3.2.4 Exam Project (Include Minton CSS in exams project)

3.2.4.1 Background

Including Minton CSS in Exams project is a task given to me where Minton is a sample project that has CSS file and other files that we can use them to take basic codes from it. I am required to take the CSS file from the Minton project and include it in the Exams project I uploaded before. The goal is to take a basic CSS file and put it into an Exams project for later work.

3.2.4.2 Approach /Objective

- Create a file named Minton in the Exams file

- Download the sample project (Minton)

- Copy and include the CSS file into the Minton file in the Exams file

- Link the required CSS page with the Exams project

3.2.4.3 Data Collection, analysis and requirements (Software, Hardware)

The Hardware requirement is my own laptop.

The Software requirement is Microsoft Visual Studio 2019, File Explorer, and link of Minton project to download from. Also, TortoiseSVN program to download any project I need, update the project, or upload the project.

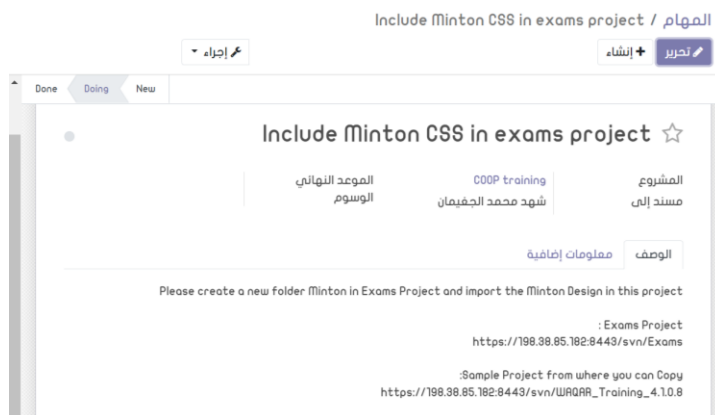### 3.2.4.4 Model & Photos

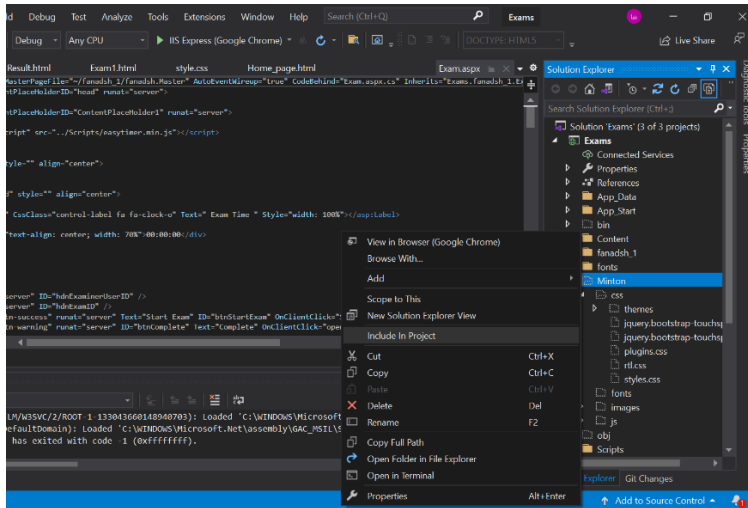Figure5: Task assigned in odoo.enseyab

Figure6: Include Minton file in Exams project

3.2.4.5 Problems Faced & Solutions) (Tools and Techniques used to solve the problem)

The problem I faced was that Exams project did not fully load on my laptop and I

could not open the existing pages. The reason behind this is that one of the

employees is working on the project, which affected my download of the

program. I asked my supervisor to solve this problem for me.

3.2.4.6 Procedures (Steps taken to solve the problem)

1. I reported this problem to my supervisor

2. I wrote the notes that I took from my supervisor to solve the problem

3. I deleted the program

4. I downloaded it again

5. The entire project has been downloaded

3.2.4.7 Experience Gained & Techniques Learned

I learned how to load a project on ASP.NET and how to update the pages of that

project if more than one person is working on it. Also, I learned to upload the

work after finishing it using TortoiseSVN and download and update from it. I

learned how to include pages on any project.

