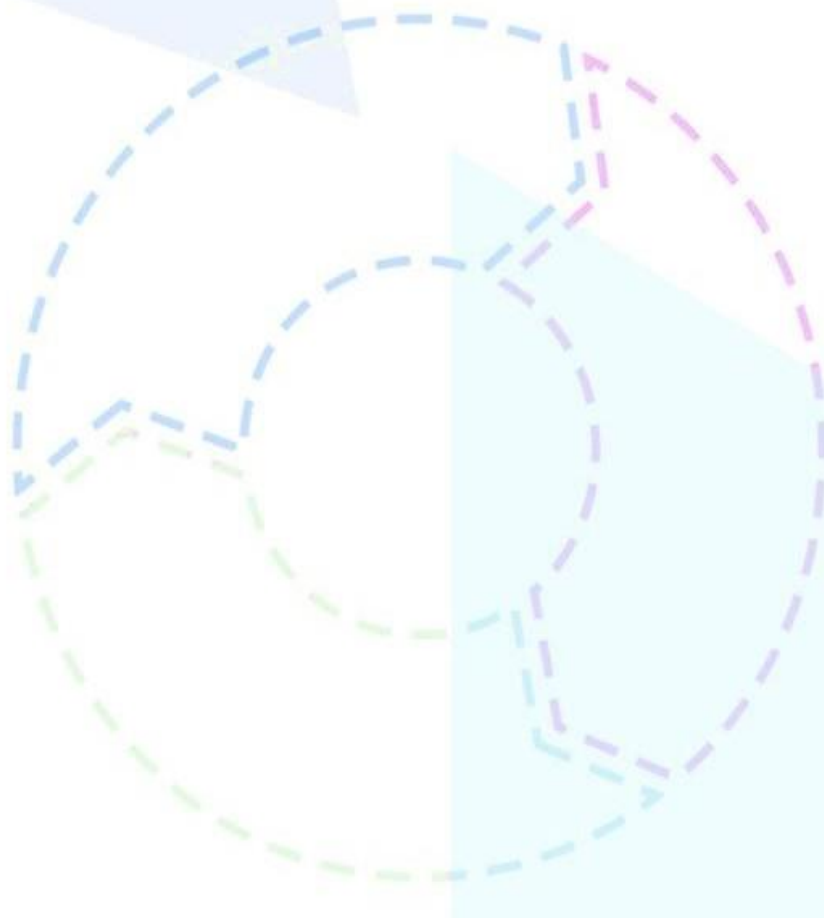
PNU EXAM
Generator

PNU Exam Generator System

Abstract:

Genetic Algorithms are versatile heuristic search algorithm based on the evolutionary ideas of natural selection and genetics. The proposed system is based upon genetic algorithm, which generates accurate exam question papers. The process of preparing question papers requires effort and time and has to satisfy some previously determined requirements like learning outcomes covered etc., therefore we have come up with a project called (PNU Exam Generator).

The system allows teachers to create professional high-quality question papers within no time, while keeping constraints like learning outcomes covered etc. under consideration. Questions are organized by topics & learning outcomes in the bank. The objective of the proposed system is to generate question papers that are competent and have high quality



I/O Screens:

PNU Exam Generator System Interfaces:

1. Instructors Interface:

a) Welcome Page Interface:

This welcome page is the public page of the website for Admin and instructors.

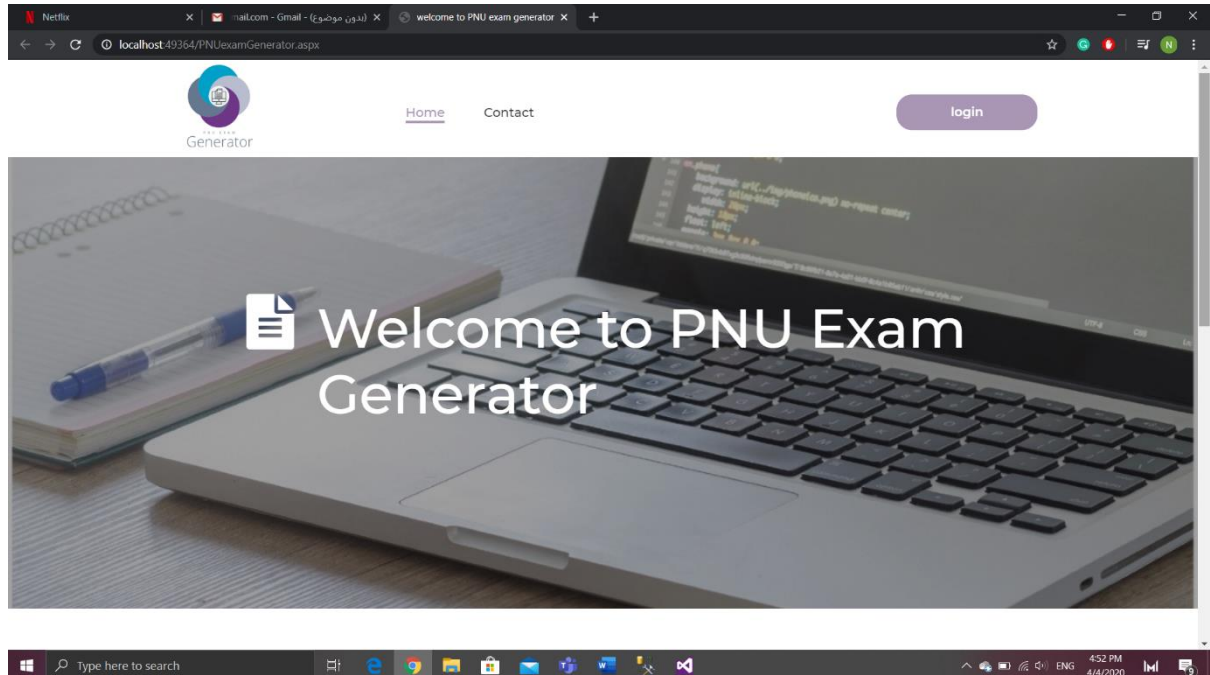


Figure 1 Instructor Welcome Page Interface

b) Login Interface:

This page is the public page of the website, Instructors can sign in using their username and password as shown in figure 2.

