

## szoftverarchitektúrák gyakorlatok

### 1. standalone, konzolos alkalmazás telepítés

The screenshot shows a GitHub repository page for 'Training360/architecture-public'. A Windows security warning is displayed over the README file, stating: 'A Windows megvédte a számítógépet. A Microsoft Defender SmartScreen megakadályozta egy nem felismert alkalmazás elindulását. Az alkalmazás futtatása veszélyeztetheti a számítógépet. Alkalmazás: LocationsCli-1.0.0.exe. Gyártó: Ismeretlen kiadó.' The warning has two buttons: 'Futtatás mindenképpen' (Run anyway) and 'Futtatás mellőzése' (Skip). The README file is titled 'Szoftverarchitektúrák' and describes a 'Standalone konzolos alkalmazás'. It includes a list of commands to run the application: 'C:\Program Files\LocationsCli> LocationsCli' and a list of options: '1. List locations', '2. Create location', '3. Edit location', '4. Delete location', '5. Exit'. The README also mentions that the application is a standalone console application and provides a link to the release page: 'public/releases/download/1.0.0/LocationsCli.exe'. The repository page shows 1 watch, 0 stars, and 0 forks.

### standalone, konzolos alkalmazás használat (listázás, adatbevitel, adatmódosítás, adattörlés)

The screenshot shows a Windows command prompt window running the 'LocationsCli' application. The prompt displays the following text: 'What is the coordinates of the location? Use 47.531605,21.627312 format!'. The user has entered '1,0,1,3' and the application has responded: 'Location has been created'. The application then displays a menu: '1. List locations', '2. Create location', '3. Edit location', '4. Delete location', '5. Exit'. The user has selected '1' and the application has displayed a table of locations:

| Id | Name     | Coordinates         |
|----|----------|---------------------|
| 1  | Budapest | 47,497912,19,040235 |
| 5  | Győr     | 47,687457,17,650397 |
| 6  | Home     | 1,100000,1,100000   |
| 8  | Home     | 1,000000,1,300000   |
| 3  | Miskolc  | 48,103478,20,778439 |
| 4  | Veszprém | 47,102809,17,909302 |

The application then prompts the user to 'Select a number, than press Enter!'. The user has entered '1' and the application has displayed the same menu as before. The command prompt window is titled 'C:\Program Files\LocationsCli> LocationsCli'.

2. központi adatbázis indítása docker containerben. (Itt eltelt pár perc, mire rájöttem, hogy egyrészt elírtam az értéket és ezért ahogy elindítottam, le is állt a container, aztán hogy nem is azért állt le, hanem mert csupa nagybetűvel kell a környezeti változókat beírni. 😊)

The screenshot shows a Windows command prompt window with the following commands and output:

```
C:\WINDOWS\system32>robocopy E:\ H:\ /mit /e /r:2 /w:3 /eta /v /log:H:\naplo.txt
Log File : H:\naplo.txt
C:\WINDOWS\system32>robocopy E:\ H:\ * /e /r:2 /w:3 /eta /v /log:H:\naplo.txt
Log File : H:\naplo.txt
C:\WINDOWS\system32>docker run -d -e mysql_database=locations -e mysql_user=locations -e mysql_password=locations -e mysql_allow_empty_password=yes -p 3306:3306 --name locations-db mariadb
dad32cee74f122b5e96f8c40241909862c05c648931578439bcf42f6e3303e3
C:\WINDOWS\system32>
```

The web application interface shows the title "Központi adatbázis" and the instruction: "Amennyiben Docker telepítve van a gépedre, indítsd el az adatbázist a következő paranccsal:"

```
QL_PASSWORD=locations -e MYSQL_ALLOW_EMPTY_PASSWORD=yes -p 3306:3306 --name locations-dbclient-mariadb mariadb
```

Below this, it says: "Írd át az alkalmazás konfigurációs állományában, hogy az adatbázishoz kapcsolódjon! Ennek kell benne szerepelnie:"

```
config.store = "db"
config.db.type = "mysql"
config.db.url = "mysql://locations:locations@localhost:3306/locations"
config.db.logging = false
```

It then says: "Majd indítsd el az alkalmazást!"

Under "SQL nyelv", there is a link "SQL konzol".

