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Capstone Database Management

Sharanya Amuduri  
Governors State University

Anitha Avula  
Governors State University

Ahmed Hussaini Syed  
Governors State University

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ABSTRACT

The main aim of this project is to provide a well-structured database for storing information about Grad projects. Apart from this, CCDS displays the existing grad projects to the students through web by query implementation. And also they can access information about any particular Grad Project. The main objective of this project is to design an application which is user-friendly and should be able to get the details about student Grad Project. Grad Project is a particular course and administrator for maintaining the data of students, List of Grad projects and modules this system facilitates the administrator to manage Project List, manage Project Documents and manage reports. Including storage and retrieval of all the activities related to selected Projects and also the modification and deletion of the data.
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1 Project Description

The main aim of this project is to provide a well-structured database for storing information about Grad projects. Apart from this, CCDS displays the existing grad projects to the students through web by query implementation. And also they can access information about any particular Grad Project. The main objective of this project is to design an application which is user-friendly and should be able to get the details about student Grad Project. Grad Project is a particular course and administrator for maintaining the data of students, List of Grad projects and modules this system facilitates the administrator to manage Project List, manage Project Documents and manage reports. Including storage and retrieval of all the activities related to selected Projects and also the modification and deletion of the data.

1.1 Assumptions and Dependencies

- We assume that student user login Id and Password is created once they get the admission in the GSU.
- Before Entering Details students are allotted with Advisor and abstract is approved by the advisor.

1.2 Future Enhancements

Advisor and groups are assigned manually using random code generated we can form the groups and assign the advisor accordingly.

1.3 Definitions and Abbreviations

- SQL: Structured Query language
- GUI: Graphical User Interface
- ADO: ActiveX Data Objects
- OLED: Object Linking and Embedding, Database
- ORM: Object-Relational Mapping
- CPU: Central Processing Unit
- DB: Database
- IIS: Internet Information Services

2 Project Technical Description

Capstone Database system helps the student to view all the graduate student which are stored in the Database, so that Student will be getting an idea.
### 2.1 Application Architecture

![Architecture Diagram]

#### Figure 1 Architecture

<table>
<thead>
<tr>
<th><strong>.cs files</strong></th>
<th><strong>.aspx files</strong></th>
<th><strong>Name spaces</strong></th>
<th><strong>Bin files</strong></th>
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<td></td>
<td>System.Web</td>
<td>office.dll</td>
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</table>

#### Application Information flows

- AdminAbstractDetails.aspx.cs
- AdminDetails.aspx.cs
- MainPageMgmt.aspx.cs
- MainPage.Master.aspx.cs
- SearchAbstract.aspx.cs
- Studentpage.aspx.cs

- Interop.Microsoft.Office.Core.dll
- Microsoft.Office.Interop.Excel.dll
- Microsoft.Vbe.Interop.dll
- office.dll
Figure 2  Flow of data in Application
2.3 **Data Model**

![Database Model Diagram]

Figure. 3Database Model
## Screenshots

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<tr>
<th>GroupID</th>
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<th>First Name</th>
<th>Last Name</th>
<th>Project Title</th>
<th>Abstract</th>
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Welcome to Governors State University, this is a great place for the students all over the world to choose various courses with flexible environment. This is the modern university with great technical and moral qualities. Our excellent-designed courses assure you to gain high technical skills and a vast improvement in your career growth.
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</tr>
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</table>
2.4 About Software and Database

2.5 Capabilities

Group of this application needs learning on asp.net web frames, C# Program and SQL server. Asp.net web structures and C# information is expected to change any of the pages and business rationale. Database SQL server learning is required for client support, taking reinforcements and making upkeep arranges.

3 Project Requirements

3.1 Identification of Requirements

a. Uploading the abstract in to the database
b. Admin Can make changes like edit and delete the record
c. Student can
d. Planning sections for any student by days of the week.

3.2 Security and Fraud Prevention

Only authenticated users can login to the application and make any changes or use the application. There is no chance of any fraud activities on the application since the application can be used only by authenticated users also the database is secured by username and password. The data provided in text file is open to everyone from the website and hence the chances for loss or theft of data are least. Continuous monitoring is also done to identify any changes in the database and the application.
3.3 **Release and Transition Plan**
The Capstone Database management System application is now deployed in local IIS server and executing on local machine.

4 **Internal/external Interface Impacts and Specification**
- This application focuses on the data structure that is available in my-gsu website.
- Application allows the student enter the abstract their limit 2,147483647 bytes.
- Only Admin can update and delete the records from database using application

5 **Project Design Units Impacts**
- Login : Registered users are access the web application.
- Insert : The transformed data is then uploaded into the database using ‘insert into database’ button.
- Search : User can search the existing data from the database.

6 **System Requirements**

6.1 **Hardware Requirements**

**Visual Studio**
- 1.6 GHz or faster processor.
- 1 GB of RAM (1.5 GB if running on a virtual machine)
- 10 GB (NTFS) of available hard disk space.
- 5400 RPM hard drive.
- DirectX 9-capable video card running at 1024 x 768 or higher display resolution.

**SQL Database**
- 6 GB Hard drive space
- Installation discs
- Monitor
- Internet

6.2 **Software Requirements**
- Visual Studio 2012
- .NET Framework 4.0
- Microsoft SQL Server Management Studio 2012
• Windows 7 or higher
• Internet explorer or google chrome browser.

7 Acknowledgements

I express my Gratitude to Dr Soon-Ok Park for her help, guidance throughout the work for this project without which I would not have been able to complete this project to such a success.

I am also thankful to my project team members who have shown their co-operation and have been mindful of the proper delivery of the project.

Finally I am also thankful to other faculty members who provided me with Moral support during the course of this project.

8 References