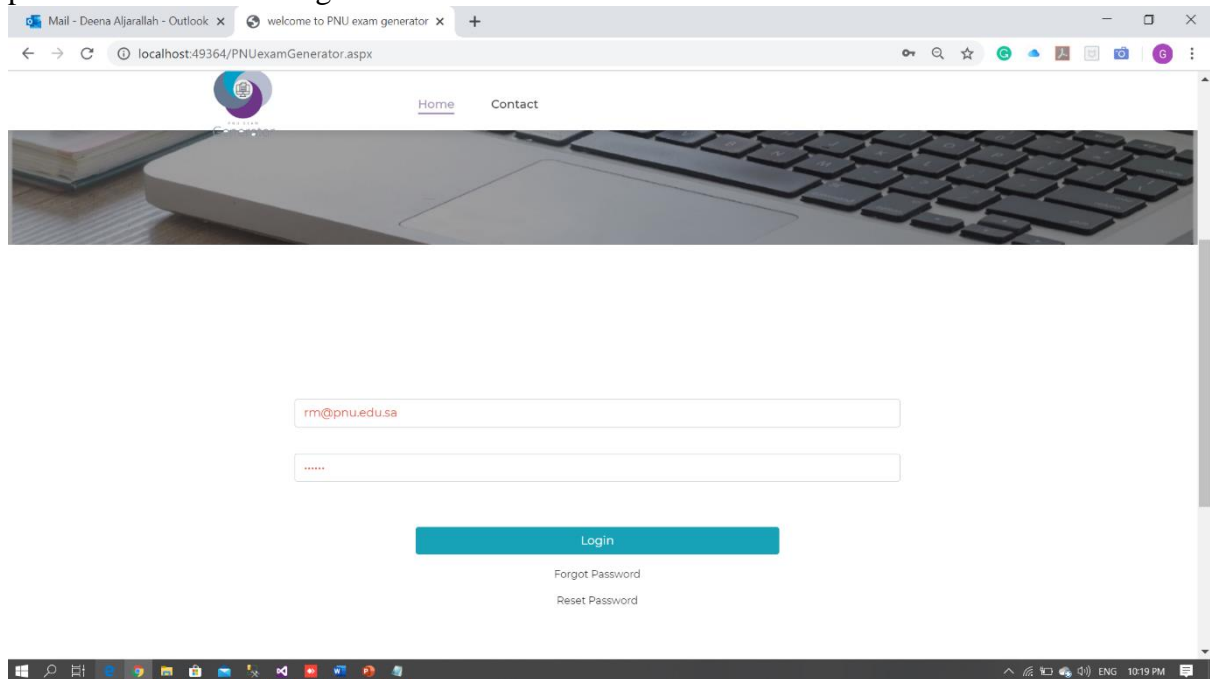
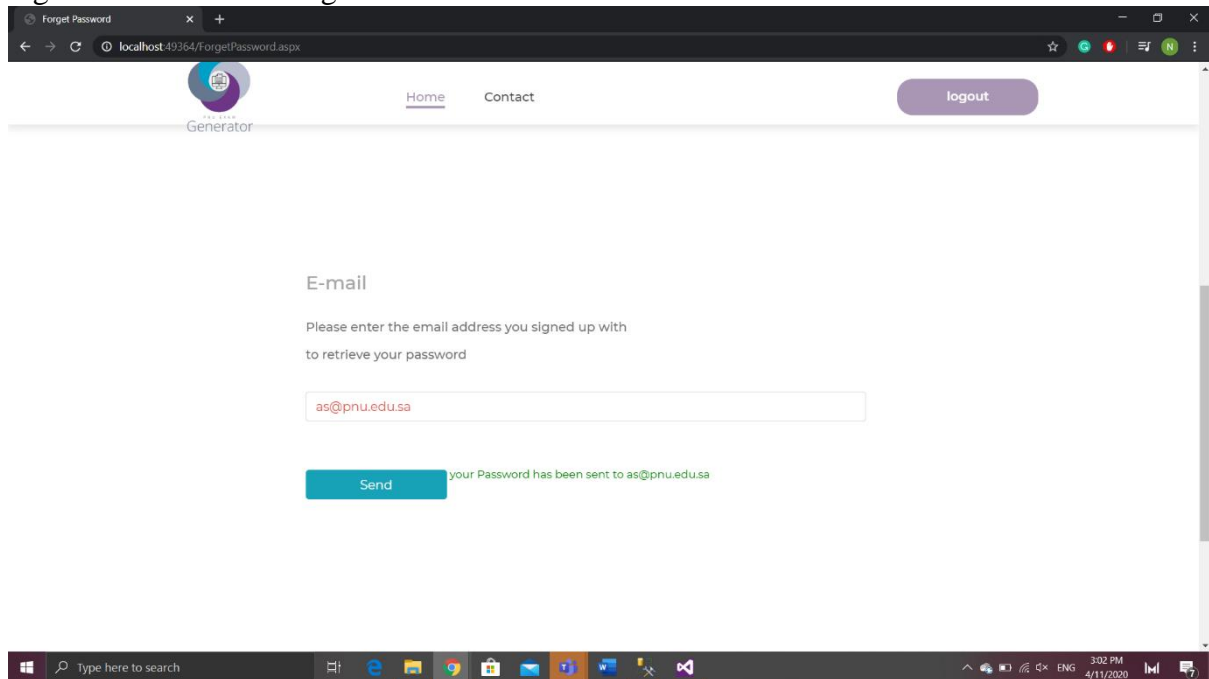


Figure 2 Login Page Interface

c) Forgot Password Interface:

This page is for Admin and instructors, so if they can to receive a New Password with email registered as shown in figure 3.

