OneNote.

10.25.2022

The domain of Your Project

Note-taking and editing.

Motivation for the Project

The motivation for choosing this particular project is to apply and copy the masterly App OneNote of Microsoft. I personally am fascinated by the discreteness of the OneNote, Its interface is so simple that a kid might get used to it and its features are so vast that i yet didn't know about some. And furthermore I like the idea of how the notes are all interconnected through your microsoft account, you can use it on any device having a single account and can read and write from wherever you want.

Problems that will be Solved by this Project

By this project I will try to provide a single place for keeping all of your notes, research, plans, and information — everything you need to remember and manage in your life at home, at work, or at school. In OneNote, notebooks never run out of paper.

Database Design

No of Roles are 4

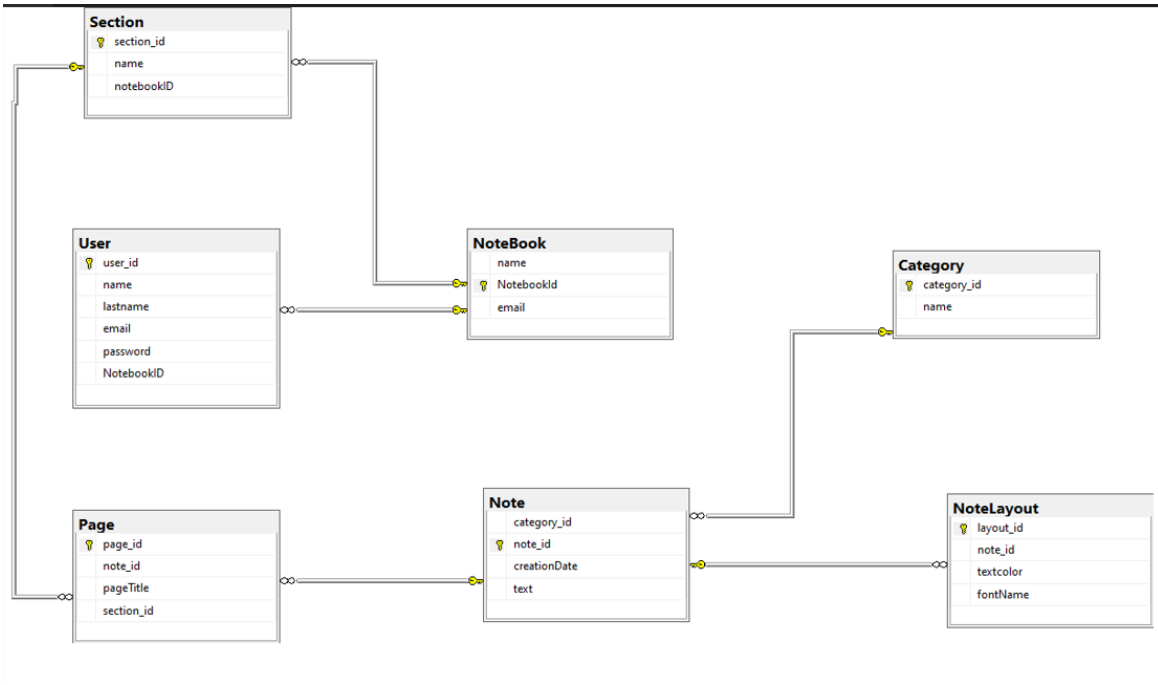
User	Role	Description
End User (Student, Person)	Uses the app.	Can note down important dates and messages. Can make his education notes. Can share his notes.
Database Administrator	Manages, Monitor	Review users and can delete them.
Database Analyst	Maintain, Accesses	Maintain data storage, Accesses database design.
Database Developer	Create, Develop	Ensure Performance, Security and Integrity of data.

Tables: No of Tables are 7 namely, User, Notebook, Section, Page, Note, NoteLayout, Category.

