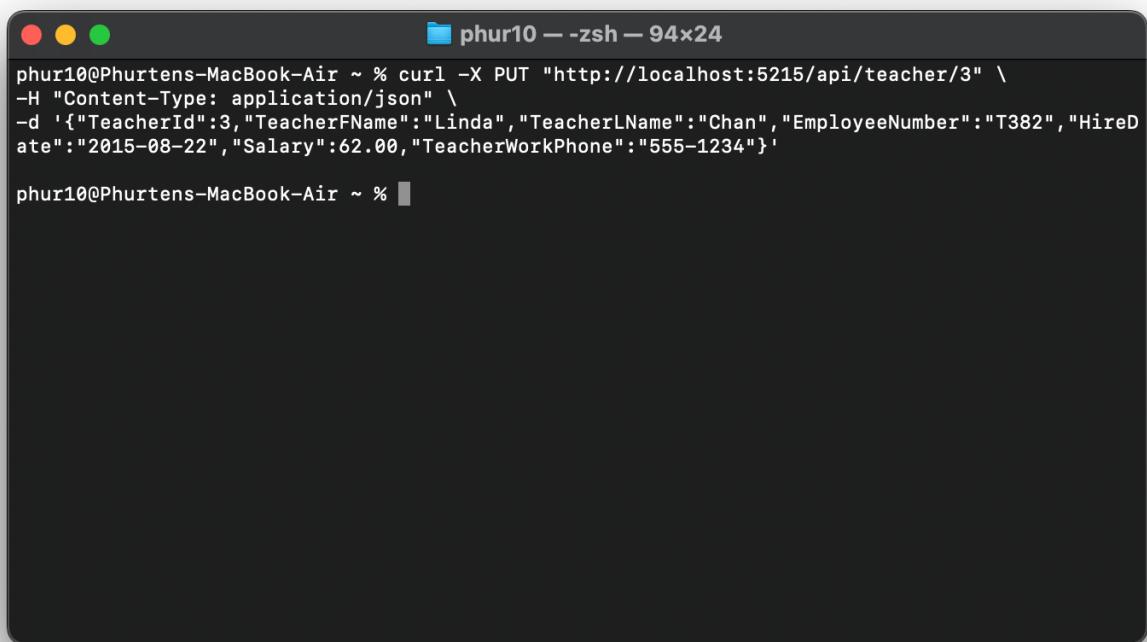


# C# Cumulative 3 Testing Screenshots

## 1. Successful Update:

```
curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d'{
    "TeacherId":3,
    "TeacherFName":"Linda",
    "TeacherLName":"Chan",
    "EmployeeNumber":"T382",
    "HireDate":"2015-08-22",
    "Salary":62.00,
    "TeacherWorkPhone":"555-1234"
}'
```



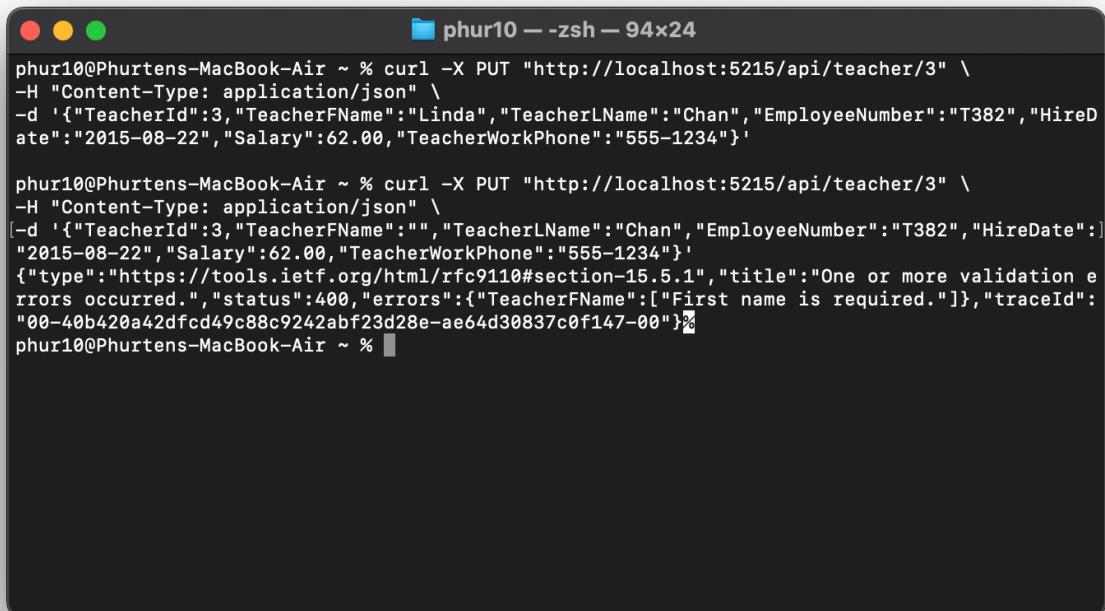
A screenshot of a macOS terminal window titled "phur10 — -zsh — 94x24". The window shows the command line input and output. The command entered is:

```
curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d'{
    "TeacherId":3,
    "TeacherFName":"Linda",
    "TeacherLName":"Chan",
    "EmployeeNumber":"T382",
    "HireDate":"2015-08-22",
    "Salary":62.00,
    "TeacherWorkPhone":"555-1234"
}'
```

The output shows the command being run and the prompt returning to the user.