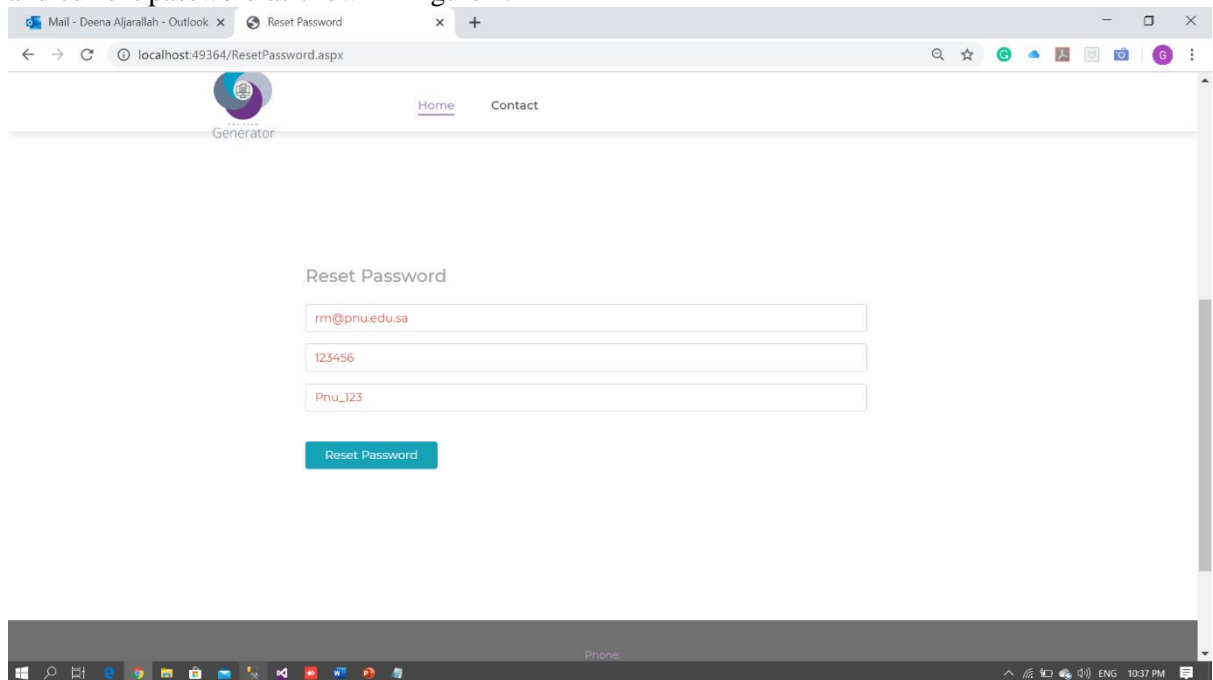


The screenshot shows a web browser window with the address bar displaying 'localhost:49364/ForgetPassword.aspx'. The page has a header with a logo on the left, 'Home' and 'Contact' links in the center, and a 'logout' button on the right. The main content area is titled 'E-mail' and contains the text 'Please enter the email address you signed up with to retrieve your password'. Below this is a text input field containing 'as@pnu.edu.sa'. A green message below the field states 'your Password has been sent to as@pnu.edu.sa'. A blue 'Send' button is positioned below the message. The Windows taskbar at the bottom shows the search bar and various application icons.

Figure 3 Forgot Password Interface

d) Reset Password Page:

This page is for Admin and instructors, so they can reset a new password with registered email and current password as shown in figure 4.



The screenshot shows a web browser window with the address bar displaying 'localhost:49364/ResetPassword.aspx'. The page has a header with a logo on the left, 'Home' and 'Contact' links in the center, and a 'logout' button on the right. The main content area is titled 'Reset Password' and contains three text input fields. The first field contains 'rm@pnu.edu.sa', the second contains '123456', and the third contains 'Pnu_123'. A blue 'Reset Password' button is positioned below the third field. The Windows taskbar at the bottom shows the search bar and various application icons.

Figure 4 Reset Password Page

e) Instructor Main Page:

This page is the instructor Main page as shown in figure 5.

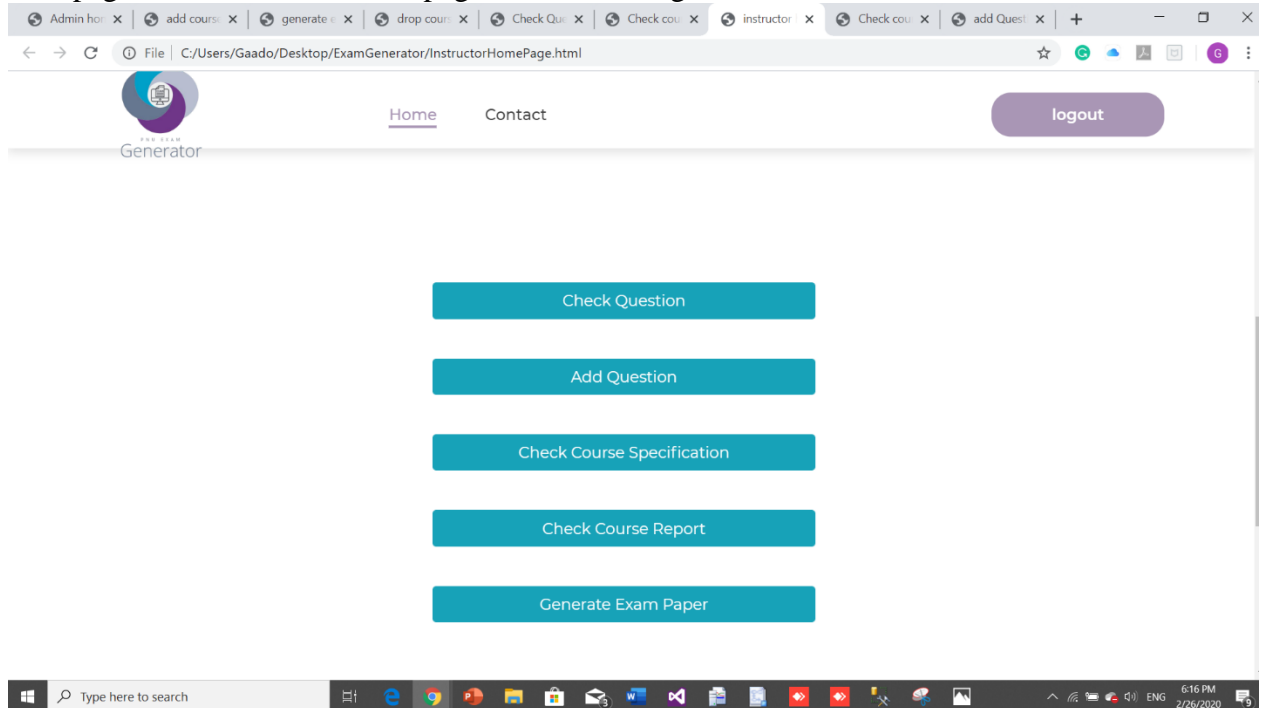


Figure 5 Instructor home Page

f) Check Question Interface:

This page allows instructors to check the questions in the question bank as shown in figure 6.

