Zagazig University
Faculty of Computers and Informatics
Information System Department

Smart college

Student Attendance System

Under Supervision

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Project Team Work

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Introduction

Esraa Ibrahim Saad Eldin

Introduction: A problem to solve and a solution

- As in our college, we still dependent on traditional and manual work instead of using computers to make that work, which led to a very large wastage of time for students and faculty staff.

- For these reasons, we implemented a project entitled as **“Smart College“** to resolve manual work problems using computers and the internet or using any mobile device that can access the internet.

Introduction: A problem to solve and a solution

- Manual work problem:
- Time consuming
- Chances of Human error
- Paper work results in need of lot of space to keep the data
- Possibility of data duplication as there's no repetition
- check like in computer software
- Not more than one person can access data at the same time but in Computerized Information system many people can access the same data on the same time

- Solution: Smart College

(Student Attendance System)

Introduction: System Purpose

- The purpose of this system is to develop an automated class attendance checking system for each and every section room in the university.

- Also, the system enables the instructor reserve the available lab, then upload required subject's files after finishing the section ,so students can found it done and download.

Introduction: System services

- Lab Reservation
- Student Attendance and Absence
- Subject Files Downloading and Uploading

Introduction: Used tools and technologies

- used tools

1. Microsoft Visual studio 2013
2. Microsoft SQL Server 2012

- used technologies

1. Web technology using ASP.NET with C# language

Planning & Analysis

Ghada Gamal Ahmed

Planning

- We believe that the best way to get a good working application is to give enough time for planning and designing.

- In our planning phase, we passed through the following..

Planning (continued)

- large number of students ,class rooms and teaching staff.
- Limited resources.
- Searching for suitable ASP.NET to work efficiently with minimum cost.
- System has to be scalable.

Analysis: Technical

- **H/W requirements:**
- Client machine
- Server machine

- **S/W requirements:**
- SQL Server Database
- IIs web server

- **Who uses the system:**
- Students
- Instructors

System Analysis

- The system should be divided into 3 modules

- **The ASP module**
  for using the ASP form compiler on IIS web server
- **The Database module**
  for recording the attendance
- **The View module**
  for viewing recorded attendance

Application & Database Design

Eman Abdelaal Saad

Design

- As in the planning phase, we have 3 modules

- The ASP module
- The Database module
- The View module

Design: ASP

- Designing ASP form compiler which function is:

- When instructors pass through the ASP form with their username and password, the ASP form reads data of each instructor, passes and sends it to the server for processing.

- The server takes a new data from instructors, process it and record student's attendance in the database.

Design: Database

- Including two phases:

- **Designing the Database**

1. Creating tables that mirrors the structure of the environment and the relations between these tables.
2. Normalizing tables.

- **Designing Database connection**

Connection string that connects data in the database with ASP forms.

Design: View

- Designing login form to check authentication.
- Designing needed forms for possible users of the system depending on the permissions given to each type of user (instructors , students).

The Environment

Ghada Mahmoud Abdelmonaem

The Environment: ASP

- ASP is faster compared to the interpreted scripts.
- simpler and easier to maintain with server-side model.
- offers built-in security features.
- Integrated with ADO.NET.
- Built-in caching features.

The Environment: SQL Server

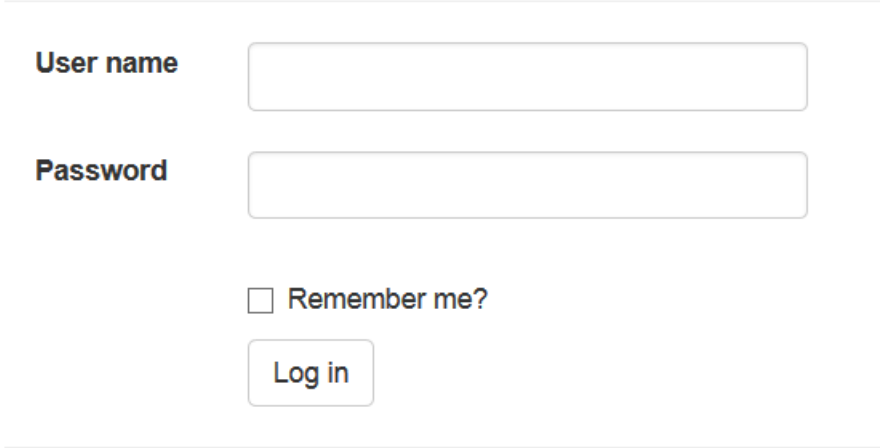
- Relational database management system (RDBMS).
- Provides multiuser access to a number of databases.
- Works on many different system platforms.
- Offers improved performance, security, excellent data restoration and recovery mechanism.

Implementation

Amira Elshahat Abdelsalam

Login Interface

- The client machine will send this information to the server to check if this user is authenticated.



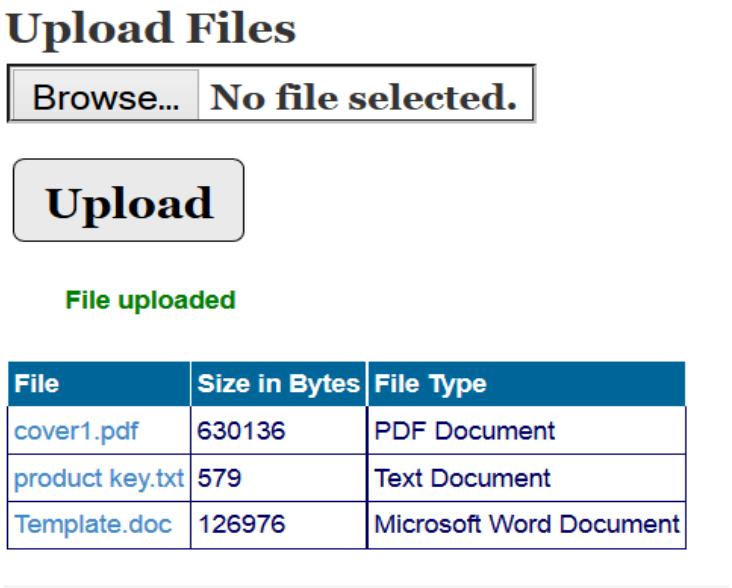
Student Interface

- For student he can only download and upload subject files material.