3.2.4.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

- Exams and Minton programs are installed on the device

- A file named Minton was created in the Exams project

- The CSS file was copied from the Minton project and placed in the

  Minton file in the Exams project

- CSS pages are included in the Exams project

3.2.4.9 Relationship to academic background

The relationship between this task and academic background is that CSS was used

which we used extensively in the FWP course. We also learned about file

association and file orientation ordering in detail in Object Oriented Programming

(OOP).

3.2.5 Exam Project (Storing the Exam project database in Microsoft SQL)

3.2.5.1 Background

An Exams project needs a database to put the exam data into and store the new

information as a new exam or new questions. The database needs to be sorted and

entered Microsoft SQL to use this data later in the project. All questions, answers,

exam types and their ratings must be ranked, and all data must have ID. Then, all

this data must be entered into a database.

3.2.5.2 Approach /Objective

- Arrange questions, answers, exams, and their types in an Excel file

- Assign ID for questions, answers, exams, and their types

- Assign photo path for all questions and answers that have photos

- Insert all data in Microsoft SQL

3.2.5.3 Data Collection, analysis and requirements (Software, Hardware)

The Hardware requirement is my own laptop.

The Software requirement is Excel sheets to arrange all the dataset in them. Also,

Microsoft SQL program required to insert the dataset into database.

3.2.5.4 Model & Photos

Figure7: Entering and arranging data in Excel

3.2.5.5 Problems Faced & Solutions) (Tools and Techniques used to solve the problem)

I had a problem entering data in Microsoft SQL where the Exams project database requires a special username and password. I asked an employee who was working on Microsoft SQL to help me out.

3.2.5.6 Procedures (Steps taken to solve the problem)

1. I asked the employee working on the databases for the password and username of the Exams project

2. The employee gave me the password and username

3. I tried this password with the username

4. The database for the Exams project was opened on my Microsoft SQL

3.2.5.7 Experience Gained & Techniques Learned

The task made me gain techniques and experiences in dealing with databases

Here are some of the experiences gained:

• How to deal with the process of participating in entering data into the database

without a conflict

• How to arrange data and link data using FOREIGN KEY

• How to open a database in Microsoft SQL developed by someone else

3.2.5.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

The task was accomplished by arranging the questions and answers, exams, and

their types, assigning an ID to them, and then setting the image path for all

questions and answers that contain images, and finally

 Enter all data into the database in Microsoft SQL.

3.2.5.9 Relationship to academic background

The relationship between this task and the academic background is working on

databases, as we took in the course on Database Concepts and Design (DCD).

3.2.7 Exam Project (Create Page for CRUD operation in Exam Categories)

3.2.7.1 Background

Creating a page to add, delete or modify exams in Exams project is important to benefit from this project and is one of the most important features of this project. This page contains two sections where the first section will show filtration and add edit controls and buttons. These buttons are search, save and cancel. The second part will show the grid view. In the grid view, we will show already added categories in the system and the option to Edit or Delete any category. A box will be created on the page to search the database for the exam categories to be searched. One of the most important parts that will be on this page is the Show Grid View pane, in the grid view to display the categories already added in the system and the option to edit or delete any category.

3.2.7.2 Approach /Objective

- Create a page for creation, reading, updating, and deleting from the database

- Add buttons to search, save and cancel

- Show categories already added in the system

- Create an option to edit or delete any category next to the categories shown.