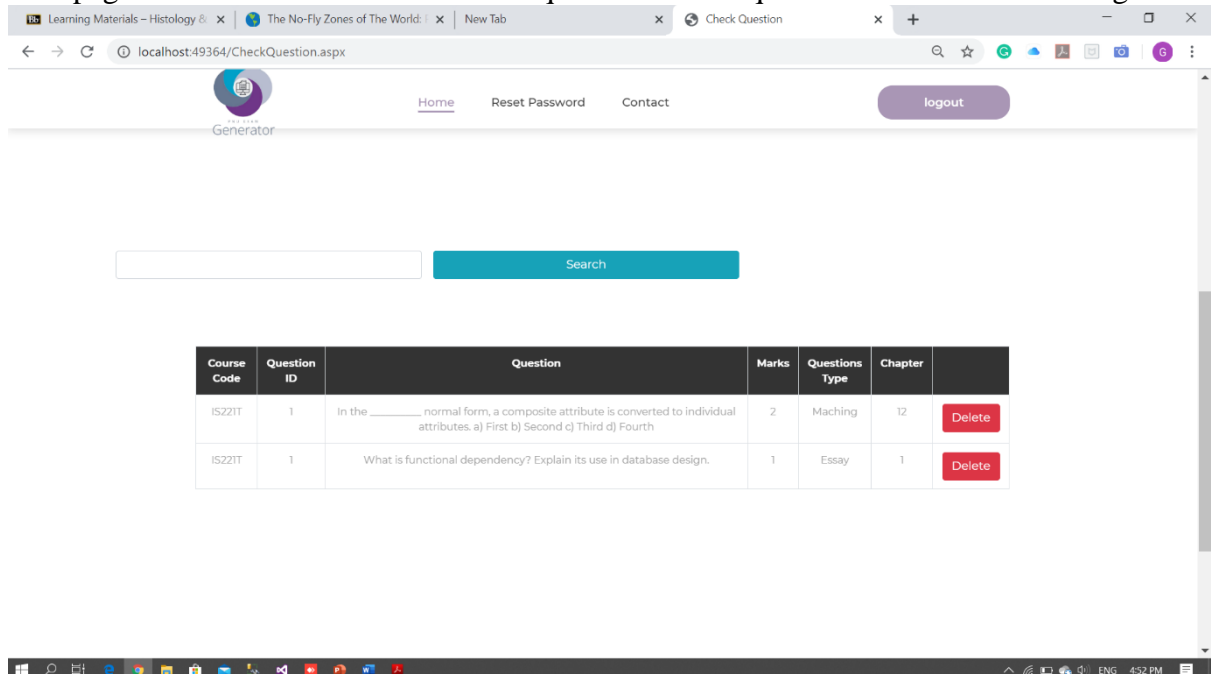
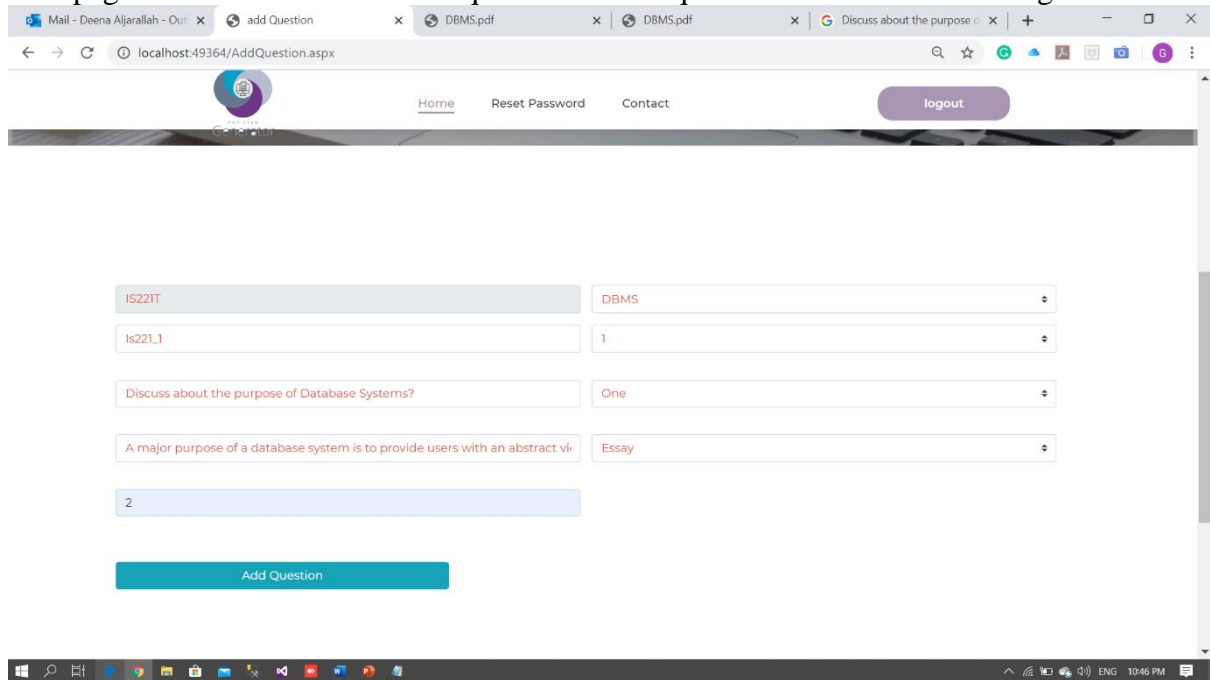


Figure 6 Check Question Interface

g) Add Question Interface:

This page allows instructors to add questions in the question bank as shown in figure 7.