Database Overview

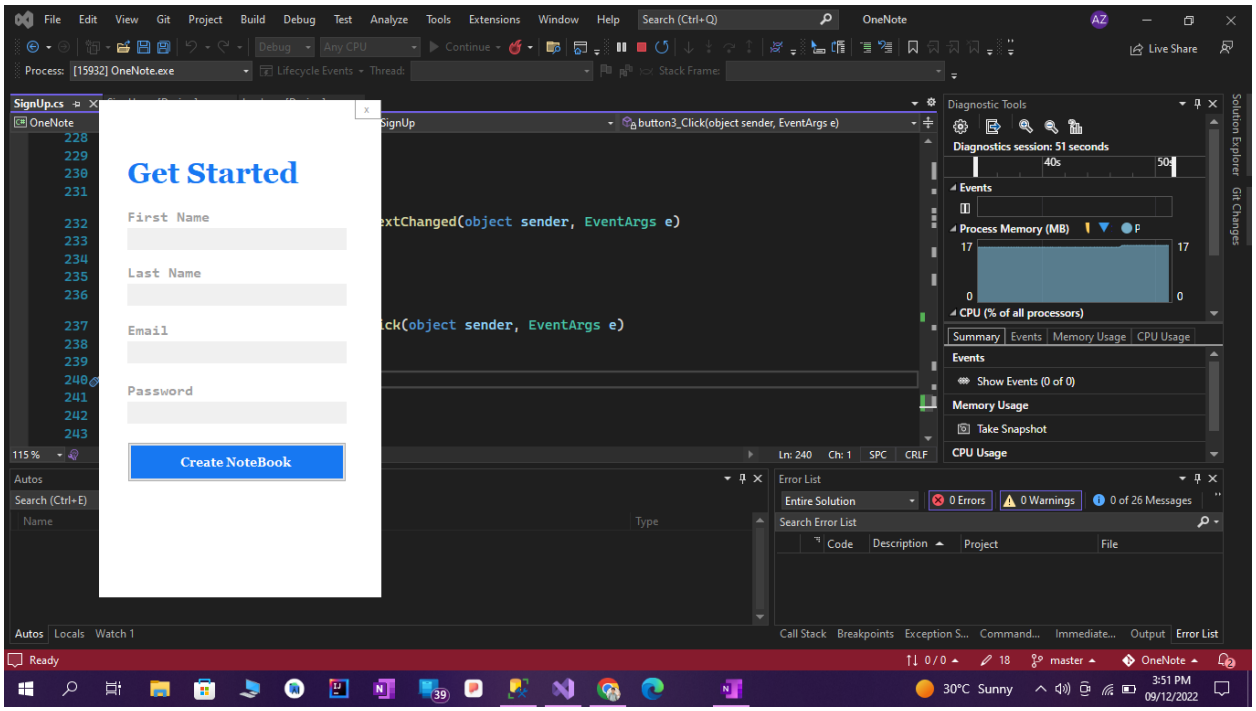
Table Name	Column Name	Datatype	Constraints
User	User_id firstname Lastname Email password. notebook_id	Int varchar(45) varchar(45) varchar(max) varchar(max) int	Primary Key Unique Key FK
Notebook	Name Notebook_id email	varchar(45) Int varchar(max)	Not Null PK UQ
Section	Section_id Name notebook_id	Int varchar(45) int	PK Not null FK
Page	Page_id Note_id Pagetitle Section_id	Int Int varchar(45) int	PK FK Not Null FK
Note	Category_id Note_id Creationdate Text	Int Int DateTime varchar(max)	FK PK
NoteLayout	layout_id Note_id Textcolor fontname	Int Int varchar(15) varchar(15)	PK FK
Category	Category_id Name	Int varchar(45)	PK