- Format the page using CSS

- Activate buttons using C#

3.2.7.3 Data Collection, analysis and requirements (Software, Hardware)
Hardware requirement is my laptop.

The software requirement is Microsoft Visual Studio 2019 to write pages using ASP.NET. Also, the need for CSS, C#, and ASPX pages to format pages, activate buttons, and arrange page structure. Microsoft SQL is required to add, take from, or modify the database.
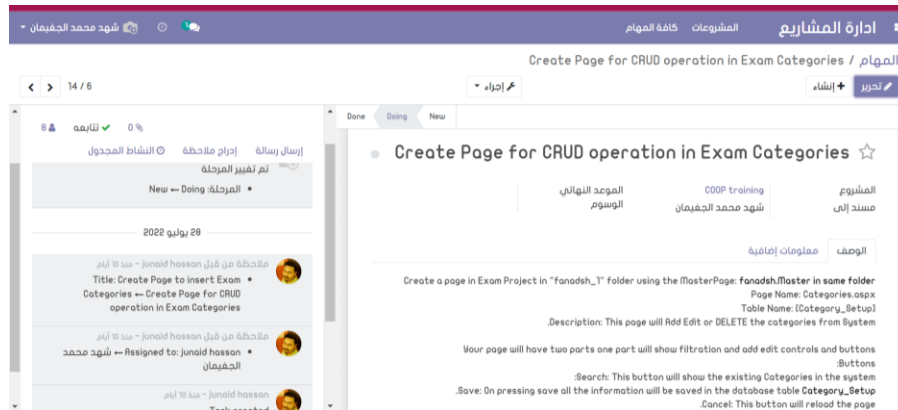
3.2.7.4 Model & Photos

Figure10: Task assigned in odoo.enseyab

Figure11: Initial look of the page

3.2.7.5 Problems Faced & Solutions) (Tools and Techniques used to solve the problem)

The problem I faced is that after writing the queries to take data from the

databases, I did not see any of these data. The reason behind this was that it was a

typo in the queries and a typo in transferring names which should match the

names of the columns in the database.

3.2.7.6 Procedures (Steps taken to solve the problem)

1. I read the code and the queries again carefully

2. I rewritten inquiries and made sure of their correctness

3. I copied the column names from the database so that no typo appears

4. I refreshed the page

3.2.7.7 Experience Gained & Techniques Learned

List of things I learned from this task:

• How to enter data into the database using C#

• Activate buttons by creating functions in ASPX.CS and C# which is a modern

object-oriented programming language.

• How to find the source of the error in the code

3.2.7.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

– A page has been created to create, read, update, and delete from the

   database

– Added buttons to search, save and cancel

– Page formatted with CSS

   There are some tasks left to complete in the next week, such as formatting

   the page completely, creating the table containing the added categories

   and creating an option to edit or delete any category next to the displayed

   categories.

3.2.7.9 Relationship to academic background

The relationship between this task and the academic background is that of working on

databases, as we took it on the subject of DCD. ASP.NET platform is used which is

very similar to HTML which we took in the FWP and C# which is similar to C++

language that we learned in Fundamentals of Programming (FOP) is used. Also, the

CSS was widely used in the FWP subject.

3.2.8 Exam Project/ Design a prototype

3.2.8.1 Background

Website prototypes are an illustrative and initial layout of a web page. The importance of these prototypes lies in arranging the ideas and requirements of stakeholders before starting to develop and create a web page. I created this prototype to make it easier for me during the development and design of the page as well as to get my supervisor's approval for the design. I used a Word file to apply the prototype because it contains shapes and boxes that make it easier for me to design the prototype. One of the advantages of the prototype is that it does not take long to change, but on the contrary, it is quickly and easily changed, and it does not cost much time or money to change or modify it.

3.2.8.2 Approach /Objective

- Start crafting the idea

- Design a rough representation of the idea

- Create a physical prototype

- Refine the Prototype to Perfection

- Final Thoughts

3.2.8.3 Data Collection, analysis and requirements (Software, Hardware)

Hardware requirement are my laptop and laptop pen for the initial drawing of the prototype.

The software is Word file to design a prototype using it.
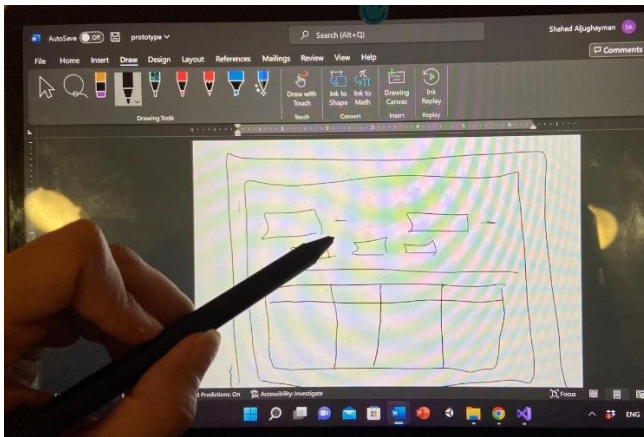
3.2.8.4 Model & Photos