## 2. Empty First Name

```
curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d'{
"TeacherId":3,
"TeacherFName":"",
"TeacherLName":"Chan",
"EmployeeNumber":"T382",
"HireDate":"2015-08-22",
"Salary":62.00,
"TeacherWorkPhone":"555-1234"
}'
```

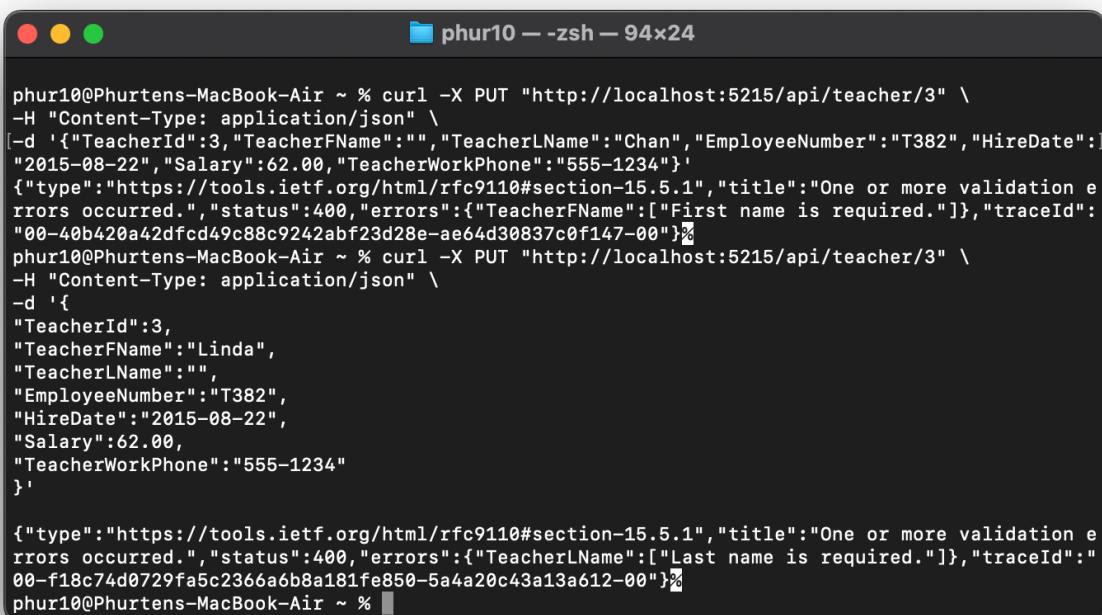


```
phur10@Phurtens-MacBook-Air ~ % curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d'{
"TeacherId":3,
"TeacherFName":"",
"TeacherLName":"Chan",
"EmployeeNumber":"T382",
"HireDate":"2015-08-22",
"Salary":62.00,
"TeacherWorkPhone":"555-1234"
}'
```

```
phur10@Phurtens-MacBook-Air ~ % curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d'{
"TeacherId":3,
"TeacherFName":"",
"TeacherLName":"Chan",
"EmployeeNumber":"T382",
"HireDate":"2015-08-22",
"Salary":62.00,
"TeacherWorkPhone":"555-1234"
}'{"type": "https://tools.ietf.org/html/rfc9110#section-15.5.1", "title": "One or more validation errors occurred.", "status": 400, "errors": {"TeacherFName": ["First name is required."]}, "traceId": "00-40b420a42dfcd49c88c9242abf23d28e-ae64d30837c0f147-00"}%
```

### 3. Empty Last Name

```
curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d'{
"TeacherId":3,
"TeacherFName":"Linda",
"TeacherLName":"",
"EmployeeNumber":"T382",
"HireDate":"2015-08-22",
"Salary":62.00,
"TeacherWorkPhone":"555-1234"
}'
```



A terminal window titled "phur10 — zsh — 94x24" running on a Mac OS X system. The window contains the following text:

```
phur10@Phurtens-MacBook-Air ~ % curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d'{
"TeacherId":3,
"TeacherFName":"Linda",
"TeacherLName":"",
"EmployeeNumber":"T382",
"HireDate":"2015-08-22",
"Salary":62.00,
"TeacherWorkPhone":"555-1234"
}'
```