At the bottom, it shows the command: `docker exec -it locations-dbclient-mariadb mysql locations`.

3. standalone, grafikus alkalmazás config.js állomány módosítás, hogy a containerben futó adatbázishoz kapcsolódjon

The screenshot shows a web application interface with the title "config.js - Jegyzet" and the following code:

```
const config = {}
config.db = {}
config.mongo = {}
config.rest = {}

//config.store = "inmemory"

config.store = "db"
config.db.type = "mysql"
config.db.url = "mysql://locations:locations@localhost:3306/locations"
config.db.logging = false

//config.store = "mongo"
//config.mongo.url = "mongodb://localhost:27017/locations"
//config.mongo.logging = true

//config.store = "rest"
//config.rest.url = "http://localhost:8080"
```

Below the code, it says: "Írd át az alkalmazás konfigurációs állományában, hogy az adatbázishoz kapcsolódjon! Ennek kell benne szerepelnie:"

```
config.store = "db"
config.db.type = "mysql"
config.db.url = "mysql://locations:locations@localhost:3306/locations"
config.db.logging = false
```

It then says: "Majd indítsd el az alkalmazást!"

Under "SQL nyelv", there is a link "SQL konzol".

Below this, it shows the command: `docker exec -it locations-dbclient-mariadb mysql locations`.

Under "SQL utasítások", there is a link "desc location;"

## adatbevitel grafikus felületen

The screenshot shows a web application interface for managing locations. The 'Locations' form is open, displaying fields for Name, Coordinates, Interesting at, and Tags. A file explorer window is open in the background, showing the local file system. The console shows a 'Successful post' message.

**Locations**

Name\*  
work 1

Coordinates (format: 47.4979,19.0402, no spaces, max. 6 digits after decimal point)\*  
1.1,2

Interesting at (format: 2019-09-11T15:31:04)

Tags (format: favourite, capital)  
ez egy tag

Create location Cancel Refresh table

Majd indítsd el az alkalmazást!

**SQL nyelv**

- SQL konzol

```
docker exec -it locations-database mariadb mysql locations
```

- SQL utasítások

```
desc location;
```

## 4. adatbevitel, módosítás, törlés SQL konzolon, containerben

The screenshot shows a web application interface for managing locations. The 'Locations' form is open, displaying a table of locations. A terminal window is open in the background, showing SQL commands and their output.

**Locations**

Location has been modified

Create location Refresh table

| ID | Name     | Coordinates | Interesting at | Tags               |
|----|----------|-------------|----------------|--------------------|
| 1  | work - 3 | 1, 1        |                | otthon édes otthon |
| 2  | work 1   | 1.1, 2      |                | ez egy tag         |
| 3  | work 2   | 2.1, 3      |                |                    |

**NoSQL adatbázisok**

MongoDB elindítása:

```
docker run -d -p27017:27017 --name locations-mongo mongo
```

Parancssoros kliens elindítása:

```
docker exec -it locations-mongo mongo locations
```

Parancsok:

```
db.location.find()
db.location.insert({name: "work", lat: 2, lon: 3})
```

Terminal output:

```
Field | Type | Null | Key | Default | Extra
id | int(11) | NO | PRI | NULL | auto_increment
name | varchar(255) | NO | | NULL |
lat | double | NO | | NULL |
lon | double | NO | | NULL |
interesting_at | datetime | YES | | NULL |
5 rows in set (0.002 sec)

MariaDB [locations]> insert into location(name, lat, lon) values ('work 2', 2.1, 3);
Query OK, 1 row affected (0.022 sec)

MariaDB [locations]> select * from location
-> ;
+----+-----+-----+-----+-----+
| id | name | lat | lon | interesting_at |
+----+-----+-----+-----+-----+
| 1 | Home | 1 | 1 | NULL |
| 2 | work 1 | 1.1 | 2 | NULL |
| 3 | work 2 | 2.1 | 3 | NULL |
+----+-----+-----+-----+-----+
3 rows in set (0.000 sec)

MariaDB [locations]> update location set name = 'work - 3' where ID = 1;
Query OK, 1 row affected (0.042 sec)
Rows matched: 1 Changed: 1 Warnings: 0

MariaDB [locations]>
```

A locations alkalmazásban sem törölhető a felvitt kedvenc hely, ha van tag hozzá.