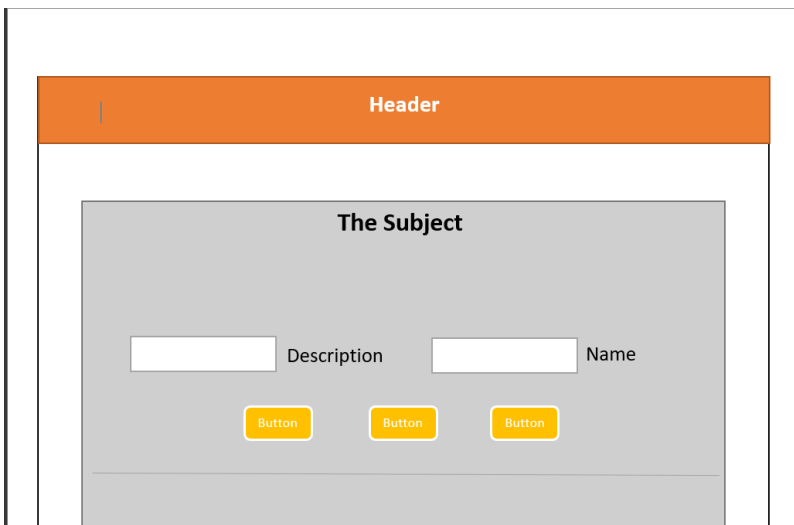Figure12: The laptop pen used to design the initial prototype
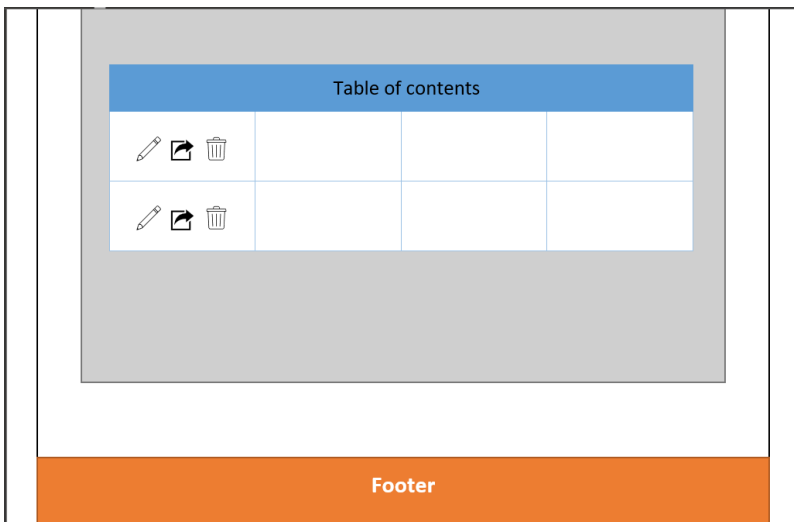

Figure13: First part of the prototype

Figure14: Second part of the prototype

3.2.8.5 Problems Faced & Solutions) (Tools and Techniques used to solve the problem)

3.2.8.6 Procedures (Steps taken to solve the problem)

3.2.8.7 Experience Gained & Techniques Learned

I learned how to do Sketching (Low Fidelity) which is easiest and fastest way to

start creating a prototype[15]. Sketching is conducted in the very early stages of

the web page design and development process, especially during the

brainstorming process to understand stakeholder requirements and get early

feedback from them.

Techniques I learned when designing a prototype are

 • Preparing for the prototype

• Improving the performance of the design prototype

• Reducing time and cost of prototype

3.2.8.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

- The basic idea of the web page has been crafted

- A rough representation of the idea is designed with a pen

- The prototype is physically created and similar to what will be

  implemented on a web page

- The prototype has been refined to perfection and the final comments from

  the supervisor have been modified

3.2.8.9 Relationship to academic background

The relationship between this task and the academic background is that creating a

prototype was one of the most important steps we learned and worked on in the

FWP project as it was one of the initial requirements before the project started.