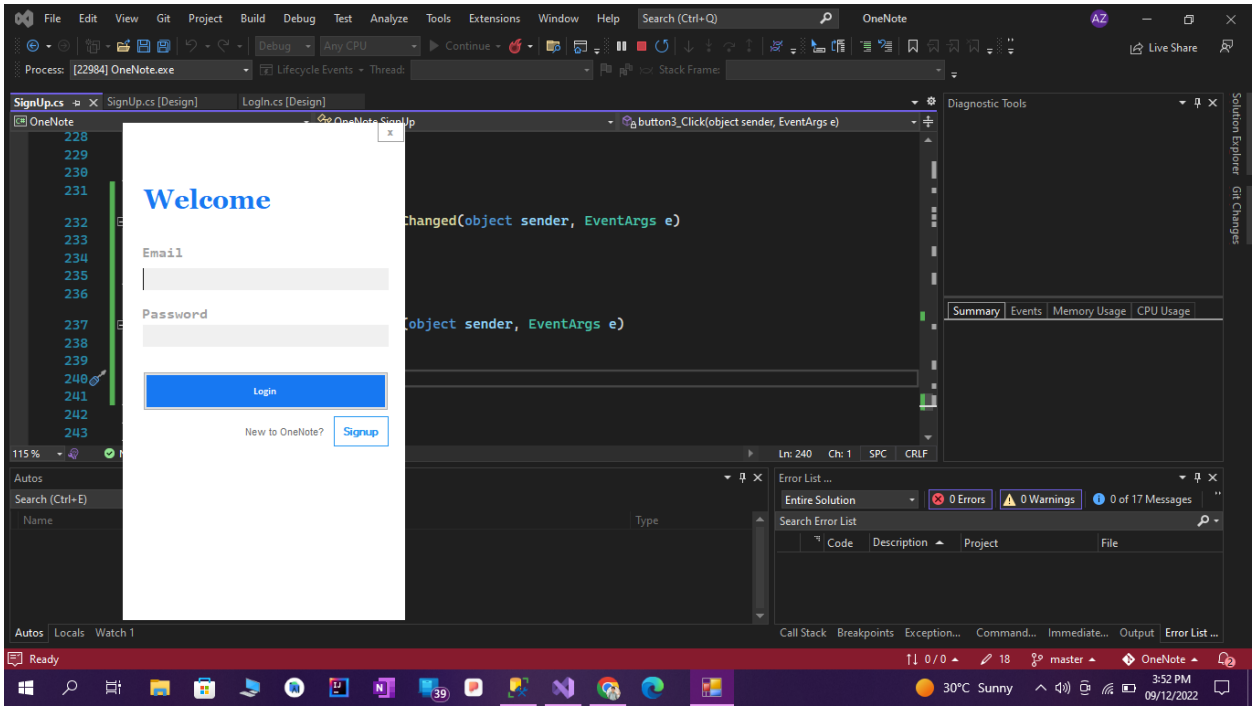
ER-Diagram


Section
section_id
name
notebookID
User
user_id
name
lastname
email
password
NotebookID
NoteBook
name
NotebookId
email
Category
category_id
name
Page
page_id
note_id
pageTitle
section_id
Note
category_id
note_id
creationDate
text
NoteLayout
layout_id
note_id
textcolor
fontName