The screenshot shows the 'Locations' application interface. A modal dialog asks 'Are you sure to delete location?' with 'Delete location' and 'Cancel' buttons. Below the dialog is a table with columns: Id, Name, Coordinates, Interesting at, and Tags. The table contains one row with Id 2, Name 'work 1', Coordinates '1.1, 2', and Tags 'ez egy tag'. To the right, a console window shows a JavaScript error: 'Uncaught (in promise) QueryFailedError: ER\_ROW\_ID\_REFERENCED\_2: Cannot delete or update a parent row: a foreign key constraint fails ('locations', 'tag', CONSTRAINT FK\_tagofff1e4e9a12e4d979e4 FOREIGN KEY ('locationId') REFERENCES 'location' ('id') ON DELETE NO ACTION ON UPDATE NO ACTION) at new QueryFailedError (C:\architektura\locations-win32-64x\resources\app\node\_modules\typeorm\mysql\MysqlQueryRunner.js:168:45)'. Below the console, a terminal window shows SQL commands and their results in MariaDB.

```
C:\WINDOWS\system32>
MariaDB [locations]> select * from location
->
+----+-----+-----+-----+-----+
| id | name  | lat | lon | interesting_at |
+----+-----+-----+-----+
| 1  | Home  | 1   | 1   | NULL          |
| 2  | work 1 | 1.1 | 2   | NULL          |
| 3  | work 2 | 2.1 | 3   | NULL          |
+----+-----+-----+-----+
3 rows in set (0.000 sec)

MariaDB [locations]> update location set name = 'work - 3' where ID = 1;
Query OK, 1 row affected (0.002 sec)
Rows matched: 1  Changed: 1  Warnings: 0

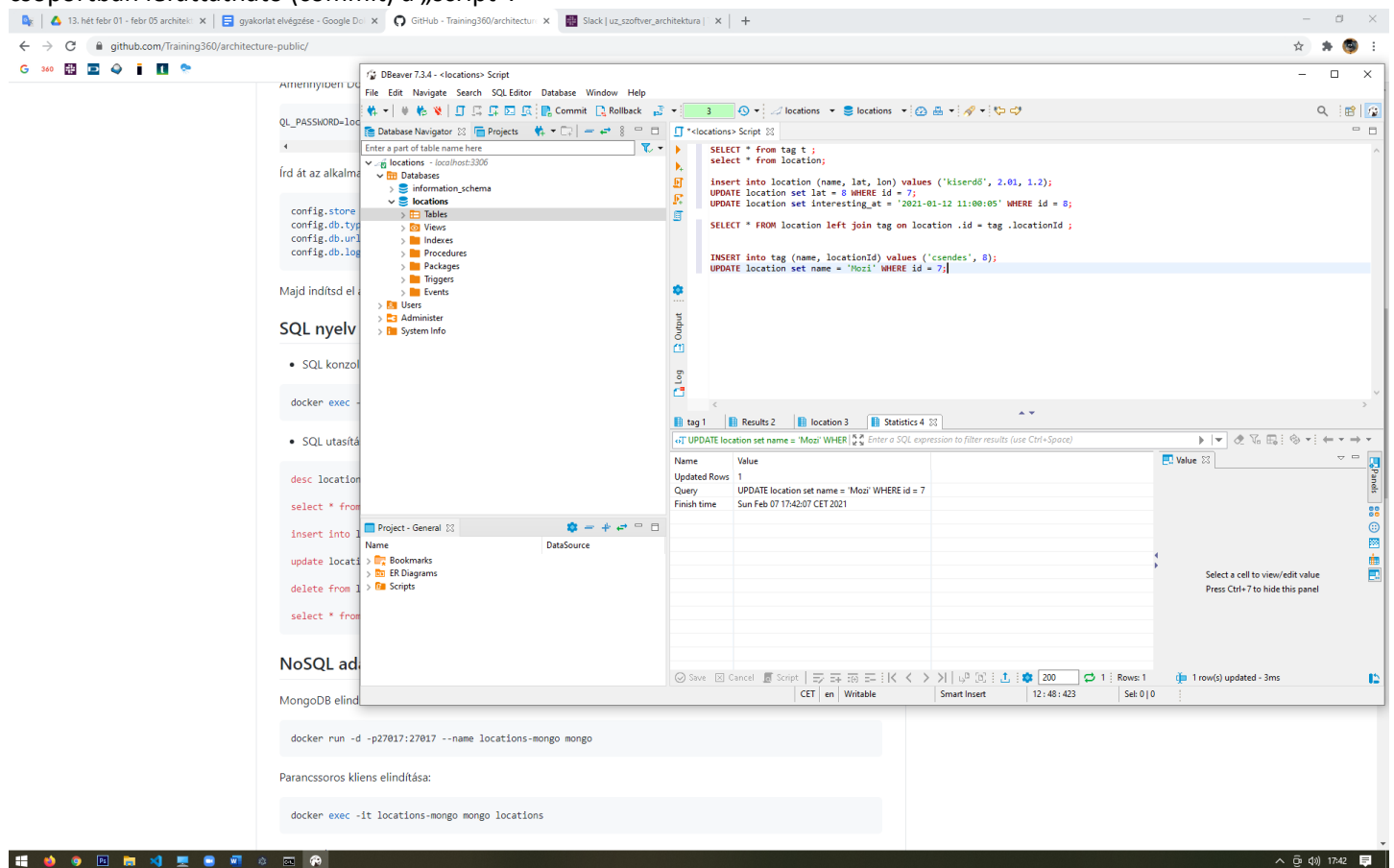
MariaDB [locations]>
```