3.2.9.1 Background

The first step in creating a web page is designing the HTML for it. HTML design is placing a place for each section we want on the web page, such as placing a tables, buttons, or text boxes. This step is important and must be started because it is considered as a page layout and through it, we can give each section an ID or a class to be used in CSS. CSS is a design that has been placed in HTML and formatted with the required colors and positions. In this task, a (DIV) tag was created, which is a shortened form of the word division, which is a section or division in an HTML document that is used to separate tags from each other. In this (DIV) there is (h1) which is a place for the headlines also there are two text boxes where the name of the exam and its description will be entered through them and there are labels next to each text box to clarify who they are. Under the text box there are three buttons to search, add and cancel. Then all tags were formatted using CSS according to the instructions given by the supervisor.

3.2.9.2 Approach /Objective

- Create (DIV) that contains all the tags

- Add a headline and design it by using CSS

- Design text boxes and labels using CSS

- Design search, save, and cancel buttons using CSS

- Completely format (DIV) and arrange the positions of all the tags

3.2.9.3 Data Collection, analysis and requirements (Software, Hardware)

Hardware requirement is my laptop.

The software requirement is Microsoft Visual Studio 2019 to write pages using ASP.NET platform. Also, the need for CSS and ASPX pages to format pages and arrange page structure.
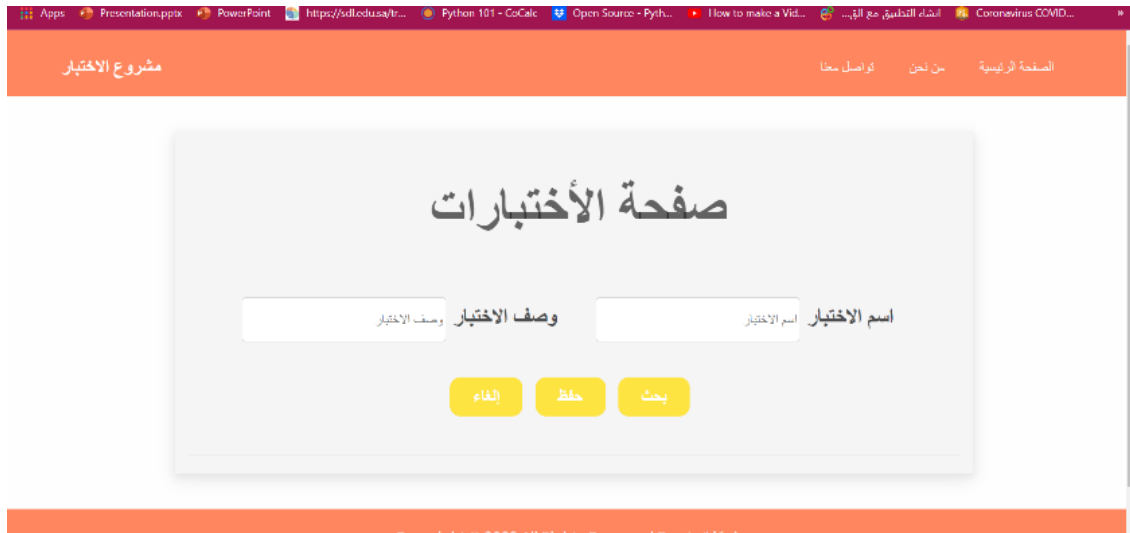
3.2.9.4 Model & Photos

Figure15: First part of Exam categories page

3.2.9.5 Problems Faced & Solutions) (Tools and Techniques used to solve the problem)

The problem I faced is in CSS designing that the text boxes did not appear in one line even though I put to them (display: inline) which displays an element as an inline element[3]. I was able to solve the problem by controlling the width of the text boxes and the margin. I reduced the space for both text boxes and labels to make an enough space for them in one line.

3.2.9.6 Procedures (Steps taken to solve the problem)

1. I deleted (display: inline)

2. I tried to reduce the width of each text box

3. I manipulated the margins until they were set in one line

4. I refreshed the page and watched the change

3.2.9.7 Experience Gained & Techniques Learned

List of things I learned from this task:

• How to format the shadow so that the division appears as prominent

• Different ways to put tags in one line

• How to change the formatting of the button when the pointer is hovered over it.