The screenshot shows a web browser window with the URL `localhost:49364/AddQuestion.aspx`. The page has a header with a logo, navigation links (Home, Reset Password, Contact), and a Logout button. The main content area contains a form with the following fields:

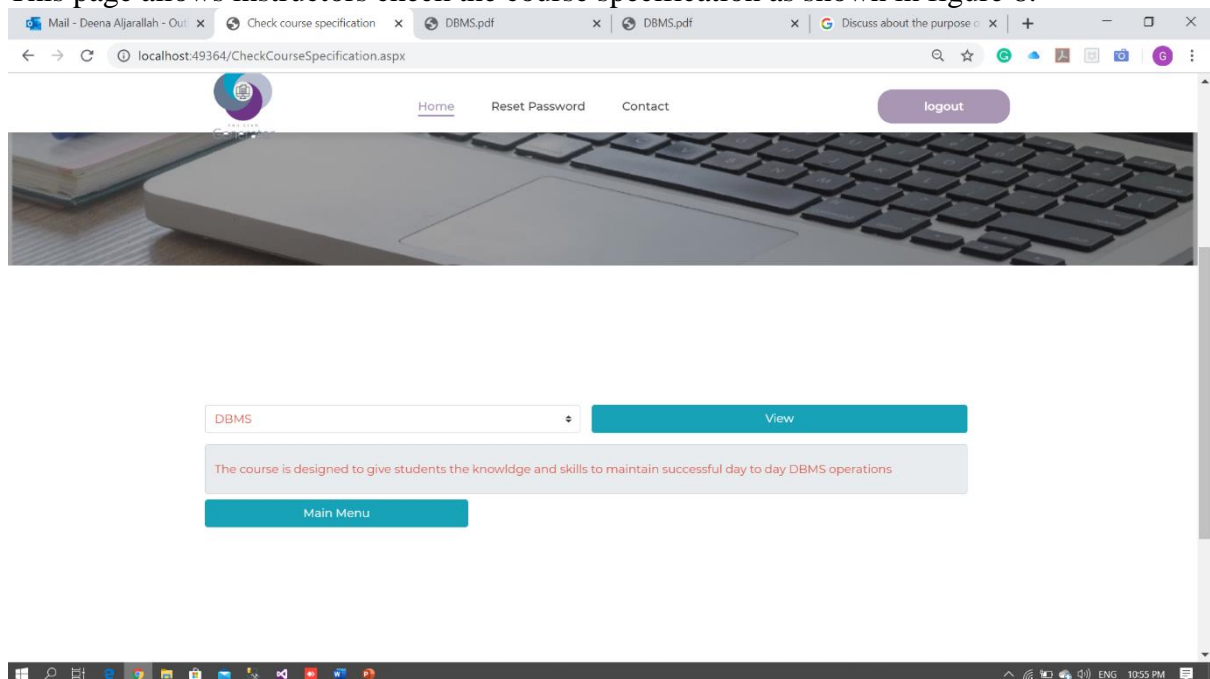
- IS221T** (Text input)
- Is221_L** (Text input)
- Discuss about the purpose of Database Systems?** (Text input)
- A major purpose of a database system is to provide users with an abstract vi** (Text input)
- 2** (Text input)
- DBMS** (Dropdown menu)
- 1** (Dropdown menu)
- One** (Dropdown menu)
- Essay** (Dropdown menu)

At the bottom of the form is a blue button labeled **Add Question**.

Figure 7 Add Question Interface

h) Check Course Specification Interface

This page allows instructors check the course specification as shown in figure 8.



The screenshot shows a web browser window with the URL `localhost:49364/CheckCourseSpecification.aspx`. The page has a header with a logo, navigation links (Home, Reset Password, Contact), and a Logout button. The main content area contains a form with the following elements:

- DBMS** (Dropdown menu)
- View** (Blue button)
- The course is designed to give students the knowldge and skills to maintain successful day to day DBMS operations** (Text box)
- Main Menu** (Blue button)

Figure 8 Check Course Specification Interface

i) Check Course Report Interface:

This page allows instructors check the course report as shown in figure 9.

DBMS

Check Report

Pass Course 184 A+ = 16 A = 30 B+ = 50 B = 29 C+ = 22 C = 20 D+ = 12 D = 5 Fail 6 Total Students 190

Save New Report

Figure 9 Check Course Report

j) Generate Exam Paper Interface:

This page allows instructors to select the name of the course, CLO, type of question by chapter wise and quantity of the question as shown in figure 10.

DBMS

One

1

2

Question Type	Quantity	Prepare
T/F	<input type="text" value="5"/>	<input type="button" value="Prepare"/>
Multiple Choice	<input type="text" value="0"/>	<input type="button" value="Prepare"/>
Matching Question	<input type="text" value="5"/>	<input type="button" value="Prepare"/>
Essay Question	<input type="text" value="5"/>	<input type="button" value="Prepare"/>

Generate Exam Paper

Figure 10 Generate Exam Paper Interface

k) Exam Paper Results

This page shows the exam paper as shown in figure 11.

Course Code : IS221T
Course Title : DBMS
Instructor : 1234
Date : 4/10/2020

Q. No.	Questions	Marks
T&F1	A domain is a field or set of fields in a record that identifies the record.	1
T&F2	If a table is in 3NF, it is also in 2NF ?	1
T&F3	The primary key does not necessarily have to be unique for a given table ?	1
T&F4	DBMS stores data efficiently with little wasted space ?	1
T&F5	Does index take space in the disk ?	1
Multiple Choices1	Tables in second normal form (2NF) a) Eliminate all hidden dependencies b) Eliminate the possibility of a insertion anomalies c) Have a composite key d) Have all non key fields depend on the whole primary key	2
Essay2	Define Database? Discuss about applications of Database Systems?	2
Essay3	What is functional dependency? Explain its use in database design.	1
Multiple Choices4	The DBMS acts as an interface between what two components of an enterprise-class database system? A) Database application and the database B) Data and the database C) The user and the database application D) Database application and SQL	1
Multiple Choices5	Which is a bottom-up approach to database design that design by examining the relationship between attributes. a) Functional dependency b) Database modeling c) Normalization d) Decomposition	1
Essay1	Explain classification of storage structure?	2
Essay2	Discuss about file organizations and indexing?	2
Essay3	Discuss briefly about views?	1
Essay4	List and define ACID properties?	2
Essay5	Discuss about the purpose of Database Systems?	2

Figure 11 Exam Paper Results

2. Admin interfaces:

a) Login Interface:

This page is the public page of the website, admins can sign in using their username and password as shown in figure 12.