The response from the server is displayed below the command:

```
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.", "status":400, "errors":{"TeacherLName":["Last name is required."]}}, "traceId": "00-40b420a42dfcd49c88c9242abf23d28e-ae64d30837c0f147-00"}%
```

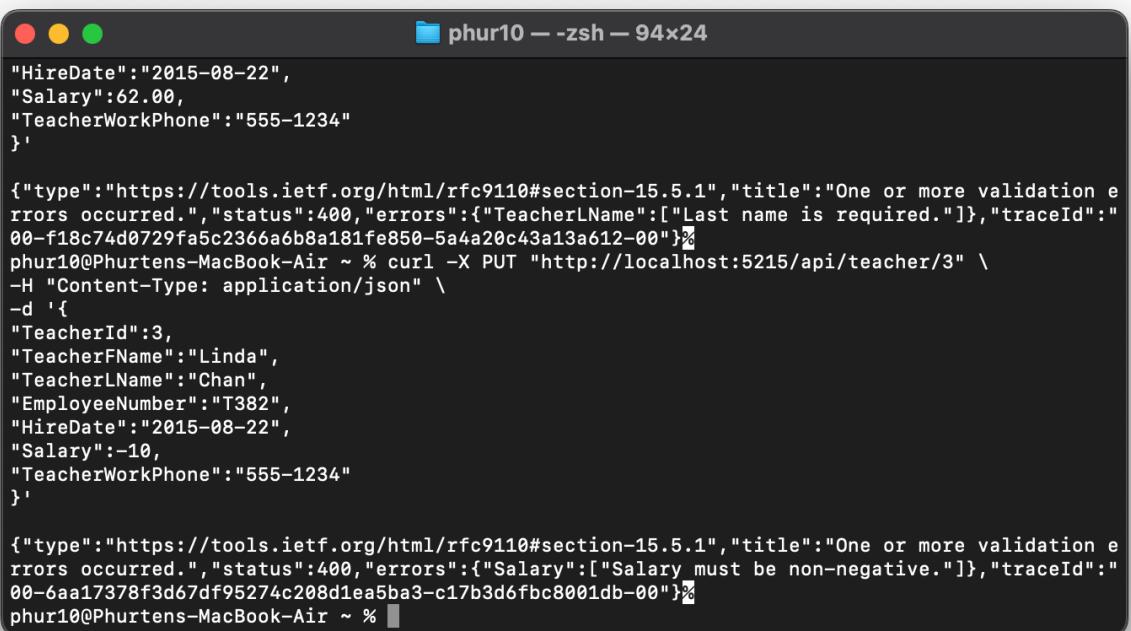
```
phur10@Phurtens-MacBook-Air ~ % curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d'{
"TeacherId":3,
"TeacherFName":"Linda",
"TeacherLName":"",
"EmployeeNumber":"T382",
"HireDate":"2015-08-22",
"Salary":62.00,
"TeacherWorkPhone":"555-1234"
}'
```

```
{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.", "status":400, "errors":{"TeacherLName":["Last name is required."]}}, "traceId": "00-f18c74d0729fa5c2366a6b8a181fe850-5a4a20c43a13a612-00"}%
```

```
phur10@Phurtens-MacBook-Air ~ %
```

## 4. Negative Salary

```
curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d '{
"TeacherId":3,
"TeacherFName":"Linda",
"TeacherLName":"Chan",
"EmployeeNumber":"T382",
"HireDate":"2015-08-22",
"Salary":-10,
"TeacherWorkPhone":"555-1234"
}'
```



The screenshot shows a terminal window titled "phur10 — zsh — 94x24". The user has run a curl command to update a teacher record with a negative salary. The command and its output are as follows:

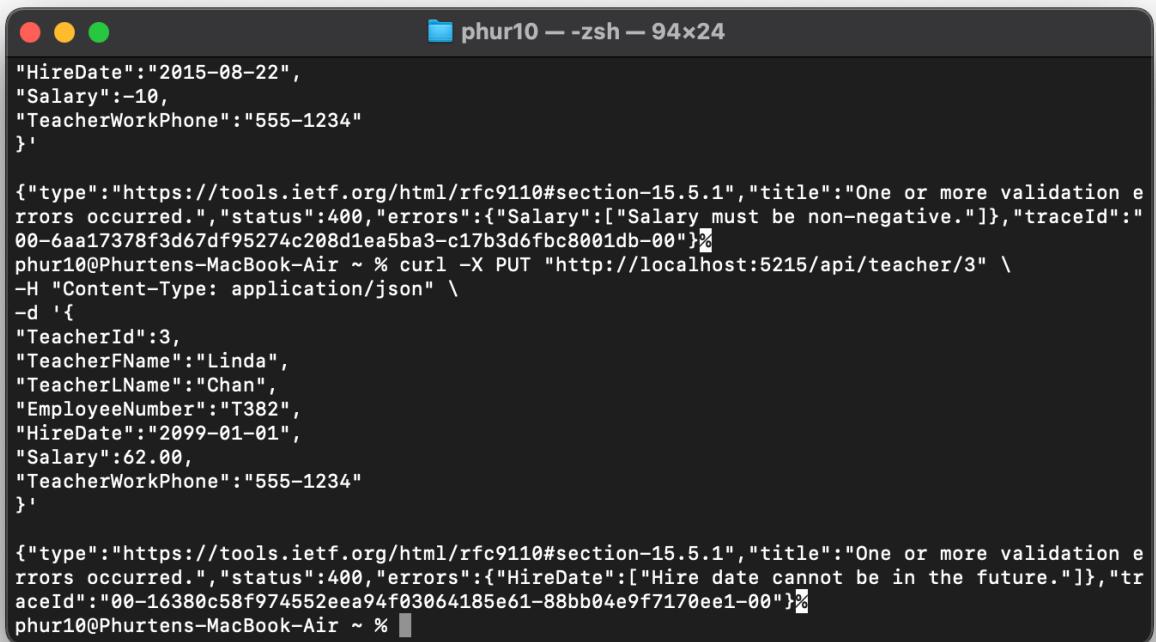
```
"HireDate":"2015-08-22",
"Salary":62.00,
"TeacherWorkPhone":"555-1234"
}'

{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation e
rrors occurred.","status":400,"errors":{"TeacherLName":["Last name is required."]}, "traceId":"
00-f18c74d0729fa5c2366a6b8a181fe850-5a4a20c43a13a612-00"}%
phur10@Phurtens-MacBook-Air ~ % curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d '{
"TeacherId":3,
"TeacherFName":"Linda",
"TeacherLName":"Chan",
"EmployeeNumber":"T382",
"HireDate":"2015-08-22",
"Salary":-10,
"TeacherWorkPhone":"555-1234"
}'

{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation e
rrors occurred.","status":400,"errors":{"Salary":["Salary must be non-negative."]}, "traceId":"
00-6aa17378f3d67df95274c208d1ea5ba3-c17b3d6fbc8001db-00"}%
phur10@Phurtens-MacBook-Air ~ %
```

## 5. Hire Date in the Future

```
curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d '{
  "TeacherId":3,
  "TeacherFName":"Linda",
  "TeacherLName":"Chan",
  "EmployeeNumber":"T382",
  "HireDate":"2099-01-01",
  "Salary":62.00,
  "TeacherWorkPhone":"555-1234"
}'
```



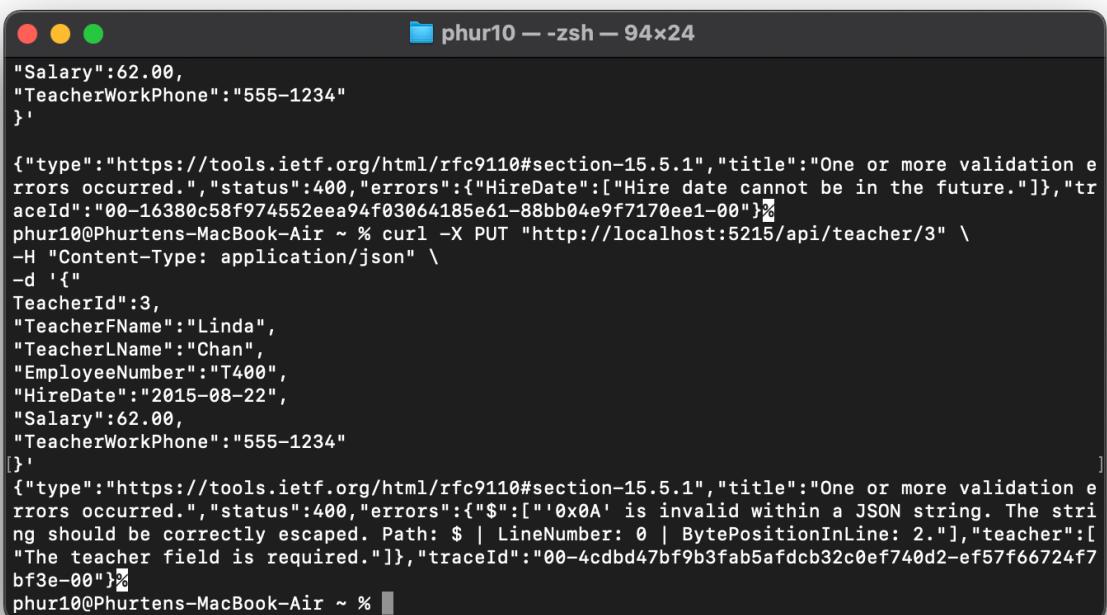
```
"HireDate":"2015-08-22",
"Salary":-10,
"TeacherWorkPhone":"555-1234"
}'

{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation e
rrors occurred.", "status":400, "errors":{"Salary":["Salary must be non-negative."]}, "traceId":"
00-6aa17378f3d67df95274c208d1ea5ba3-c17b3d6fbc8001db-00"}%
phur10@Phurtens-MacBook-Air ~ % curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d '{
  "TeacherId":3,
  "TeacherFName":"Linda",
  "TeacherLName":"Chan",
  "EmployeeNumber":"T382",
  "HireDate":"2099-01-01",
  "Salary":62.00,
  "TeacherWorkPhone":"555-1234"
}'

{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation e
rrors occurred.", "status":400, "errors":{"HireDate":["Hire date cannot be in the future."]}, "tr
aceId":"00-16380c58f974552eea94f03064185e61-88bb04e9f7170ee1-00"}%
phur10@Phurtens-MacBook-Air ~ %
```