3.2.9.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

- (DIV) containing all the tags has been created

- Headline added and styled using CSS

- Text boxes and labels are designed using CSS

- Search, Save, and Cancel buttons are designed with CSS

- (DIV) has been fully coordinated and the positions of all tags were

  arranged

3.2.9.9 Relationship to academic background

The relationship between this task and the academic background is that ASP.NET

platform is used which is very similar to HTML which we took in the FWP. Also,

I used CSS that was widely used in the FWP subject.

3.2.10 Exam Project/ Create SQL queries and functions in C# of search, add, and cancel buttons

3.2.10.1 Background

After the search, add, and cancel buttons are created, they need effective

functionality or an event while clicking on them. Events are worked out in C#, an

object-oriented programming language. Also, SQL queries are needed to deal

with the database where data is being added or taken from. In this task, the

bindCategories() function was created. Through which the required exam

categories or all categories are obtained if the user does not search for a specific

category. In addition, the addCategories() function has been created through

which the exam category entered in the text box is saved to the database. This

clearForm() function is used to cancel what has been written in text boxes. On the

CatClass.cs page all the queries we need to get data from or add to the database

are written.

3.2.10.2 Approach /Objective

- Create the CatClass.cs page we need to handle the database

- Create functions on click of each of the buttons (search, save, cancel)

- Create functions in Categories.aspx.cs page to call the functions on the

  CatClass.cs page.

- Make a connection with the database

- Create functions in CatClass.cs page to write queries

- Experiment with the work of each button to ensure that its function is correct

3.2.10.3 Data Collection, analysis and requirements (Software, Hardware)

Hardware requirement is my laptop.

The software requirement is Microsoft Visual Studio 2019 to write pages using

ASP.NET platform. Also, the need for CSS, C#, and ASPX pages to format

pages, activate buttons, and arrange page structure. Microsoft SQL is required to

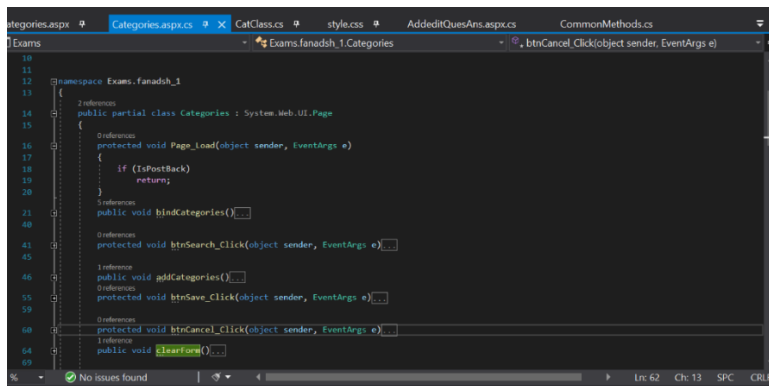add to or take from database.

3.2.10.4 Model & Photos

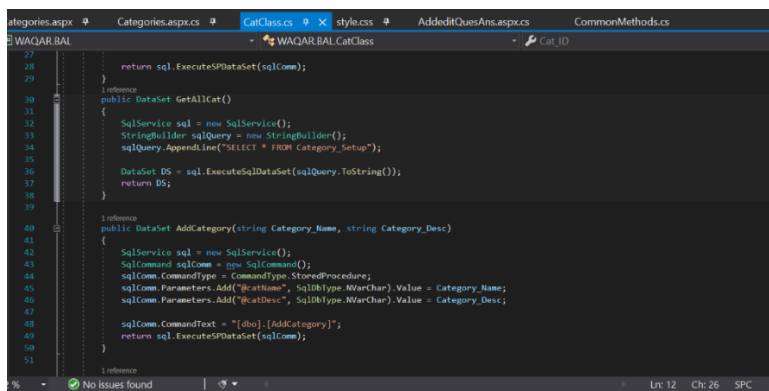Figure16: Categories.aspx.cs page for writing functions of buttons

Figure17: CatClass.cs page for database connection and queries

3.2.10.5 Problems Faced & Solutions) (Tools and Techniques used to solve the problem)

The problem I faced is that the name and description of the exam are in Arabic,

and when I search for the exam, no results appear even though they are in the

database. The reason behind this is that the database or queries do not

accommodate Arabic characters. I solved this problem by putting N" before the

variable I'm going to search and that makes it Unicode.