Subject_ID	Subject_Name	Stage_No	Semester	Download & Upload
BS110	Mathematics	1	1	Subject Files
BS125	Applied Statistics and Probability	1	1	Subject Files
BS150	Discrete Mathematics	1	2	Subject Files
BS200	Numerical Computing	2	1	Subject Files
CS120	Introduction to Computers	1	1	Subject Files
CS150	Structured Programming	1	2	Subject Files
CS200	Data Structures	2	1	Subject Files
CS250	Object Oriented Programming	2	2	Subject Files
CS255	Analysis and Design of Algorithms	2	2	Subject Files
CS260	Operating Systems	2	2	Subject Files
CS300	Artificial Intelligence	3	1	Subject Files
CS350	Formal Languages and Automata	3	2	Subject Files
123456				

Student Interface

- Upload & download files page:



Instructor Interface

- For instructors ,each one can view available labs and reserve one.

Lab No	Lab Description	Reserved	Edit Reservation
1	Data Show - 25 computers	☑	Edit Select
2	Data Show - 25 computers	☐	Edit Select
3	Data Show - 25 computers	☐	Edit Select
4	Data Show - 25 computers	☐	Edit Select
5	Data Show - 25 computers	☐	Edit Select
6	Data Show - 25 computers	☐	Edit Select
7	Data Show - 25 computers	☐	Edit Select
8	Data Show - 25 computers	☐	Edit Select
9	Data Show - 25 computers	☐	Edit Select
10	Data Show - 25 computers	☐	Edit Select

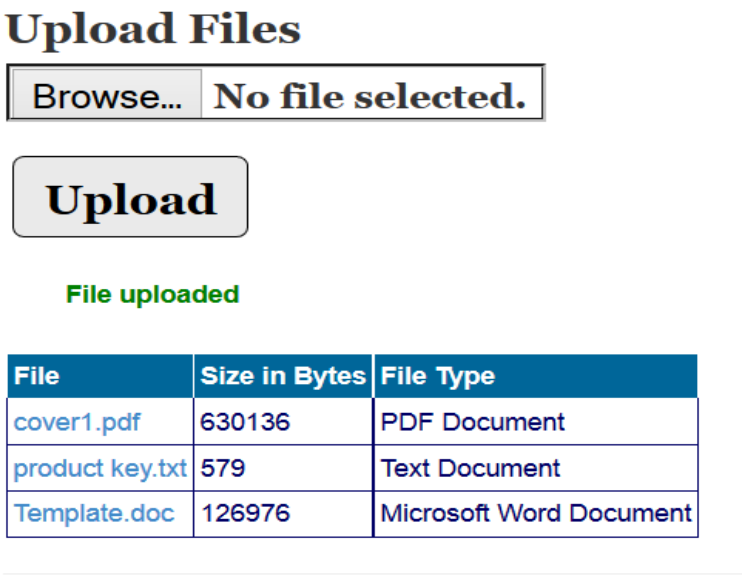
Instructor Interface

- Instructors can take student's absence.

Student ID	Name	Week1	Week2	Week3	Week4	Week5	Week6	Week7	Absence Count	Edit Absence
1001	ابراهيم حسن عبدالعال	☑	☑	☐	☐	☐	☐	☐	5	Edit Select
1002	ابراهيم حسن على	☑	☐	☐	☐	☐	☐	☐	6	Edit Select
1003	ابراهيم عبدالفتاح ابراهيم	☐	☐	☐	☐	☐	☐	☐	0	Edit Select
1004	ابراهيم عبدالمنعم عثمان	☐	☐	☐	☐	☐	☐	☐	0	Edit Select
1005	ابراهيم لطفى ابراهيم	☐	☐	☐	☐	☐	☐	☐	0	Edit Select
1026	ابراهيم محمدابراهيم	☐	☐	☐	☐	☐	☐	☐	0	Edit Select
1027	ابراهيم محمدالشحات	☐	☐	☐	☐	☐	☐	☐	0	Edit Select
1028	احمد ابراهيم حسين	☐	☐	☐	☐	☐	☐	☐	0	Edit Select
1029	احمد ابراهيم محمود	☐	☐	☐	☐	☐	☐	☐	0	Edit Select
1030	احمد احمد ابراهيم	☐	☐	☐	☐	☐	☐	☐	0	Edit Select
123456										

Instructor Interface

- Also, they can upload and download subject files.



Model

- We created functions that will execute the query on the database and return the required data.

  Ex: AuthenticateUser function

- We also created two procedures in the database to return one value many times.

  Ex: spAuthenticateUser ,

  spAbsenceCount

Future Extensions & Conclusion

Mona Ahmed Fawzy

Future work of the project

- Mobile Application using C# or android

- These applications are installed on smart phones and don't need internet connection.
- This capability will make it easier for users to access the system anywhere at any time with lower access requirement.
- Mobile application features will add attendance and absence to the system with capability of signature.

Conclusion

- In our project, we transform manual and automated work to web technology work even utilized both (Instructors & Students).
- We save time for Instructors and Students, as well as the speed of access to services will increase.
- We present many types of services such as: Student Scientific services , Student Attendance services.

THANKS!