

2018 Web Applications

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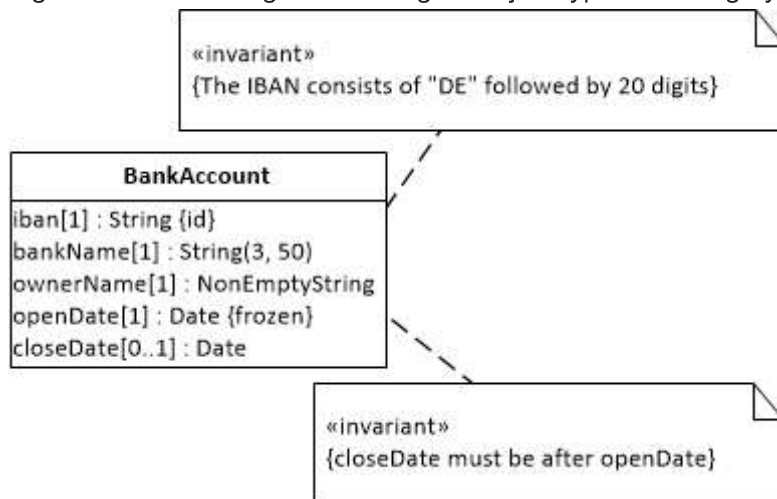
Assignment 2

Develop a JS Front-End App with Constraint Validation

Attention: this is not a team assignment, but an individual assignment, so all participants must submit a solution.

This "validation app" assignment builds upon the "minimal" app created in the previous assignment. The app to be built should be based on the information design model shown in Figure 1.

Figure 1: A class diagram defining an object type with integrity constraints



In this model, the following constraints have been expressed:

1. Due to the fact that the `iban` attribute is declared to be the standard ID attribute, it is **mandatory** and **unique**.
2. The `iban` attribute has a **pattern constraint** requiring its values to start with "DE" followed by 20 digits.
3. The `bankName` attribute is **mandatory**, as indicated by the multiplicity expression [1] appended to the attribute name. It also has a string length constraint requiring it to have at least 3 and at most 50 characters.
4. The `ownerName` attribute is also **mandatory**.
5. The `openDate` attribute is **mandatory** and **frozen**.
6. Any `closeDate` must be after the corresponding `openDate`.

Notice that the `closeDate` attribute is not mandatory, but optional, as indicated by its multiplicity expression `[0..1]`.

In addition to the constraints described in this list, there are the implicit range constraints defined by assigning the datatypes `String` to `iban` and `bankName`, `NonEmptyString` to `ownerName`, and `Date` to `openDate` and `closeDate`.

In our plain JavaScript approach, all these property constraints are coded in the model class within property-specific *check* functions.

In the model code of your app, you have to take care of

1. adding, for every property, a **check** function that validates the constraints defined for the property, and a **setter** method that invokes the check function and is to be used for setting the value of the property,
2. **performing validation** before any data is saved in the `add` and `update` methods,

while In the user interface ("view") code you have to take care of

1. **validation on user input** for providing immediate feedback to the user,
2. **validation on form submission** for preventing the submission of invalid data.

Make sure that your pages comply with the XML syntax of HTML5 by means of [XHTML5 validation](#) (setting the validator field `Preset` to "HTML + SVG 1.1 + MathML 3.0"), and that your JavaScript code complies with our [Coding Guidelines](#) and is checked with JSHint (<http://www.jshint.com>).

You can use the following sample data for testing your app:

IBAN	Bank	Owner	Opening date	Closing date
DE89860100900123456789	Postbank Leipzig	Hans Meier	2009-05-12	2011-11-11
DE89120700000047114711	Deutsche Bank Berlin	Hans Meier	2011-11-11	
DE66100800000047114711	Commerzbank Berlin	Erna Meier	2013-02-21	

Submission

Submit your solution code by packaging your app's folder in a zip archive, and include your name in its file name (i.e., `assignment_2_wagner.zip`).

Evaluation Criteria

Type	ID	Description	Total Points
Penalty	P	2.5% penalty per day for late submission	-2.50%
Functionality	F1	Create/Retrieve/Update/Delete works	1.00
	F2	Created check functions	0.50
	F3	Created setter functions	0.50
	F4	Validation on user input	1.00
	F5	Validation on form submission	1.00
Validation	V1	iban (Mandatory / Unique / Pattern Constraint)	1.00
	V2	bankName (Mandatory / Length)	1.00
	V3	ownerName (Mandatory)	0.50
	V4	openDate (Mandatory / Frozen)	1.00

Type	ID	Description	Total Points
	V5	closeDate (Constraint)	0.50
Quality	Q1	HTML compliance	1.00
	Q2	Coding Guidelines	1.00

Abgabestatus

Abgabestatus

Kein Versuch

Bewertungsstatus

Nicht bewertet

Fälligkeitsdatum

Donnerstag, 19. April 2018, 23:55

Verbleibende Zeit

Abgabeende überschritten seit: 9 Tage 15 Stunden

Zuletzt geändert

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Abgabekommentare

 [Kommentare \(0\)](#)[Abgabe hinzufügen](#)[Lösung ändern](#)[◀ Reading assignment 2: JS Front-End Web Apps Tutorial Part 2 \(Constraint Validation\)](#)

Direkt zu:

[Quiz 2 ▶](#)

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WebApp-18

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