

Internet Application Development

Lab 04B

Date: 19-Feb-2025

Registration Number: _____

Full Name: _____

Task 1) The Visual Studio IDE is a creative launching pad that you can use to edit, debug, and build code, and then publish an app. Over and above the standard editor and debugger that most IDEs provide, Visual Studio includes compilers, code completion tools, graphical designers, and many more features to enhance the software development process. This task is about installation of Visual Studio.

Open website: <https://visualstudio.microsoft.com/downloads/> and download Visual Studio 2022 Community edition (if not installed).

Note: In case of limited resources available on PC/laptop/notebook you may check <https://visualstudio.microsoft.com/vs/older-downloads/> for previous versions.

After download run the installer for Visual Studio to complete installation.

Select ASP.NET and Web Development.

Do not forget to select following items:

.NET Framework project and item templates, .NET Framework 4.6.2-4.7.1 development tools and Additional project templates (previous versions).

Task 2) The Database Engine is the core service for storing, processing, and securing data. The Database Engine provides controlled access and transaction processing to meet the requirements of the most demanding data consuming applications within an enterprise. You connect to the Database Engine using a client tool or client library. Client tools run in a graphical user interface (GUI), or a command-line interface (CLI).

Please read following information about two type of instances: (a) Default Instance (B) Named instance

a) Connect to a default SQL Server instance on the same machine

If you're connecting to a server configured with default settings, use one of the following options:

localhost

127.0.0.1

. (a single period)

If you're connecting to a custom TCP port, such as 51433, use one of the following options:

tcp:localhost,51433

127.0.0.1,1433

b) Connect to a SQL Server named instance on the same machine

In this example, the named instance is called MyInstance. Make sure the SQL Server Browser service is running, and use one of the following options:

localhost\MyInstance
127.0.0.1\MyInstance
.MyInstance

Go to <https://www.microsoft.com/en-us/sql-server/sql-server-downloads> and download SQL Server Developer or SQL Server Express edition, follow its instructions for installation.

SQL Server Developer

SQL Server Developer is a full-featured free edition, licensed for use as a development and test database in a non-production environment.

SQL Server Express

SQL Server Express is a free edition of SQL Server, ideal for development and production for desktop, web, and small server applications.

Important: Make sure to select mixed mode authentication during SQL Server installation.

Note: In case of limited resources check <https://learn.microsoft.com/en-us/previous-versions/sql/>.

Task 3) SQL Server Management Studio (SSMS) is an integrated environment for managing any SQL infrastructure. Use SSMS to access, configure, manage, administer, and develop all components of SQL Server or Azure SQL Database. SSMS provides a single comprehensive utility that combines a broad group of graphical tools with many rich script editors to provide access to SQL Server for developers and database administrators of all skill levels. Go to website: <https://aka.ms/ssmsfullsetup> to download SQL Server Management Studio. Install SQL Server Management Studio SSMS by executing SSMS-Setup-ENU file.

Task 4) Consider the project database designed and implemented during previous semester i.e. Fall 2024. Its implementation was done using structured query language during previous semester. Try to recall major relations in your project database. You already have its report in printed form.

- (i) Create a database of appropriate size using SSMS.
- (ii) Create a user and set its authorizations to access the newly created database.
- (iii) Using query analyzer run the SQL script to recreate your project tables and populate with data.
Alternate option: Otherwise restore your project database.
- (iv) Create a website project using a blank folder as demonstrated in class.
 - a. Add a web form with separate code to the project.
 - b. Test the web form by running it in browser.
 - c. Write code to retrieve data from any of your project table. Display at least first five records of any relation in browser.

Task 5) Connect and query a SQL Server instance directly using Visual Studio without using SSMS. (Hint: Follow the instructions on <https://learn.microsoft.com/en-us/ssms/quickstarts/ssms-connect-query-sql-server>)

Write Code for Task 4 here