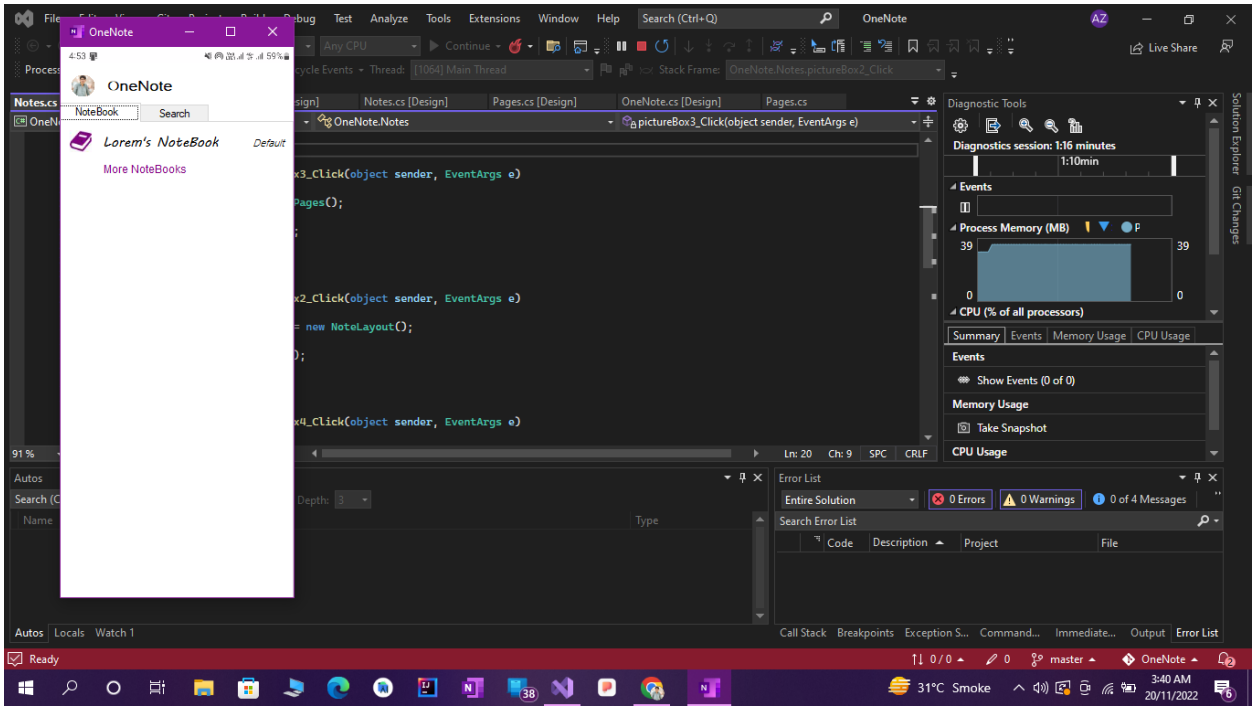
User Interface

1. Login/SignUp:

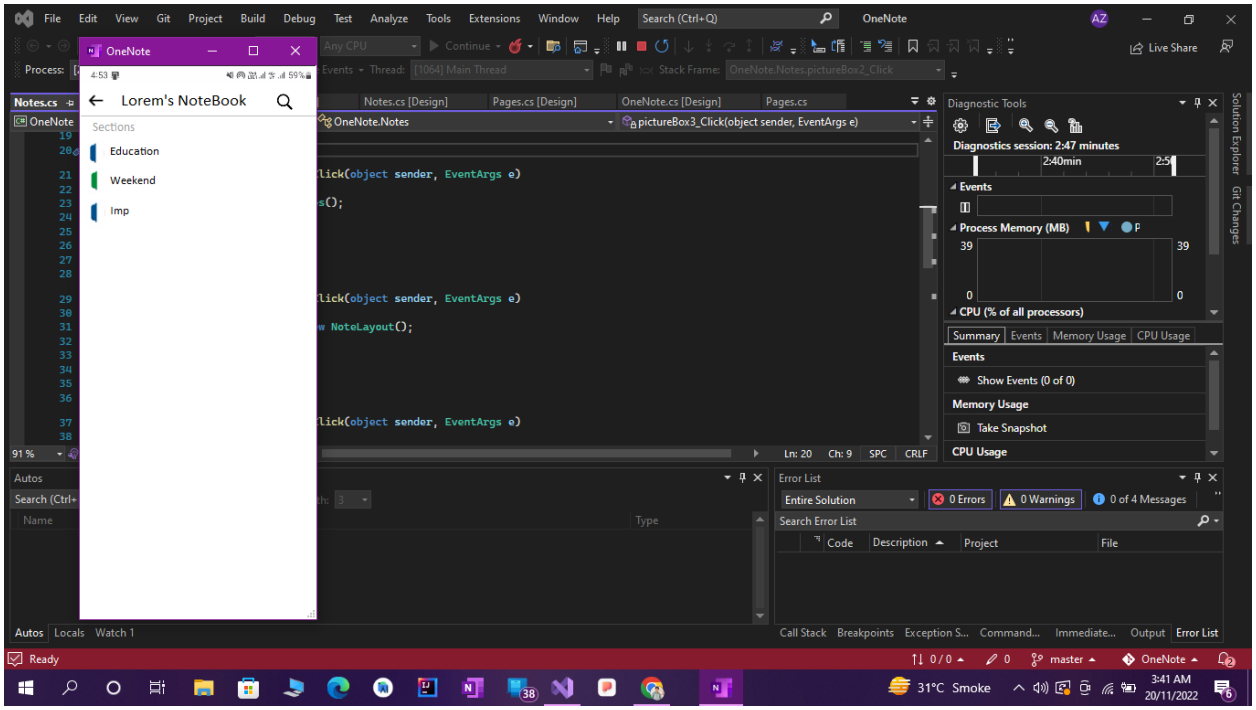




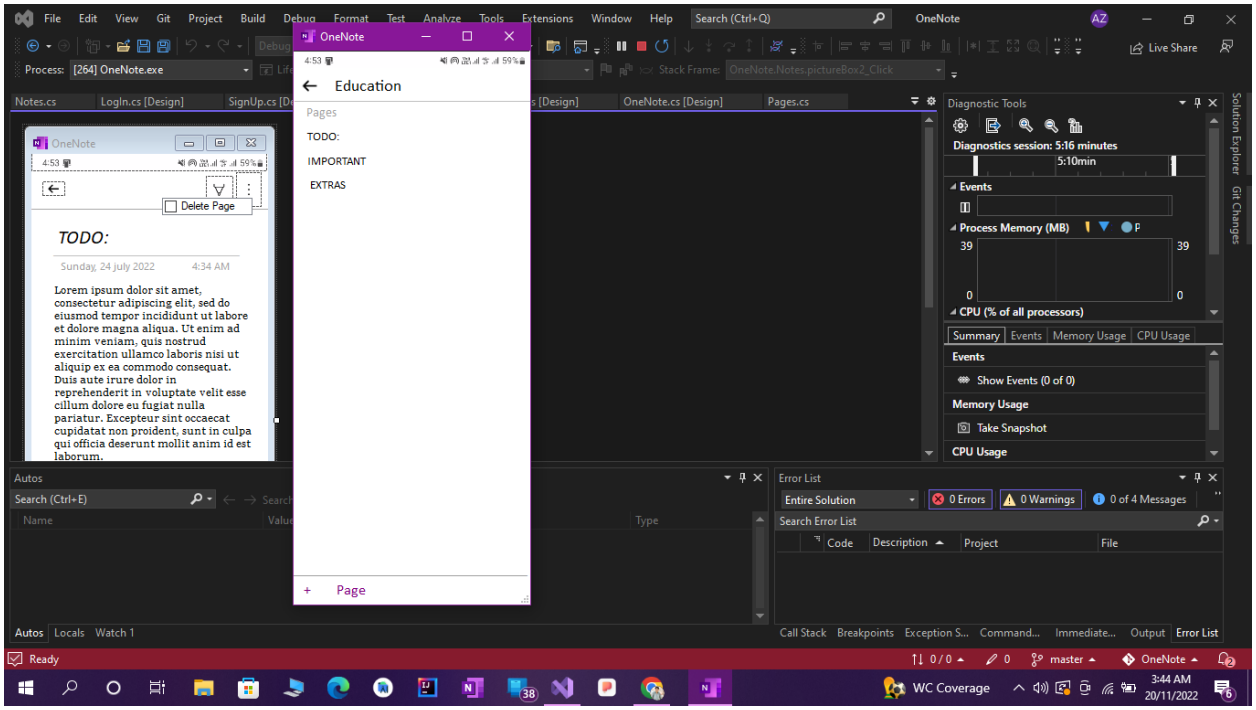
2. OneNote App Starting Page:(After Clicking Login)