41

3.2.10.6 Procedures (Steps taken to solve the problem)

1. Understand the problem

2. Search in the browser for solutions or other formulas for query

3. Understand the property of placing N before Arabic text in query

4. Apply the property in the search query

3.2.10.7 Experience Gained & Techniques Learned

List of things I learned from this task:

• How to deal with Arabic texts while writing queries

• How to add and search data in the database using C#

• How to create functions for buttons in ASPX.CS

3.2.10.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

– The CatClass.cs page we need to work with the database has been created

– Functions created when each of the buttons is clicked (search, save,

cancel)

– Functions were created in Categories.aspx.cs page to call the functions in

the CatClass.cs page.

– A connection has been made with the database and this connection is

called in a function that needs the database

– Created functions in CatClass.cs page for writing queries

– Every button has been tested and made sure that its function is correct and

working

3.2.10.9 Relationship to academic background

The relationship between this task and the academic background is that working

on databases, which we took in the DCD subject and which we use to get or send

data. ASP.NET platform which is very similar to HTML which we took in FWP and C# which is like C++ which we learned in (FOP) is used and this language is used to write functions.

3.2.11 Exam Project/ Design HTML and CSS for table part

3.2.11.1 Background

After completing the first part of the page, we will move to the other part, which is the table section. In this section, a table will be created using gridview, which is a control that is used to display data in the form of tables on a web page [14]. This table is then formatted with CSS. This table appears because of the buttons we have created functions for. Within the gridview, LinkButtons are placed through which the user can edit or delete the test category or go to the questions page related to the selected exam.

3.2.11.2 Approach /Objective

- Create a table using gridview
- Add the headers to the table corresponding to the names of the columns in the database
- Add LinkButton to edit or delete the selected exam category
- Add <a> tag to forward to the questions page related to the specific exam category
- Design the table using CSS
- Format lines and determine their position
- Full design of the table and arrangement of positions for all tags

3.2.11.3 Data Collection, analysis and requirements (Software, Hardware)

Hardware requirement is my laptop.

The software requirement is Microsoft Visual Studio 2019 to write pages using ASP.NET platform. Also, the need for CSS and ASPX pages to format pages and arrange page structure.

3.2.11.4 Model & Photos

Figure18: Table format with no specific searching

Figure19: Table format with specific searching

3.2.11.5 Problems Faced & Solutions) (Tools and Techniques used to solve the problem)

The problem I faced is in CSS designing that the trash symbol did not appear on the web page even though its class was written correctly and taken from a trusted site [4]. Class for <i> tag used to specify the type of icon to display. In the end, I

discovered that the syntax written for the class did not match the version of the

platform I was working on, so I changed the syntax and then it appeared on the

screen.

3.2.11.6 Procedures (Steps taken to solve the problem)

1. First, I thought the problem was from the space, so I enlarged the
   space

2. Then I found out that the problem is not with the space because I
   tried the edit icon, and it appeared in the exact place

3. I searched many websites for other formats to show the trash icon

4. I used the format of the icon in this link [5] and it appeared on the
   webpage

3.2.11.7 Experience Gained & Techniques Learned

List of things I learned from this task:

• Icon formats vary from version to another version

• How to format a table from gridview

• How to coordinate the texts fetched from the database and put all the data in the

appropriate place.

3.2.11.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

– Table has been created using gridview

– Headers have been added to the table corresponding to the column names
  in the database

– LinkButton has been added to edit or delete the selected exam category

– A <a> tag has been added to forward it to the questions page for the
  selected exam category

- The table is designed using CSS

- Fonts are formatted and positioned

- The table has been completely designed and the positions are arranged for all the tags

3.2.11.9 Relationship to academic background

The relationship between this task and the academic background is that ASP.NET platform is used which is very similar to HTML which we took in the FWP. Also, I used CSS that was widely used in the FWP subject.