## 6. Duplicate Employee Number

```
curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d'{
TeacherId":3,
"TeacherFName":"Linda",
"TeacherLName":"Chan",
"EmployeeNumber":"T400",
"HireDate":"2015-08-22",
"Salary":62.00,
"TeacherWorkPhone":"555-1234"
}'
```



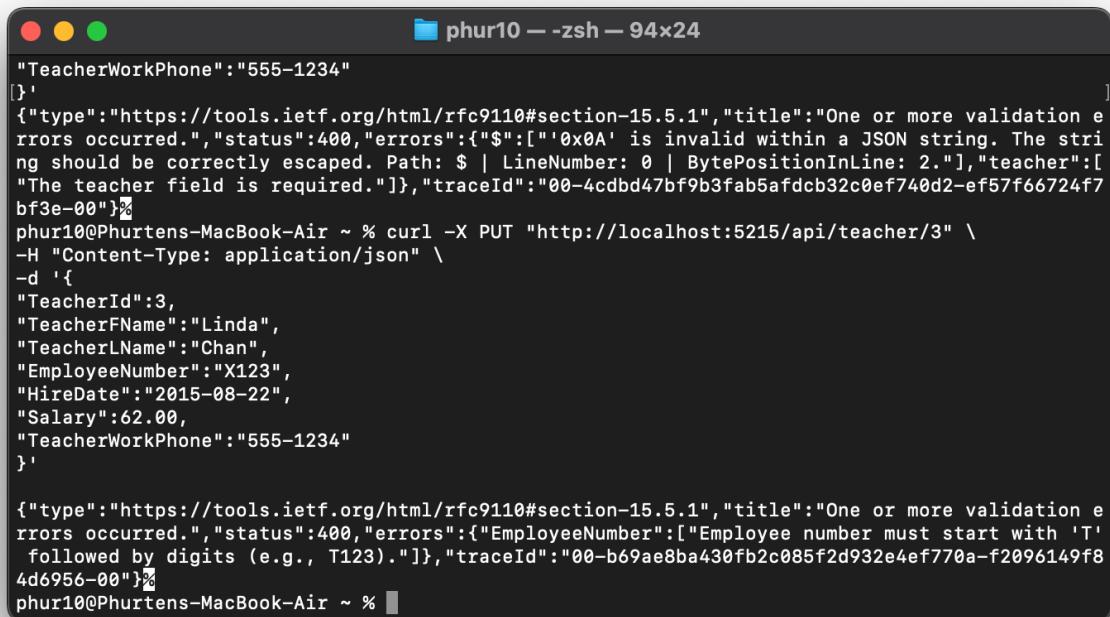
A terminal window titled "phur10 — zsh — 94x24" displays the following JSON data and validation errors:

```
"Salary":62.00,
"TeacherWorkPhone":"555-1234"
}'

{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation e
rrors occurred.","status":400,"errors": [{"HireDate":["Hire date cannot be in the future."]}],"tr
aceId":"00-16380c58f974552eea94f03064185e61-88bb04e9f7170ee1-00"}]
phur10@Phurtens-MacBook-Air ~ % curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d '{
TeacherId":3,
"TeacherFName":"Linda",
"TeacherLName":"Chan",
"EmployeeNumber":"T400",
"HireDate":"2015-08-22",
"Salary":62.00,
"TeacherWorkPhone":"555-1234"
}'
[{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation e
rrors occurred.","status":400,"errors": [{"$": ["'0x0A' is invalid within a JSON string. The stri
ng should be correctly escaped. Path: $ | LineNumber: 0 | BytePositionInLine: 2."}],"teacher": [
"The teacher field is required."]}, {"traceId":"00-4cdbd47bf9b3fab5afdc32c0ef740d2-ef57f66724f7
bf3e-00"}]
phur10@Phurtens-MacBook-Air ~ % ]
```

## 7. Invalid Employee Number Format

```
curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d '{
  "TeacherId":3,
  "TeacherFName":"Linda",
  "TeacherLName":"Chan",
  "EmployeeNumber":"X123",
  "HireDate":"2015-08-22",
  "Salary":62.00,
  "TeacherWorkPhone":"555-1234"
}'
```