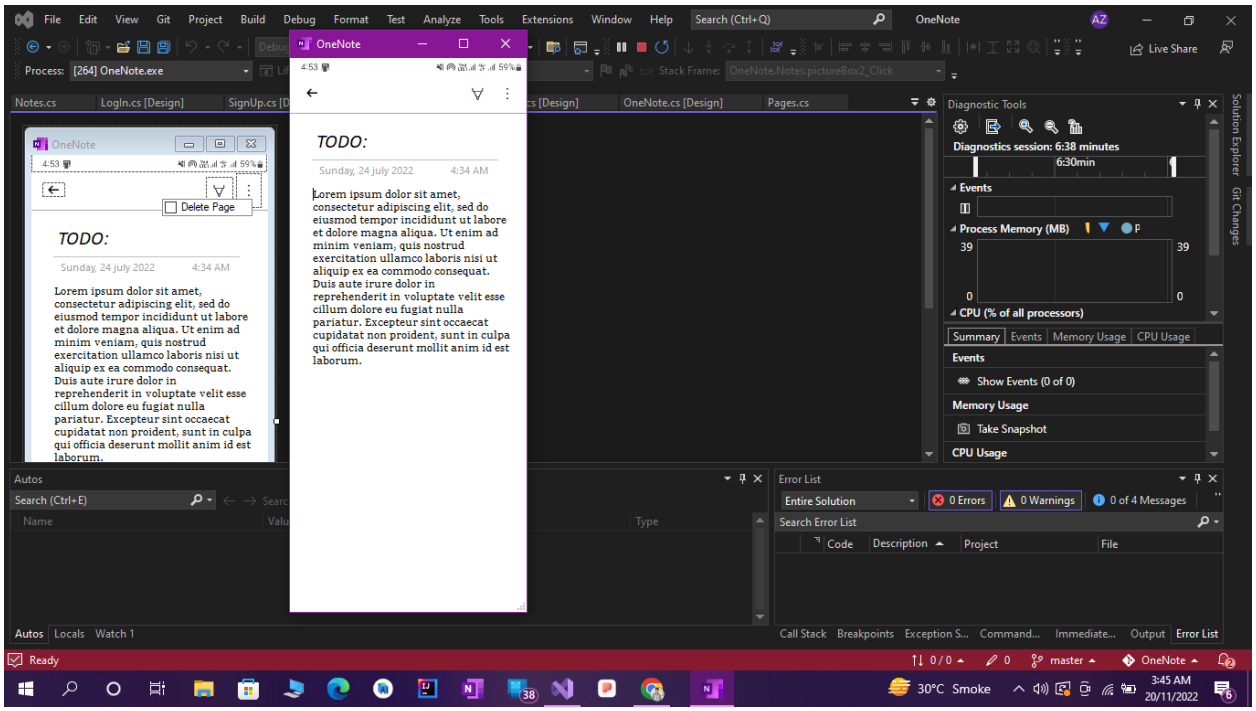
3. After Clicking Lorem's NoteBook: (These Are Sections)



