System Guide and Maintenance
for
Online Banking Application

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Table of Contents

Change History

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Introduction

This web application allows individuals to reach their bank account using the Internet and securely navigate. It enables many features such as transferring money, creating alerts or reviewing transaction history. This guide will support you on a step by step basis, on how to operate . This guide is designed to show you how to use our Online Banking service through all the screens that will appear when using Online Banking with screenshots and related descriptions.

Setup Web Server

This is an IIS based server which requires internet access to connect to both the client browser and database. In addition, an environment variable must be set on the server with the connection attributes of the database to connect to the desired database.

To set up the IIS Server:

1. Download the web server application from our site downloads OnlinkBanking.com/Downloads/Server and place it into the desired folder location
2. Log on to the Web server computer as an administrator.
3. Click Start, point to Settings, and then click Control Panel.
4. Double-click Administrative Tools, and then double-click Internet Services Manager.
5. Click Action, point to New, and then click Web Site.
6. After the Web Site Creation Wizard starts, click Next.
7. Type a description for the Web site.
8. Select the IP address to use for the site.
9. Type the TCP port number to publish the site on.
10. Type the Host Header name (the real name that is used to access this site).
11. Click Next.
12. Either type the path to the folder that is holding the Web site documents or click Browse to select the folder, and then click Next.
13. Select the access permissions for the Web site, and then click Next.
14. Click Finish.

To set up the server connection to the database:

1. Go to your application in IIS and choose Configuration Editor
2. Choose system.webServer/aspNetCore (RC2 and RTM)
3. Choose Applicationhost.config ... in From combobox.
4. Right click on environmentVariables element, select 'environmentVariables' element, then Edit Items.
5. Set an environment variable with the key “DBConn:ConnectionString” and the associated value to “server = [databaseLocation]; user = [accountUser]; database = OnlineBanking; port = [port#]; password = [password];” Replace each entry in brackets to values corresponding to the database settings.
6. Click the apply button to apply changes.

Setup Database

The web server application connects to a MySQL Database server.

To install database server:

1. Go to http://dev.mysql.com/downloads/installer/.
2. Click the Download button.
3. Save the installer file to your system.
4. Right-click the downloaded installation file (for example, mysql-installer-community-5.6.14.0.msi) and click Run.
5. On the Welcome panel, select Install MySQL Products.
6. On the License Information panel, review the license agreement, click the acceptance checkbox, and click Next.
7. On the Find latest products panel, click Execute.
8. When the operation is complete, click Next.
9. On the Setup Type panel, choose the Custom option and click Next.
10. On the Feature Selection panel, ensure MySQL Server 5.6.x is selected, and click Next.
11. On the Check Requirements panel, click Next.
12. On the Installation panel, click Execute.
13. When the server installation is completed successfully, the information message appears on the Installation panel. Click Next.
14. On the Configuration panel, click Next.
15. At the first MySQL Server Configuration page (1/3), set the following options:
    a. Under “Server Configuration Type”. Select the Development Machine option.
    b. Under “Enable TCP/IP Networking”. Ensure the checkbox is selected and specify the options below:
        i. Under “Port Number”. Specify the connection port.
        ii. Under “Open Firewall port for network access”. Select to add firewall exception for the specified port.
16. Click Next.
17. At the second MySQL Server Configuration page (2/3), set the following options:
    a. Under “Root Account Password”:
        i. Under “MySQL Root Password”. Enter the root user's password.
        ii. Under “Repeat Password”. Retype the root user's password.
    b. Under “MySQL User Accounts”. Click Add User to create a user account. In the MySQL User Details dialog box, enter a user name, a database role, and a password.
    c. Click OK.
18. Click Next.
19. At the third MySQL Server Configuration page (3/3), set the following options:
    a. Under “Windows Service Name”. Specify a Windows Service Name to be used for the MySQL server instance.
    b. Under “Start the MySQL Server at System Startup”. Leave the checkbox selected if the MySQL server is required to automatically start at system startup time.
    c. Under “Run Windows Service as”. Choose Standard System Account.

20. Click Next
21. At the Configuration Overview page, click Next.
22. When the configuration is completed successfully, the information message appears on the Complete panel. Click Finish

To setup the database:

1. Download the OnlineBankingDatabase.sql file from our site downloads OnlinkBanking.com/Downloads/Database and place it into the desired folder location
2. Open a command prompt window.
3. In the Command Prompt window, type, “sqlcmd -S [server_name] -i “ and the location of the OnlineBankingDatabase.sql with the file name. Replace server_name with the name of the server
4. Press ENTER.

System Maintenance

If any maintenance, changes, or additional functionality needs to be made to the Online Banking application, it is helpful to know some of the ins and outs of the code and to be made aware of some of the specifics of the code. This section of the document will go into a bit of detail on some parts of the project to help the maintenance person understand the project. Because this project is a 3-tier project, this discussion of the code will be grouped into the three different tiers of the architecture. The application is organized in a MVC format with controllers and models being in C# and Views being in HTML, CSS, Javascript and ASp.Net.

C# Code - Controllers and Models

The C# code consists of 6 controllers and 12 models. In addition to the models, a DatabaseHandler also relays information from the database. The models map data from the database to C# variables to be passed to the client from the View files. The controllers route information from the client to other processes like the Database handler. The Database handler relays information to and from the database using either parameterized input from the client to be sent to the database via stored procedures or a stored procedure is called and information is retrieved from the database to be sent to the client.

HTML, CSS, Javascript, Asp.Net - Views

The Views consist of 11 view files that convert the C# information into a display for the client via a combination of HTML, CSS, Javascript and Asp.Net. These views create 5 pages; Alerts, Home, Login, Reports, Rules, Template and Transactions.

SQL Code

The database is written in SQL and consists of 8 tables, 14 stored procedures, a trigger on transactions to generate alerts and a monthly event to generate monthly reports.