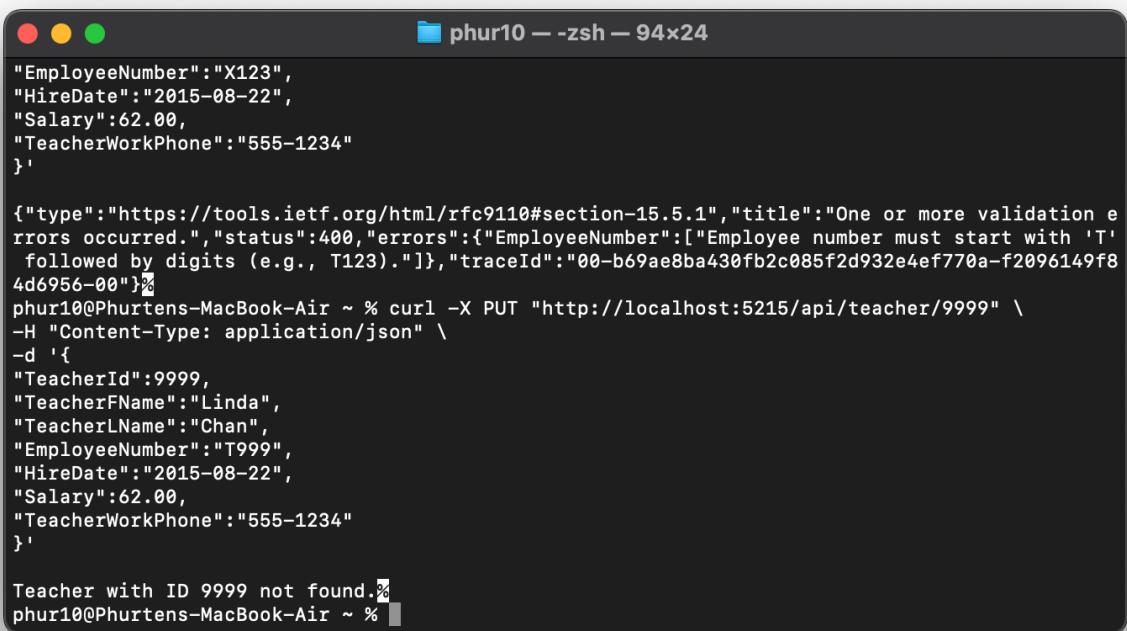
The screenshot shows a terminal window titled 'phur10 -- zsh -- 94x24'. The user has run a curl command to update a teacher record with an invalid EmployeeNumber ('X123'). The response is a JSON object containing validation errors:

```
"TeacherWorkPhone": "555-1234"
[{"type": "https://tools.ietf.org/html/rfc9110#section-15.5.1", "title": "One or more validation errors occurred.", "status": 400, "errors": {"$": ["'0xA' is invalid within a JSON string. The string should be correctly escaped. Path: $ | LineNumber: 0 | BytePositionInLine: 2."]}, "teacher": [{"The teacher field is required."}], "traceId": "00-4cdedb47bf9b3fab5afdcdb32c0ef740d2-ef57f66724fb3e-00"}]
phur10@Phurtens-MacBook-Air ~ % curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d '{
  "TeacherId":3,
  "TeacherFName":"Linda",
  "TeacherLName":"Chan",
  "EmployeeNumber":"X123",
  "HireDate":"2015-08-22",
  "Salary":62.00,
  "TeacherWorkPhone":"555-1234"
}'

{"type": "https://tools.ietf.org/html/rfc9110#section-15.5.1", "title": "One or more validation errors occurred.", "status": 400, "errors": {"EmployeeNumber": ["Employee number must start with 'T' followed by digits (e.g., T123)."]}}, "traceId": "00-b69ae8ba430fb2c085f2d932e4ef770a-f2096149f84d6956-00"}%
```

## 8. Teacher Not Found

```
curl -X PUT "http://localhost:5215/api/teacher/9999" \
-H "Content-Type: application/json" \
-d '{
  "TeacherId":9999,
  "TeacherFName":"Linda",
  "TeacherLName":"Chan",
  "EmployeeNumber":"T999",
  "HireDate":"2015-08-22",
  "Salary":62.00,
  "TeacherWorkPhone":"555-1234"
}'
```