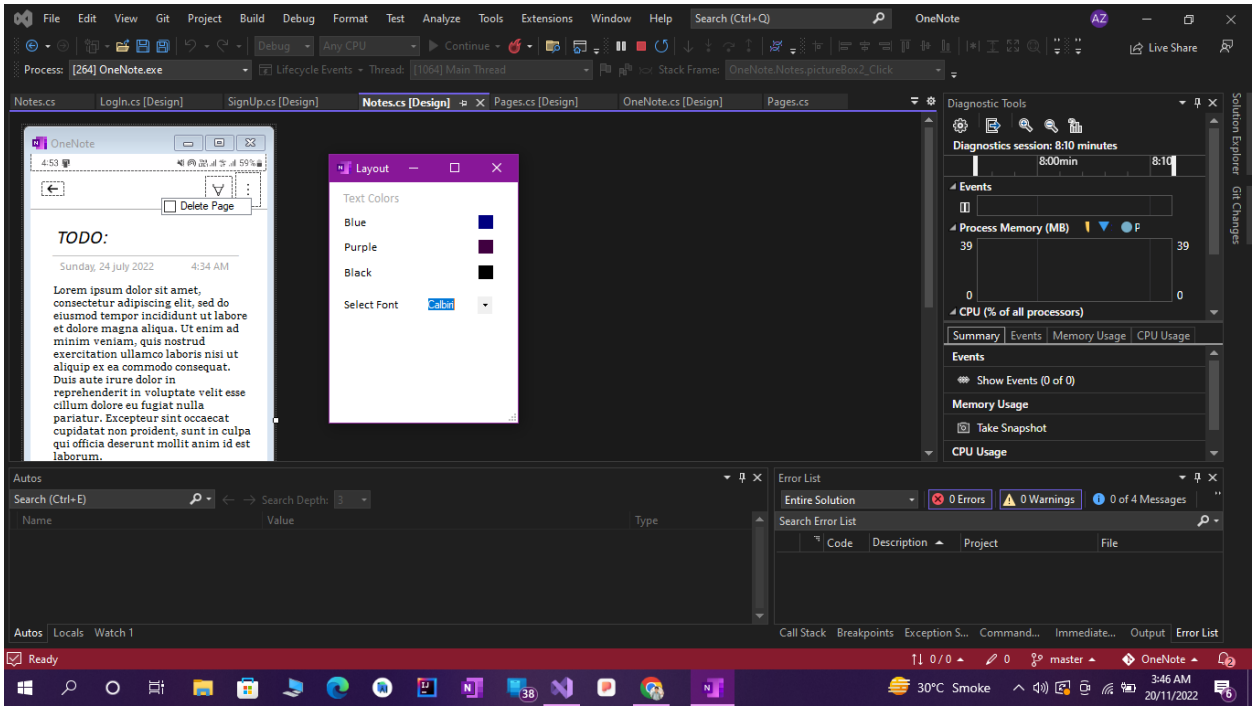
4. After Clicking Education(Section): (Now these are the pages which are inside the Sections)



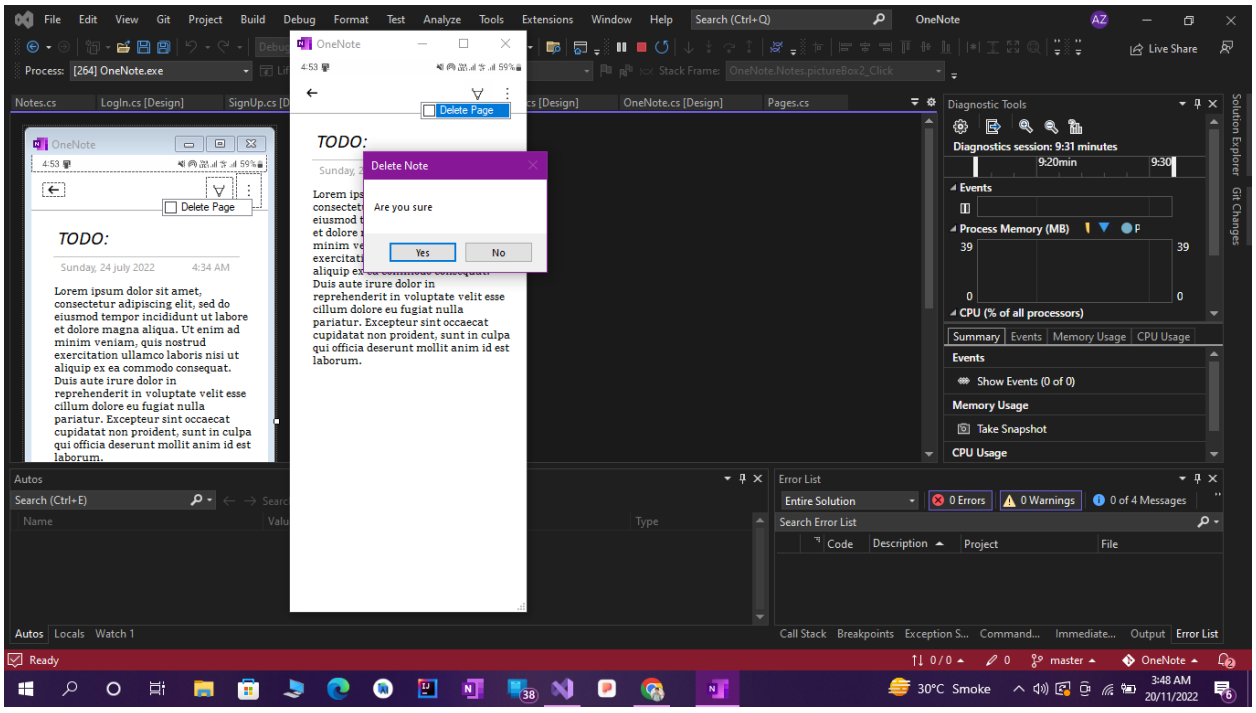
5. After Clicking TODO(Which is a Page) : (Now we are directed to Notes Screen)