3.2.12 Exam Project/ Create SQL queries and functions in C# of edit, forward, and delete symbols in the table

3.2.12.1 Background

After placing icons to edit, delete and forward, they need effective functions or event while they are clicked. Events are generated on the Categories.aspx.cs page when icons are clicked. As for the CatClass.cs page, all the queries we need to modify or delete the data from the database are written. Also, SQL is needed to write queries into stored procedures to deal with the database. Stored procedures are a system in which queries can be written which are stored in the relational database management system (RDBMS) as a collection, so that they can be used and shared by C#.

3.2.12.2 Approach /Objective

- Create a stored procedure for searching, adding, modifying, and deleting

- Write queries in stored procedures

- Create functions in Categories.aspx.cs page when you click on icons

- Create functions to call queries contained in stored procedures in the CatClass.cs page.

- Create update and cancel buttons to update the texts after editing it or canceling the changing

- Test the operation of each icon to ensure that its function is correct

3.2.12.3 Data Collection, analysis and requirements (Software, Hardware)

Hardware requirement is my laptop.

The software requirement is Microsoft Visual Studio 2019 to write pages using ASP.NET platform. Also, the need for CSS, C#, and ASPX pages to format

pages, activate buttons, and arrange page structure. Microsoft SQL is required to add to or take from database.

3.2.12.4 Model & Photos

Figure20: When clicking on the edit icon

Figure21: After editing the text and clicking on the update button

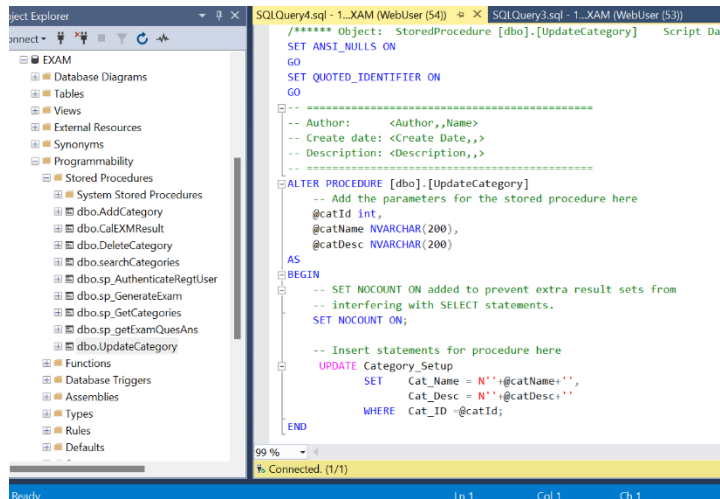Figure22: After clicking on delete icon

Figure23: Stored procedures of update query

3.2.12.5 Problems Faced & Solutions) (Tools and Techniques used to solve the problem)

The problem I faced with this task is that I was writing queries on the CatClass.cs

page but the problem is that Compiler doesn't see these queries and doesn't run

them. I asked my superviser to solve this problem and he asked me to write

queries on stored procedures and call these stored procedures in the CatClass.cs

page.

3.2.12.6 Procedures (Steps taken to solve the problem)

1. First, I asked my supervisor about this problem

2. I deleted the queries from the CatClass.cs page

3. I wrote the queries in the stored procedures

4. I called each stored procedure in the appropriate function for it on

   the CatClass.cs page

3.2.12.7 Experience Gained & Techniques Learned

List of things I learned from this task:

• How to write queries elsewhere is better than writing them in C#

• How to deal with stored procedures and how to write queries in them

• How to edit table cells to modify the text written in them

49

3.2.12.8 Tasks Accomplished & Analysis and discussion of actual results versus the expected ones

- Stored procedure for search, add, modify, and delete is created

- Queries are written into stored procedures

- Functions are created in Categories.aspx.cs page when icons are clicked

- Functions to call queries contained in stored procedures are created in the CatClass.cs page.

- Update and cancel buttons have been created to update texts after editing them or cancel the change

- Each icon has been tested to ensure that it functions correctly

3.2.12.9 Relationship to academic background

The relationship between this task and the academic background is that working on databases, which we took in the DCD subject and which we use to get or send data. ASP.NET platform which is very similar to HTML which we took in FWP and C# which is like C++ which we learned in (FOP) is used and this language is used to write functions.