Database Deployment, Entity Framework & API Deployment Tasks

Summary of Task.

1. Create a Github repo to contain all the work detailed below
2. Create an ERD based on the narrative below.
3. Create an (SQL Server) database on Azure
4. Write the DDL / build the database (in a VS database project) based on your ERD
5. Create a Post Deployment Script to Insert Sample Data (provided) on deployment.
6. Deploy your database to Azure.
7. Using Entity Framework (database first) create a (.net framework) WEB API.
8. Test your API endpoints in Postman
9. Deploy your API to Azure (creating the Azure Web App during deployment)
10. Commit and push all work to github.
11. Prepare & submit evidence of your work in the previous steps.

Narrative: Swinny Library

Swinny Library lends books to students at Swinburne University of Technology.

Naturally, Swinny being a highly advanced an up to date 21st century library, it still uses a paper card-based system to track borrowing of books. When a student borrows a book (a student can borrow multiple books at any one time) the borrowing card for the book is transferred to the students file in the filing cabinet. The students file includes information on the student including their student ID, first name, last name, email, and mobile phone number.

When a student returns a book the books borrowing card is removed from the students file and placed back in the books file in the other filing cabinet. No record is kept of borrowing history.

The cafe next door to Swinny library serves excellent coffee which helps keep the staff awake during the long hours of moving cards from file to file.

Swinny Library records the following information about each book including ISBN, title, year published, author id, authors first name, authors surname, and authors tax file number (for tax fraud purposes).

Due to some arcane by-laws of the Booroondara City Council, books at Swinny library can only be attributed to a single author, (although authors can obviously write multiple books.) For this reason books in Swinny library only have one author on record, and co-authored books are recorded as being authored by the first author named on the work.

Swinny Library has asked you to build the backend to support a new electronic system for managing their book loans. The front end is being completed by a group of arts students as part of their end of degree capstone project, and is expected to be extremely sound philosophically, if not functionally. This means you are NOT required to build the front end.

Due to internal politics, and resistance to change, Swinny books wants you to create a backend that will support a DIRECT transfer of their current process to electronic format, and do not want you to incorporate any ‘new-fangled’ ideas on how to do things better, they like the way they do things at the moment, Thank You Very Much!

Sample Data

ISBN	Title	Year Published	Author ID	Author First Name	Author Last Name	Author TFN
978-3-16-148410-0	Relationships with Databases, the ins and outs	1970	32567	Edgar	Codd	150 111 222
978-3-16-148410-1	Normalisation, how to make a database geek fit in.	1973	32567	Edgar	Codd	150 111 222
978-3-16-148410-2	TCP/IP, the protocol for the masses.	1983	76543	Vinton	Cerf	150 222 333
978-3-16-148410-3	The Man, the Bombe, and the Enigma.	1940	12345	Alan	Turing	150 333 444

Student ID	First Name	Surname	Email	Mobile
s12345678	Fred	Flintstone	12345678@student.swin.edu.au	0400 555 111
s23456789	Barney	Rubble	23456789@student.swin.edu.au	0400 555 222
s34567890	Bam-Bam	Rubble	34567890@student.swin.edu.au	0400 555 333

Submission Requirements

Prepare a single .docx document that includes:

- Your ERD
- Screen shots of the DDL for ALL your tables from your VS Database project
- Screen shot of your Post Deployment Script Code
- Screen shots of your Postman Tests and Test Results
- Link to your deployed Web API
- Link to your Github Repo

Print the completed document to .pdf and upload in doubtfire.