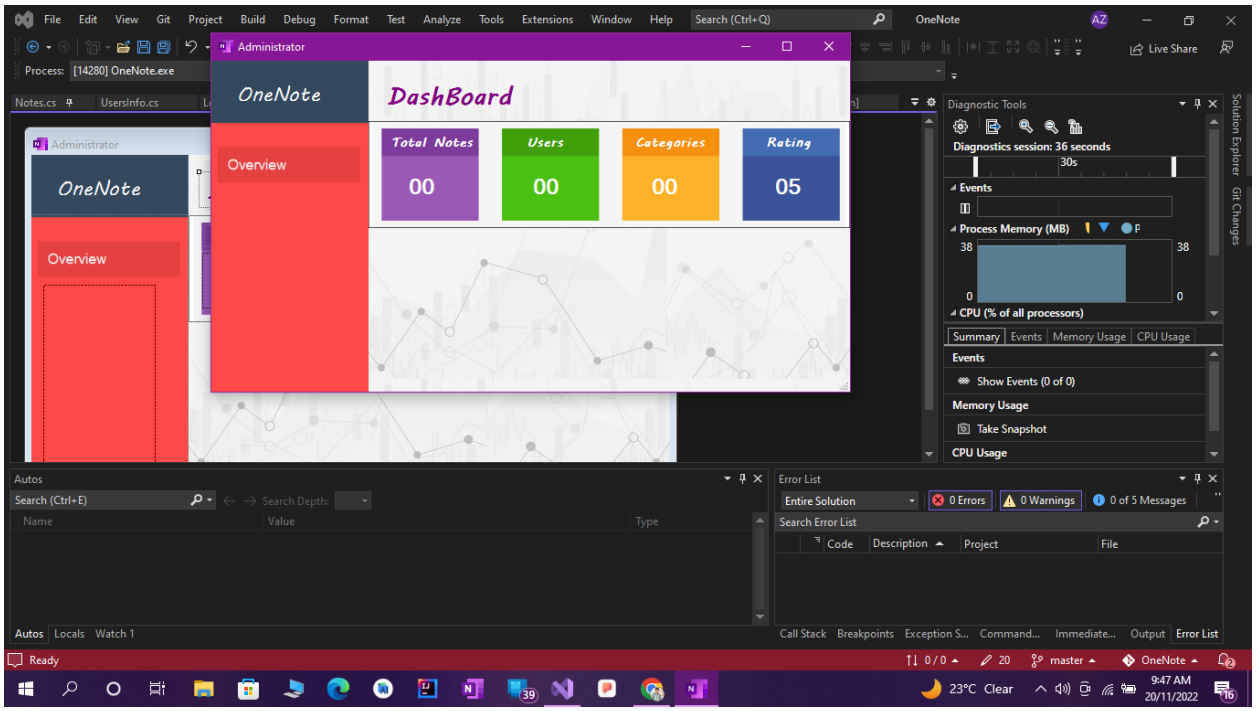
6. You can Customize the Note by clicking on the Marker icon on top right.