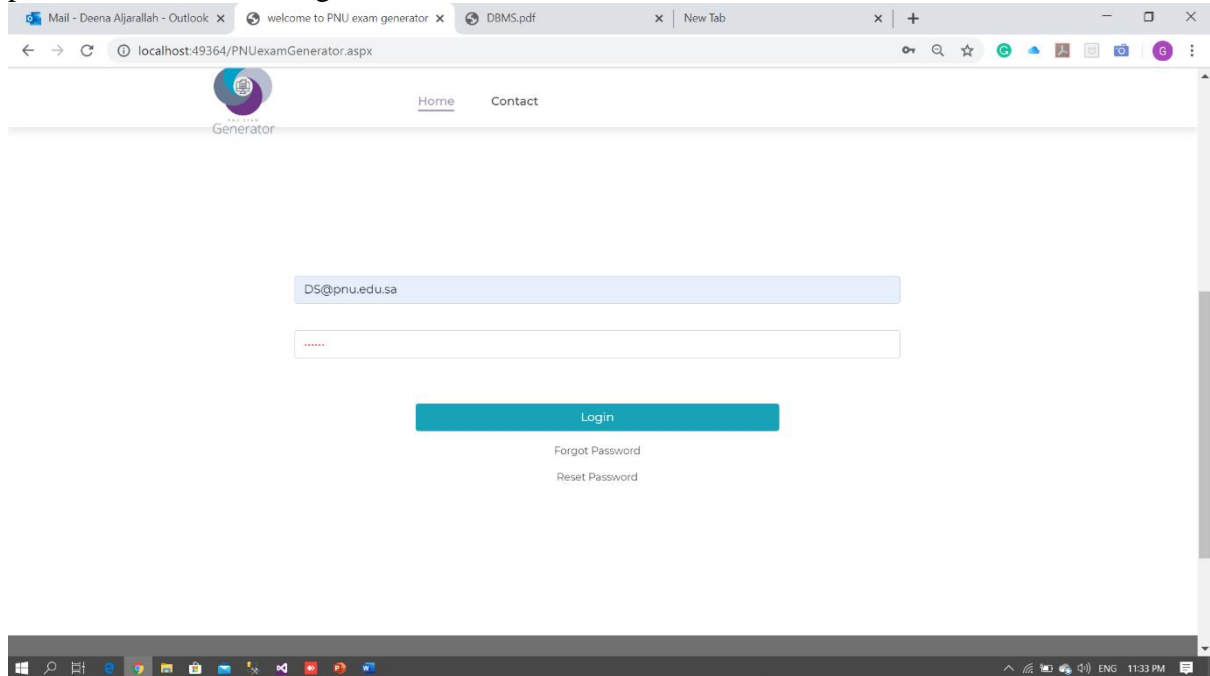


Figure 12 Admin login interface

b) Admin Main Page:

This page is the admin main page as shown in figure 13.

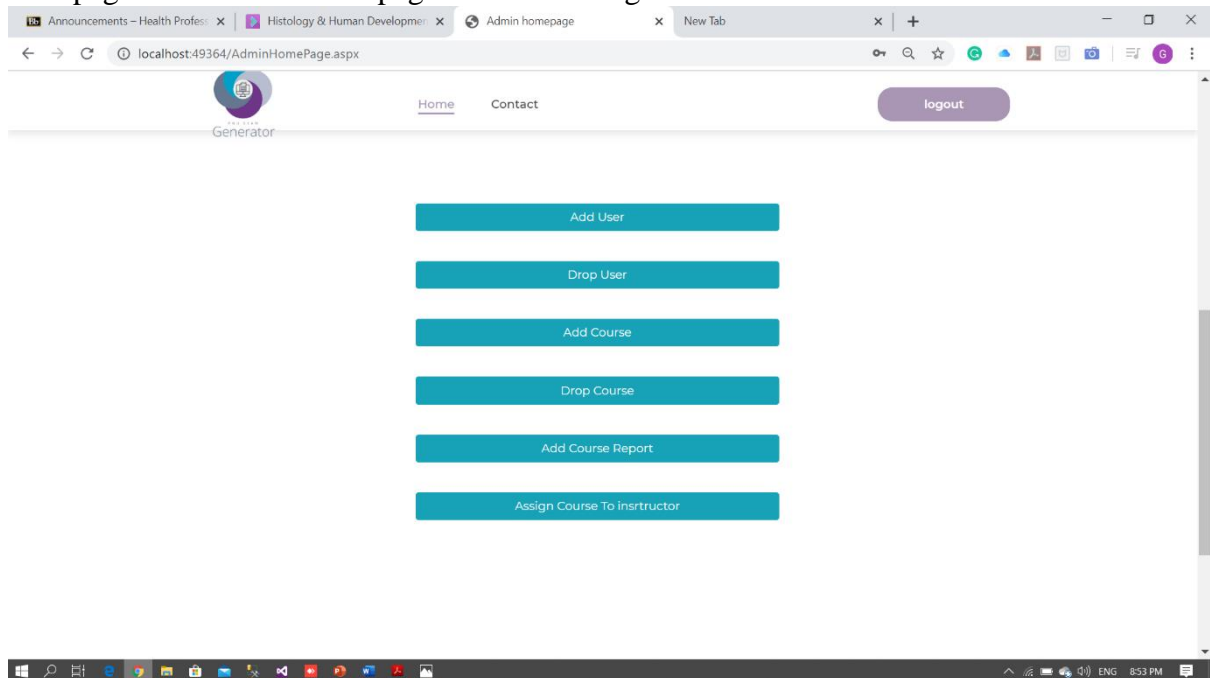


Figure 13 Admin Main Page

c) Add User Interface:

This page allows admin to add users as shown in figure 14, and user will receive an email from the system as shown in figure 15.

The screenshot shows a web browser window with the URL `localhost:49364/AddNewUser.aspx`. The page has a header with a logo, 'Home' and 'Contact' links, and a 'logout' button. The main content area contains a form with the following fields: a text box with '8484', a text box with 'Deena', a text box with '436004942@pnu.edu.sa', a text box with 'Sultan', a password field with 'Password: *****', and a dropdown menu with 'Information System'. Below the form is a 'Save User' button. A 'Message sent' status is displayed at the bottom right of the form area.