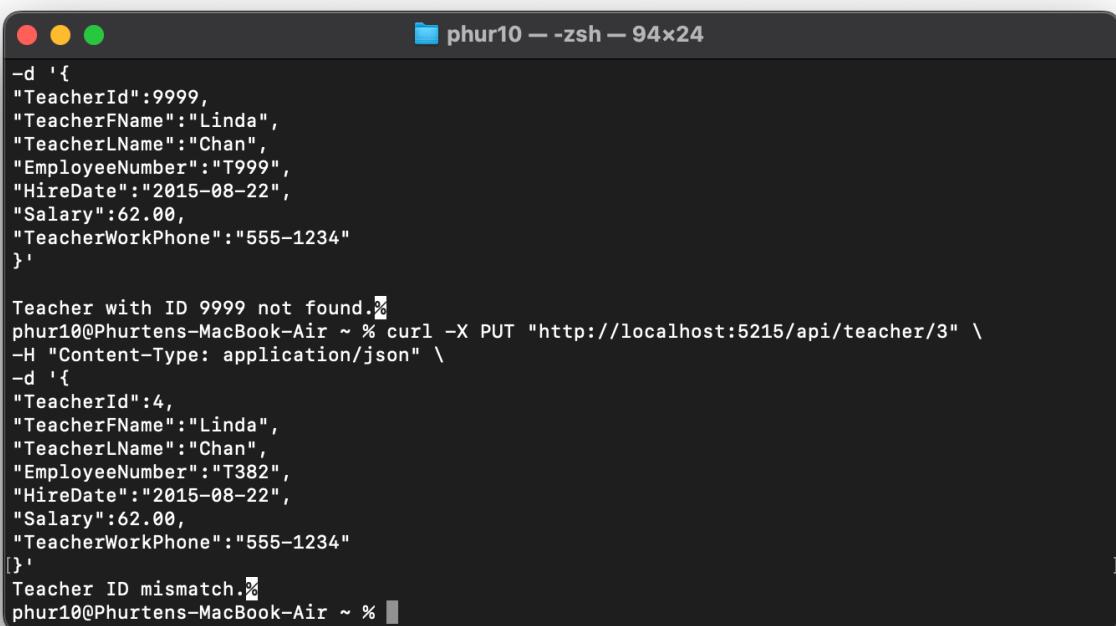
```
phur10 — zsh — 94x24
"EmployeeNumber":"X123",
"HireDate":"2015-08-22",
"Salary":62.00,
"TeacherWorkPhone":"555-1234"
}'

{"type":"https://tools.ietf.org/html/rfc9110#section-15.5.1","title":"One or more validation errors occurred.","status":400,"errors":{"EmployeeNumber":["Employee number must start with 'T' followed by digits (e.g., T123)."]}}, "traceId":"00-b69ae8ba430fb2c085f2d932e4ef770a-f2096149f84d6956-00"}%
phur10@Phurtens-MacBook-Air ~ % curl -X PUT "http://localhost:5215/api/teacher/9999" \
-H "Content-Type: application/json" \
-d '{
  "TeacherId":9999,
  "TeacherFName":"Linda",
  "TeacherLName":"Chan",
  "EmployeeNumber":"T999",
  "HireDate":"2015-08-22",
  "Salary":62.00,
  "TeacherWorkPhone":"555-1234"
}'

Teacher with ID 9999 not found.%
```

## 9. ID Mismatch

```
curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d '{
  "TeacherId":4,
  "TeacherFName":"Linda",
  "TeacherLName":"Chan",
  "EmployeeNumber":"T382",
  "HireDate":"2015-08-22",
  "Salary":62.00,
  "TeacherWorkPhone":"555-1234"
}'
```



The screenshot shows a terminal window titled "phur10 — -zsh — 94x24". The terminal displays the following command and its output:

```
-d '{
  "TeacherId":9999,
  "TeacherFName":"Linda",
  "TeacherLName":"Chan",
  "EmployeeNumber":"T999",
  "HireDate":"2015-08-22",
  "Salary":62.00,
  "TeacherWorkPhone":"555-1234"
}'

Teacher with ID 9999 not found.%
```

After pressing Enter, the terminal shows the command again with a different TeacherId value:

```
phur10@Phurtens-MacBook-Air ~ % curl -X PUT "http://localhost:5215/api/teacher/3" \
-H "Content-Type: application/json" \
-d '{
  "TeacherId":4,
  "TeacherFName":"Linda",
  "TeacherLName":"Chan",
  "EmployeeNumber":"T382",
  "HireDate":"2015-08-22",
  "Salary":62.00,
  "TeacherWorkPhone":"555-1234"
}'
```

Finally, the terminal outputs an error message:

```
Teacher ID mismatch.%
```

## Web Successful Update (Salary changed to 88.00)

The screenshot shows a web browser window with the address bar set to 'localhost'. The title bar says 'Humber'. The page content is titled 'Edit Teacher' and displays a success message: 'Teacher updated successfully!'. Below the message, there are input fields for First Name (Jim), Last Name (Carrey), Employee Number (T1001), Hire Date (08/01/2024), Salary (88.00), and Work Phone (555-0001). At the bottom are 'Update Teacher' and 'Back to List' buttons, with 'Back to List' being highlighted.