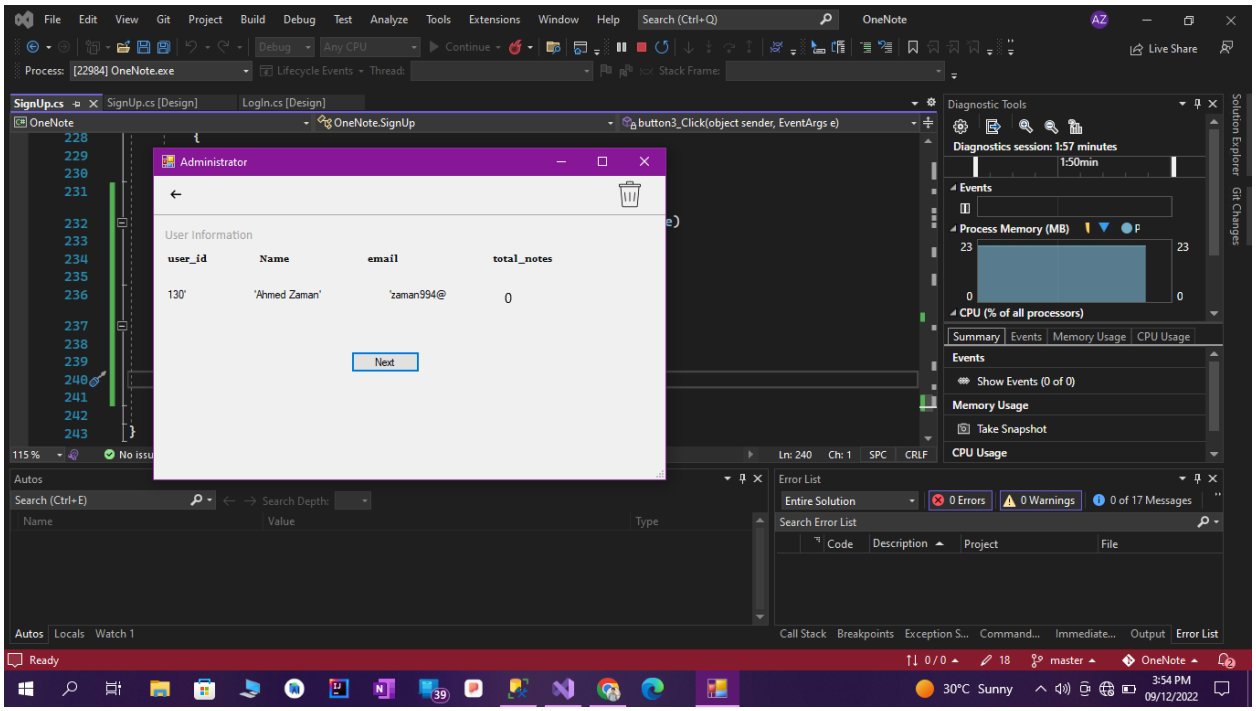
7. Or you can also delete this note by clicking on three dots on the top right corner of the screen.



8. Administrator Dashboard:



9. By clicking on the Users Dashboard Admin will get a new screen to overview the details of the user and also by clicking on the recycle bin admin can delete any user.



Conclusion

1. **Which steps were the most difficult?**

   The most difficult parts of the project were:

   a. **Database:** One of the challenges I faced during this project was the need to change database design as I progressed through the project. I initially designed our database in a certain way, but as I worked on the project and encountered new challenges and requirements, I realized that my original design was not sufficient and had to be revised. This is a difficult and time-consuming process, as it involves making changes to the underlying structure of the database. However, by adapting to these challenges and updating my database design, I was able to overcome this difficulty.

   b. **Page Form:** Another challenge I have faced during this project was implementing the ability for users to add pages to the app and have the form automatically update to display the new pages. This was a difficult task because it involved dynamically modifying the user interface of the app at runtime, which can be complex and require careful planning and implementation. In order to successfully implement this feature, I need to design the user interface in a flexible way that allows for changes to be made to it while the app is running.. Overall, this was a challenging but important part of the project, and by overcoming this difficulty I was able to add an important feature to this project.

   c. Admin ability to delete:A third challenge faced during this project was implementing the ability for the admin user to delete other users and their associated data from the app. This was a complex task because it involves not only removing the user's account from the app, but also all of the data that the user has created, such as sections, pages, notes, and layouts. This requires careful planning and implementation, as I need to ensure that all of the user's data is properly deleted from the database, without affecting the data of other users or causing any errors or inconsistencies in the app. In order to implement this feature, you would need to design the database and the app's code in a way that allows for the efficient and reliable deletion of user data, including handling any dependencies or relationships between different pieces of data.

2. **Which were the easiest?**

   The easiest part was to design the project as it only required drag and drop mostly.

3. **What did you learn that you did not imagine you would have?**

   By working on a project that involved creating a clone of Microsoft OneNote using C# and .NET, I likely gained experience with technologies and programming languages that are commonly used in software engineering. Additionally, the project is likely required to work with database management systems, which can be an important skill for software engineers. By implementing features such as the ability to add pages and delete users, I have also learned about design and implementation strategies for complex software systems, and gained experience with the challenges and rewards of working on a real-world software project. Overall, by completing this project, I likely gained a wide range of valuable skills and knowledge that will be useful in my future career as a software engineer.

4. **If you had to do it all over again, what would you have done differently?**

   There are likely several things I would have done differently. For example, I may have approached the design of the database in a different way, or implemented certain features in a different way. Additionally, I have encountered new challenges during the project that I didn't anticipate the first time around, and I would need to adapt my approach in order to successfully complete the project. Overall, if I had to do the project again, I would likely make different decisions and take different approaches based on the new experiences and knowledge gained from completing the project the first time.