Figure 14 Add User Interface

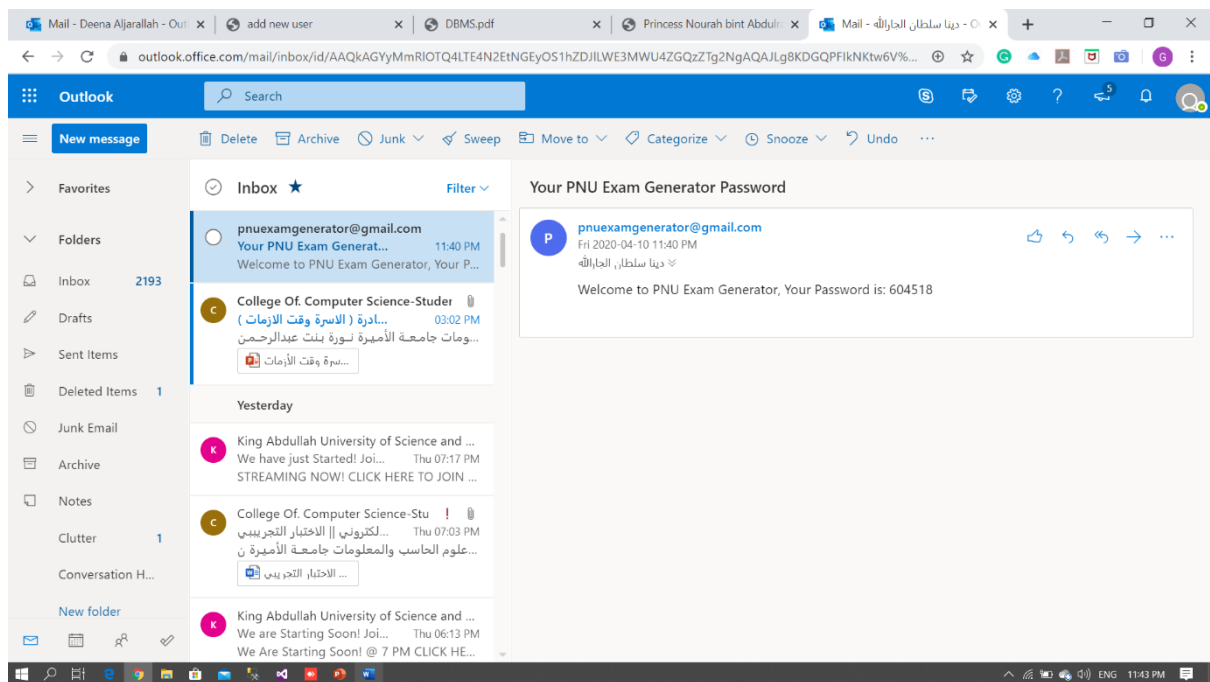
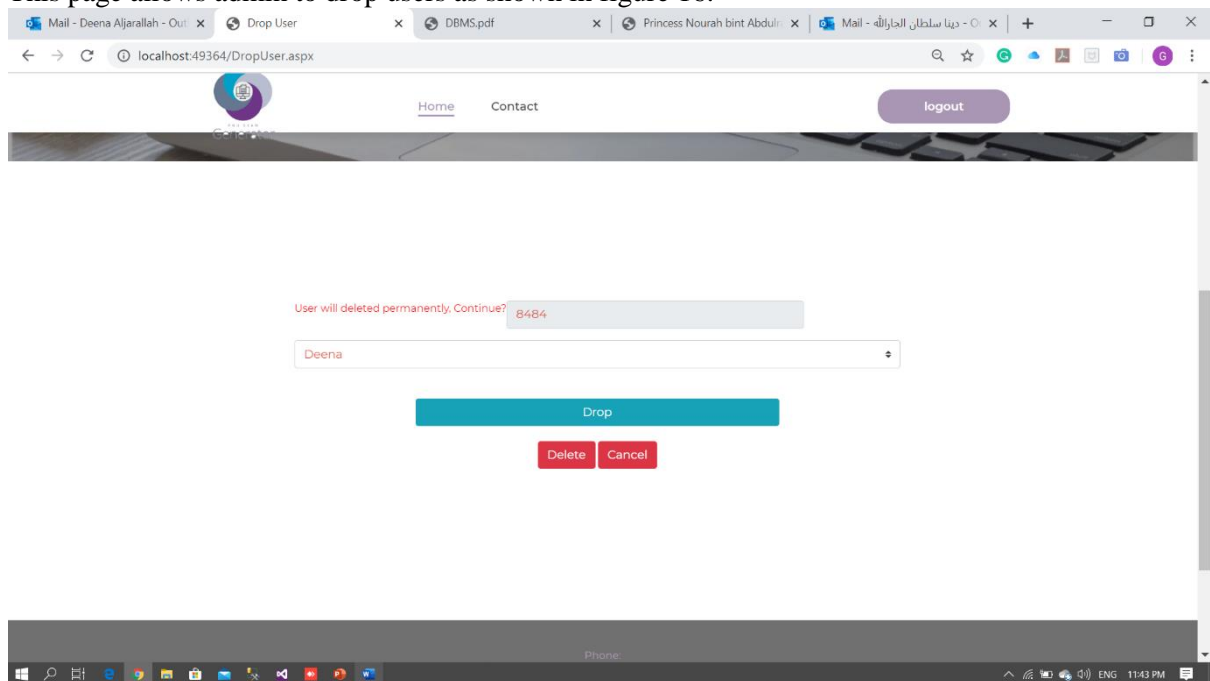


Figure 15 Add User Email

d) Drop User Interface:

This page allows admin to drop users as shown in figure 16.