The screenshot shows a web browser window with the address bar set to 'localhost'. The title bar says 'Humber'. The page content features a search form with 'Hire Date From:' set to '08/15/2025' and 'To:' set to '08/15/2025'. Below the form is a 'Search' button. A table lists 15 teacher records with columns: First Name, Last Name, Employee Number, Hire Date, Salary, Work Phone, and Actions (Details, Edit, Delete). The table rows are as follows:

First Name	Last Name	Employee Number	Hire Date	Salary	Work Phone	Actions
Alexander	Bennett	T378	2016-08-05	90.00	4374562324	<button>Details</button> <button>Edit</button> <button>Delete</button>
Caitlin	Cummings	T381	2014-06-10	62.77		<button>Details</button> <button>Edit</button> <button>Delete</button>
Linda	Chan	T382	2015-08-22	62.00	555-1234	<button>Details</button> <button>Edit</button> <button>Delete</button>
Lauren	Smith	T385	2014-06-22	74.20		<button>Details</button> <button>Edit</button> <button>Delete</button>
Jessica	Morris	T389	2012-06-04	48.62		<button>Details</button> <button>Edit</button> <button>Delete</button>
Thomas	Hawkins	T393	2016-08-10	54.45		<button>Details</button> <button>Edit</button> <button>Delete</button>
Shannon	Barton	T397	2013-08-04	64.70		<button>Details</button> <button>Edit</button> <button>Delete</button>
Dana	Ford	T401	2014-06-26	71.15		<button>Details</button> <button>Edit</button> <button>Delete</button>
Cody	Holland	T403	2016-06-13	43.20		<button>Details</button> <button>Edit</button> <button>Delete</button>
John	Taram	T505	2015-10-23	79.63		<button>Details</button> <button>Edit</button> <button>Delete</button>
Test	User	T999	2024-08-01	55.00	555-1234	<button>Details</button> <button>Edit</button> <button>Delete</button>
Jim	Carrey	T1001	2024-08-01	88.00	555-0001	<button>Details</button> <button>Edit</button> <button>Delete</button>
Carol	Lee	T1004				<button>Details</button> <button>Edit</button> <button>Delete</button>

## Empty First Name

The screenshot shows a web browser window with the address bar displaying 'localhost'. The page title is 'Edit Teacher'. The form contains the following fields:

- First Name: (empty input field)
- Last Name: Carrey
- Employee Number: T1001
- Hire Date: 08/01/2024
- Salary: 88.00
- Work Phone: 555-0001

At the bottom of the form are two buttons: 'Update Teacher' and 'Back to List'.

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# Empty Last Name

The screenshot shows a web browser window with the address bar displaying 'localhost'. The page title is 'Edit Teacher'. The form contains the following fields:

- First Name: Jim
- Last Name: (empty field with validation message 'Fill out this field'))
- Employee Number: T1001
- Hire Date: 08/01/2024
- Salary: 88.00
- Work Phone: 555-0001

At the bottom of the form are two buttons: 'Update Teacher' and 'Back to List'.

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# Negative Salary

The screenshot shows a web browser window with the address bar displaying 'localhost'. The page title is 'Edit Teacher'. The form fields are as follows:

- First Name: Jim
- Last Name: Carrey
- Employee Number: T1001
- Hire Date: 1998-01-01
- Salary:  (highlighted in blue with an error message)
- Work Phone: 555-0001

Below the form are two buttons: 'Update Teacher' and 'Back to List'. A validation message 'Value must be greater than or equal to 0' is displayed above the salary input field.

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## Future Hire Date

The screenshot shows a web browser window with the following details:

- Address Bar:** localhost
- Page Title:** CSharpSchoolMVC
- Section:** Edit Teacher
- Error Message:** *Hire date cannot be in the future.*
- Form Fields:**
  - First Name: Jim
  - Last Name: Carrey
  - Employee Number: T1001
  - Hire Date: 08/23/2025
  - Salary: 88.00
  - Work Phone: 555-0001
- Buttons:** Update Teacher, Back to List

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# Invalid Employee Number Format

localhost

CSharpSchoolMVC Home Privacy

Edit Teacher

First Name: Jim  
Last Name: Carrey  
Employee Number: SS001 Match the requested format  
Hire Date: 08/23/2022  
Salary: 88.00  
Work Phone: 555-0001

Update Teacher Back to List

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# Duplicate Employee Number

The screenshot shows a browser window with the following details:

- Address Bar:** localhost
- Page Title:** CSharpSchoolMVC
- Section:** Edit Teacher
- Error Message:** Update failed: ("EmployeeNumber":["Employee number already exists."])
- Form Fields (Initial Values):**
  - First Name: Jim
  - Last Name: Carrey
  - Employee Number: T999
  - Hire Date: 08/23/2024
  - Salary: 88.00
  - Work Phone: 555-0001
- Buttons:** Update Teacher (disabled), Back to List

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