előbb törölni kell a kapcsolt tábla (tag) megfelelő sorát, vagy sorait, utána a kedvenc hely is törölhető.

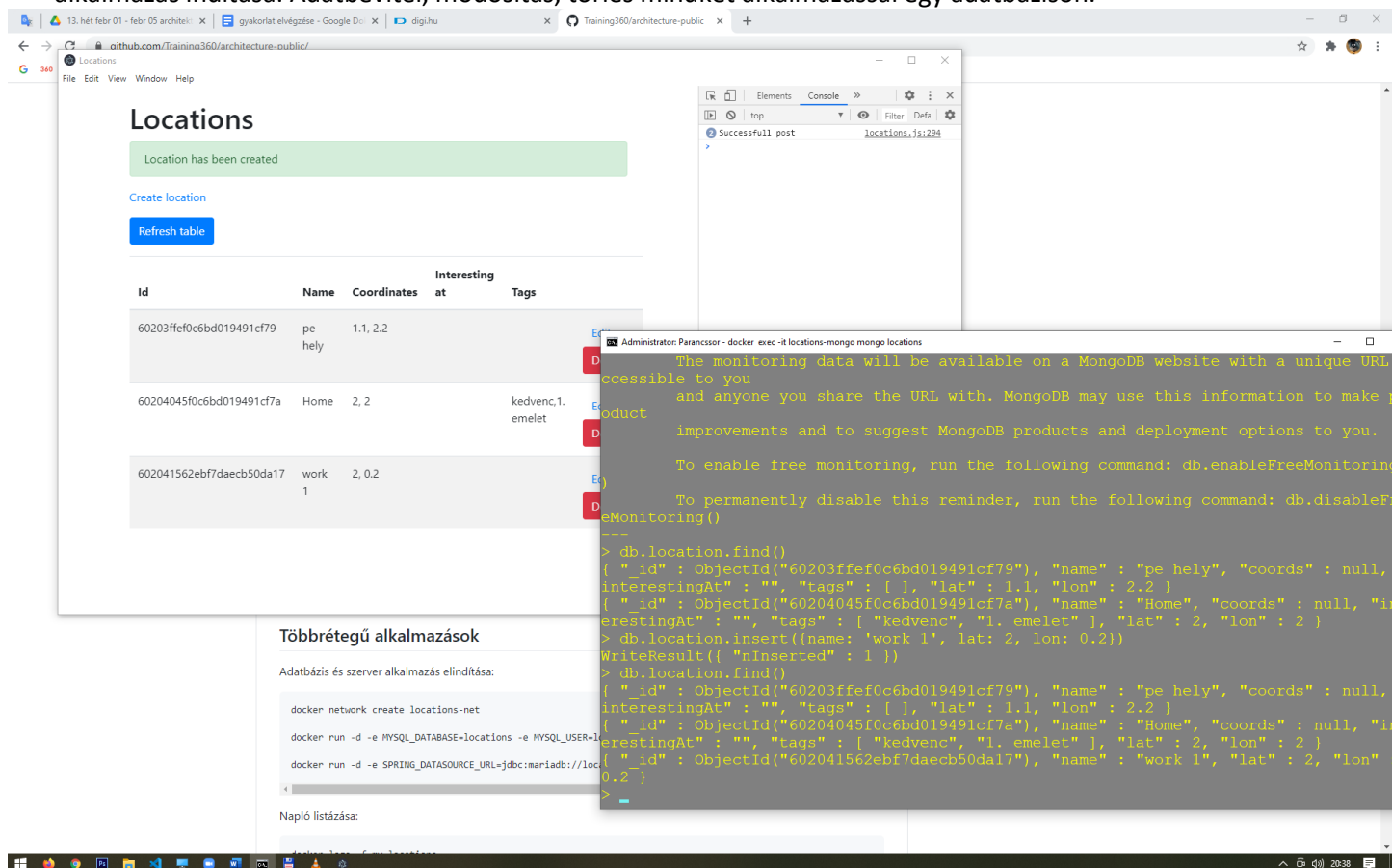
The screenshot shows the 'Locations' application interface after a successful deletion. A green message box says 'Location has been deleted'. Below it is a 'Create location' button and a 'Refresh table' button. The table is currently empty. To the right, a console window shows successful database operations. Below the console, a terminal window shows SQL commands and their results in MariaDB.

```
MariaDB [locations]>
desc location;
+-----+-----+
| id | name  | lat | lon | interesting_at |
+-----+-----+
select * from location;
+-----+-----+
insert into location(name, lat, lon) values ('Work2', 3, 3);
update location set name = 'Work3' where id = 3;
delete from location where id = 3;
select * from location left join tag on location.id = tag.locationId;
```

