



User Requirements

You are required to provide a new **Angular/WebAPI** solution to **manage people**, their **accounts** and **transactions** logged against these accounts.

OPTIONAL FOR JUNIORS ONLY (Mandatory for Seniors & Intermediate):
Please employ SOLID principles for this assessment.

General

You are required to create an MVC web project with access to the following links:

- Home
- Persons
- About
- Contact

The above links should be displayed automatically as a top menu and have the same appearance and functionality on every page within the website solution. The web site must be well styled and offer a friendly user interface.

OPTIONAL: Design your own logo which can also appear on every web page and always links to the home page. You can create unit tests to test your application logic.

Home Page

The home page will be a welcome screen with a brief description of what the web site is about.

About Page

Use the about page to display any information you may feel is relevant to this assessment or to tell us more about yourself.

Contact Pages

Use the contact page to display your contact information (this information can be fictitious).

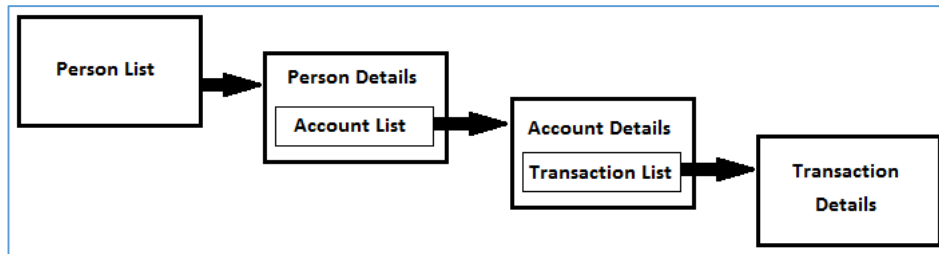
OPTIONAL: Your contact page can have working links to email you directly and to your favourite social page (actual links can be fictitious if you prefer, but they must work).

Persons List Page

The persons list page must provide the following features:

- Display a list of existing persons with links for editing and deleting.
- Effectively find a person or an account by using any of the following criteria:
 - ID Number
 - Surname
 - Account Number

- Allow you to create new persons.
- The navigation map should be similar to the following flow diagram:



OPTIONAL FOR JUNIORS ONLY (Mandatory for Seniors & Intermediate):
The persons list must include paging with a maximum of 10 persons per page.

Person Details

The person details page will be used to capture a person's details. It must have the following features:

- Allow the user to change and save the person information.
- Provision to add new accounts.
- Display a list of existing accounts for the person with a link for editing.

Account Details

The account details page will be used to capture account details. It should include the following features:

- Allow the user to change and save the account information.
- Add new transactions.
- Display a list of existing transactions for the account with a link for editing.

OPTIONAL FOR JUNIORS ONLY (Mandatory for Seniors & Intermediate):
Provision must be made to close an account or to re-open it.

Transaction Details

The transaction details page will be where transactions can be captured. It must have the following features:

- Allow the user to change and save the transaction information.
- You must use a DatePicker for the Transaction Date.
- The transaction capture date must be updated whenever it is created or edited.



Validation and Business Rules

All user input must be fully validated according to data types and database specification. In addition, the following must also be applied:

Persons

- A person can only be created once with the same ID Number.
- A person can have an unlimited number of accounts.
- Only persons with no accounts or where all accounts are closed may be deleted.

Accounts

- You cannot have duplicated account numbers.
- New accounts can only be added after the person is created (not while it is being created).
- The user is never allowed to change the account outstanding balance.
- An account may have an unlimited number of transactions.
- The outstanding balance for the account must be updated whenever a new transaction is added or when the amount for an existing transaction is modified.
- If applicable, you cannot close an account when the balance is not zero.
- If applicable, no transactions may be posted to closed accounts.

Transactions

- The transaction date can never be in the future.
- New transactions can only be added after the account is created (not while it is being created).
- The user is never allowed to change the capture date.
- Users may enter debit or credit amounts for a transaction.
- The transaction amount can never be zero (0).

Database Requirements

Create a new SQL database using any version of Microsoft SQL Server or Server Express >= 2005. Use the attached script to create 3 tables (Persons, Accounts and Transactions) and populate those tables with sample data.



InteractiveMVC_Tables_With_Data.sql

OPTIONAL FOR JUNIORS ONLY (Mandatory for Seniors & Intermediate):

Use of stored procedures or SQL views should be used to return data to the presentation layer, the database should also be indexed correctly for performance on larger data sets.