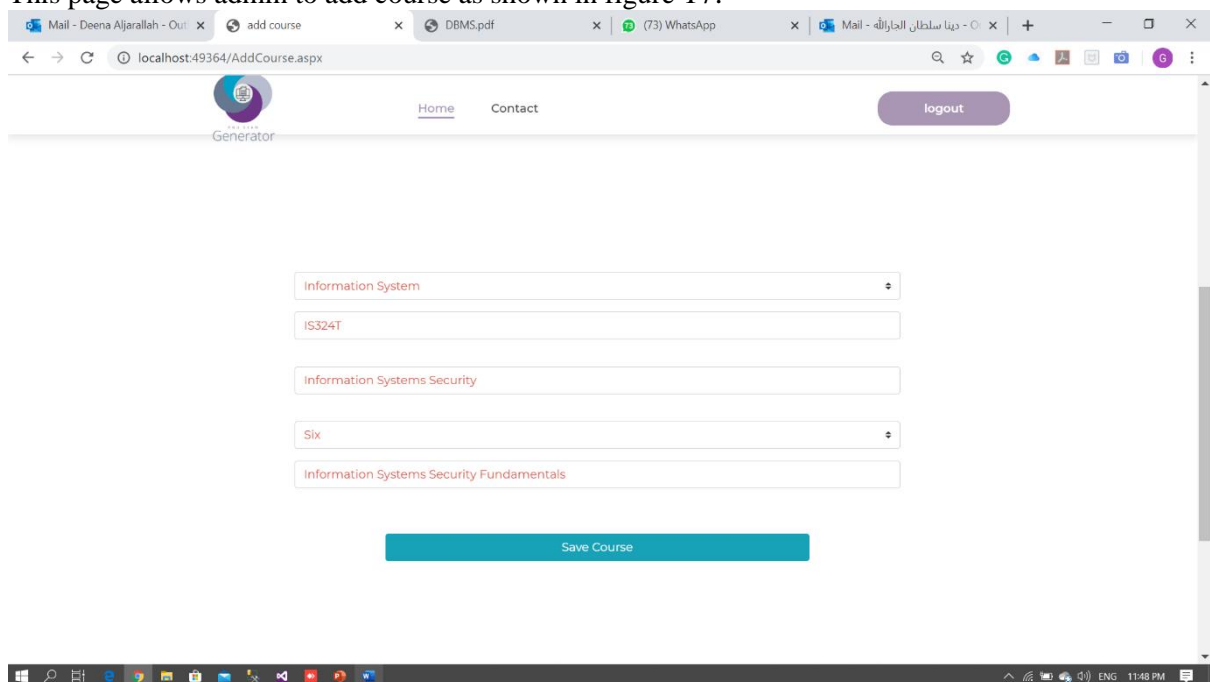


The screenshot shows a web browser window with the URL `localhost:49364/DropUser.aspx`. The page has a header with a logo, navigation links for "Home" and "Contact", and a "logout" button. The main content area displays a confirmation message: "User will be deleted permanently. Continue?". Below this message is a text input field containing "B4B4". A dropdown menu is open, showing the name "Deena". At the bottom of the form, there are three buttons: a large teal "Drop" button, and two smaller red "Delete" and "Cancel" buttons. The browser's taskbar at the bottom shows various application icons and the system clock indicating 11:43 PM.

Figure 16 Drop User Interface

e) Add Course Interface:

This page allows admin to add course as shown in figure 17.



The screenshot shows a web browser window with the URL `localhost:49364/AddCourse.aspx`. The page has a header with a logo, navigation links for "Home" and "Contact", and a "logout" button. The main content area contains a form with five input fields. The first field is a dropdown menu with "Information System" selected. The second field contains "IS324T". The third field contains "Information Systems Security". The fourth field is a dropdown menu with "Six" selected. The fifth field contains "Information Systems Security Fundamentals". At the bottom of the form, there is a large teal "Save Course" button. The browser's taskbar at the bottom shows various application icons and the system clock indicating 11:48 PM.

Figure 17 Add Course Interface

f) Assign Course To Instructor

This page allows admin to assign courses to instructor as shown in figure 18.

ID	Instructor ID	Instructor Name	Course Code	Course Title	
2	IZ12	Shakila	IS202	DBMS	Drop Course

Figure 18 Assign Course to Instructor

g) Drop Course Interface:

In this page admin will be able to drop course as shown in figure 19.

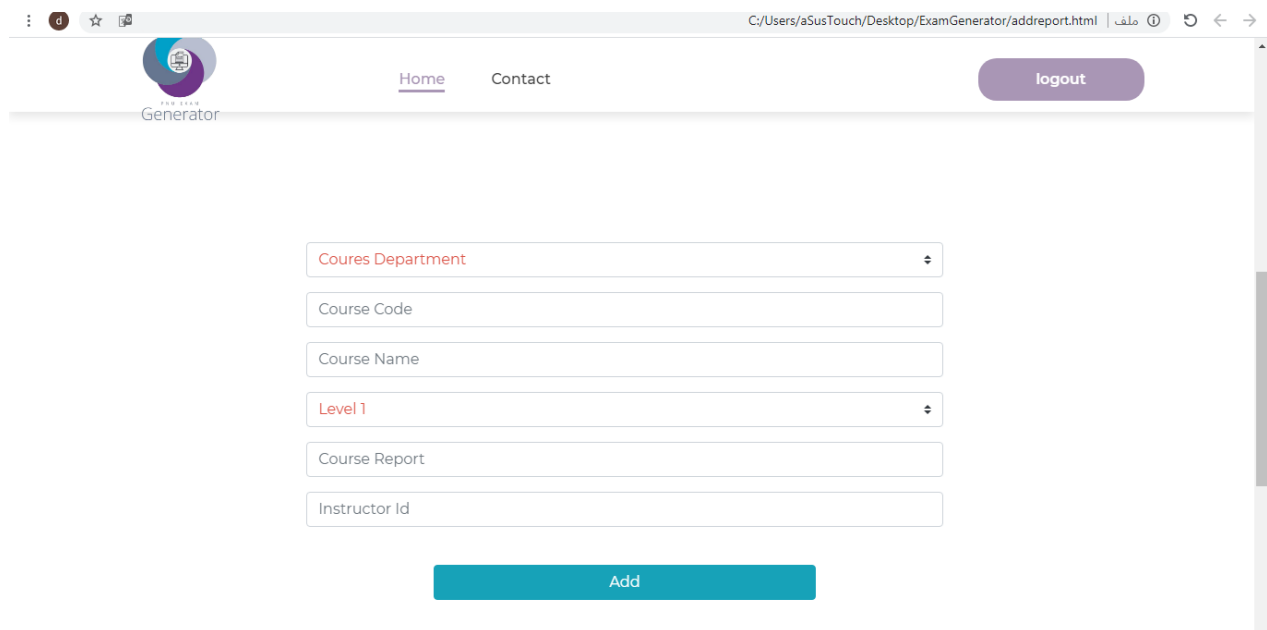
Course will deleted permanently. Continue?

Delete Cancel

Figure 19 Drop Course Interface

h) Add Course Report Interface:

In this page admin will be able to add course report as shown in figure 20.



The screenshot shows a web browser window with the URL `C:/Users/aSusTouch/Desktop/ExamGenerator/addreport.html`. The page has a header with a logo on the left, navigation links for [Home](#) and [Contact](#) in the center, and a [logout](#) button on the right. The main content area contains a form with the following fields: a dropdown menu for 'Courses Department' (showing 'Courses Department'), a text input for 'Course Code', a text input for 'Course Name', a dropdown menu for 'Level 1' (showing 'Level 1'), a text input for 'Course Report', and a text input for 'Instructor Id'. Below the form is a teal 'Add' button.

Figure 20 Add Course Report Interface