Tranzakció kezelés DBeaver-el. Az sql utasítások futtatását manuális commit-ra állítva visszapörgethető (rollback), vagy csoportban lefuttatható (commit) a „script”.



5. noSQL adatbázis használata. MongoDB indítása containerben, és megfelelő config.js beállítással a locations alkalmazás indítása. Adatbevitel, módosítás, törlés mindkét alkalmazással egy adatbázison.





## 7. webes alkalmazásról adatbevitel, módosítás törlés

The screenshot shows a web browser at `localhost:8080/server/details?sessionId=03EEB5286CF0CA8A563A3198BE930B27id=6`. The page title is "Location details". A green message box says "Location has been created." Below it is a form with the following fields:

| Field          | Value    |
|----------------|----------|
| Name           | új város |
| Coordinates    | 1.0, 4.0 |
| Interesting at |          |
| Tags           |          |

At the bottom of the form are buttons: "Edit", "Delete", and "Back to list".

On the right, the Chrome DevTools Network tab is open, showing a list of requests. The "create" request is selected, showing a POST method to `/details?sessionId=03EEB5286CF0CA8A563A3198BE930B27id=6` with a status of 200.

## .log ablak figyelése adat manipulálás közben

The screenshot shows a web browser at `localhost:8080/server`. The page title is "Locations". A green message box says "Location has been deleted." Below it is a table of locations:

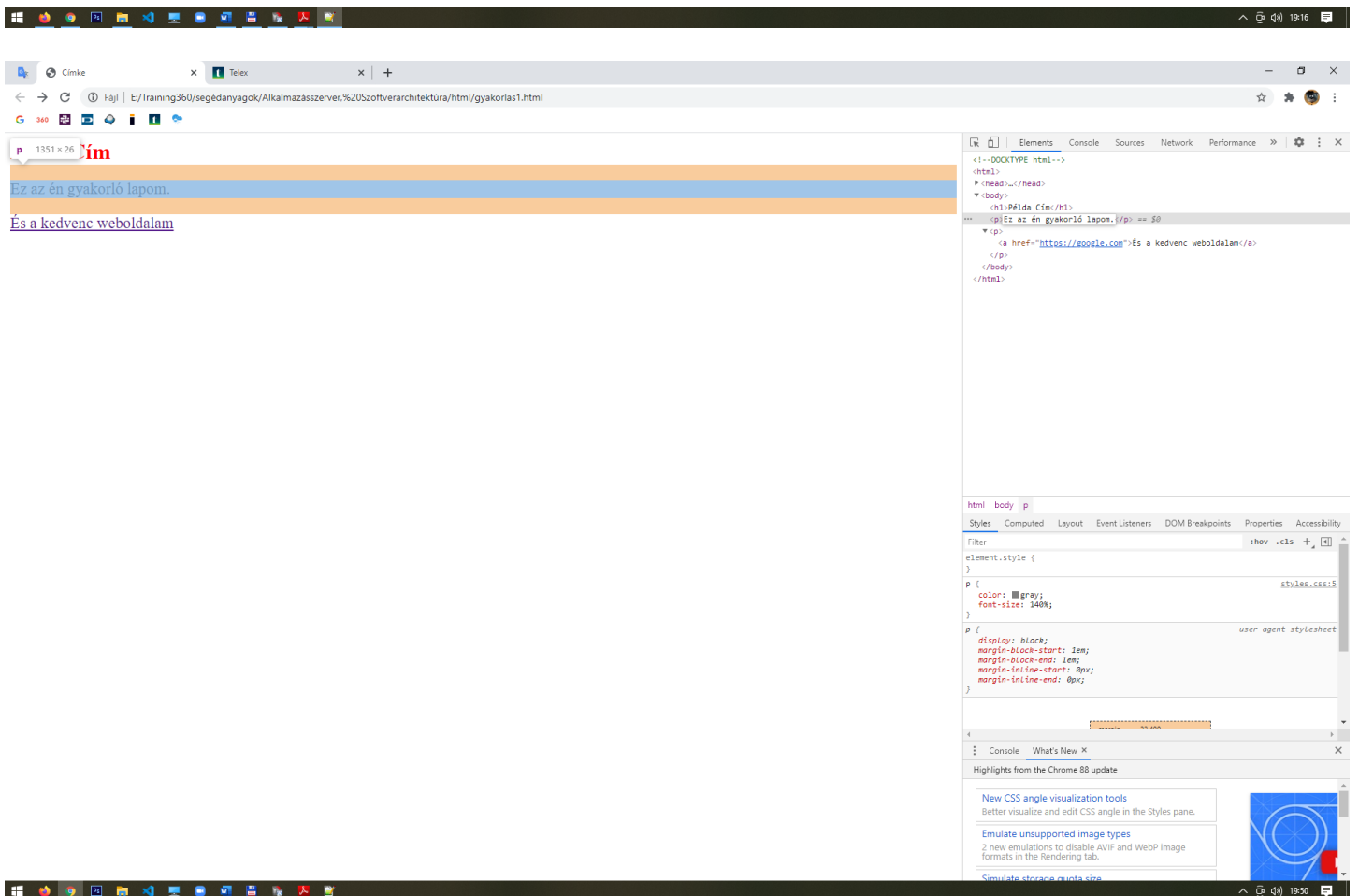
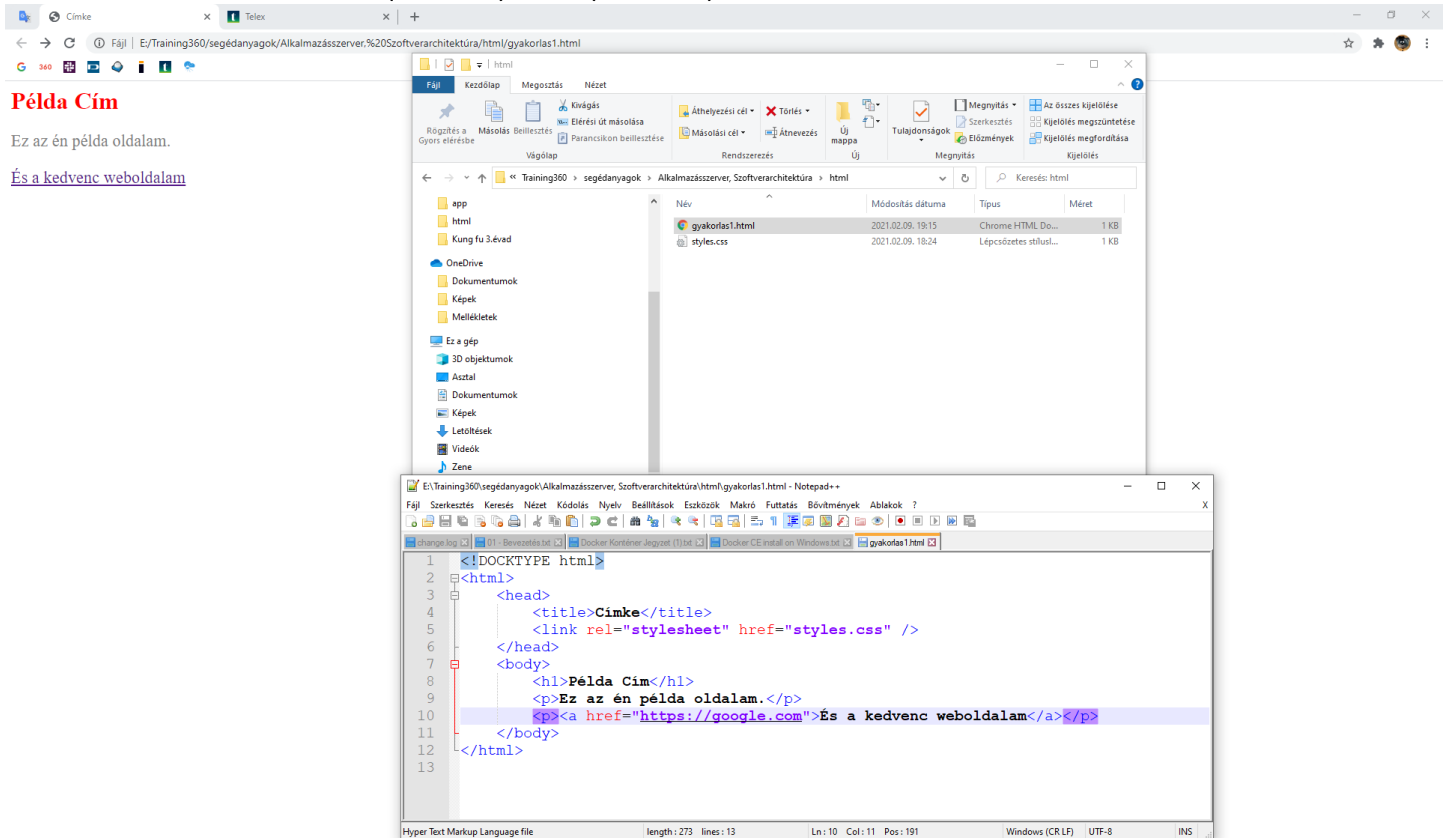
| Name     | Coordinates            | Action               |
|----------|------------------------|----------------------|
| Budapest | 47.497912, 19.040235   | <a href="#">View</a> |
| Debrecen | 47.5316049, 21.6273124 | <a href="#">View</a> |
| Győr     | 47.6874569, 17.6503974 | <a href="#">View</a> |
| parti    | 3.0, 1.0               | <a href="#">View</a> |
| új város | 1.0, 4.0               | <a href="#">View</a> |
| Veszprém | 47.1028087, 17.9093019 | <a href="#">View</a> |

At the bottom left, there is a "Create location" link.

On the right, a PowerShell terminal window is open, showing the following commands and output:

```
PS E:\Training360\githubra\szvarc [main 9cd9891] commit2
1 file changed, 0 insertions(+),
create mode 100644 "tartalom/szo
On branch main
Your branch is ahead of 'origin/main'
(use "git push" to publish your
nothing to commit, working tree
PS E:\Training360\githubra\szvarc
fatal: unable to access 'https://
PS E:\Training360\githubra\szvarc
```

## 8. web formátumok: html (tartalom) és css (formázás)





## 9. webes alkalmazás RIA felülettel (JavaScript)

**Példa Cím**

Ez az én példa oldalam.

[És a kedvenc weboldalam](#)

Az oldal közlése  
Hello World!

```
<!DOCTYPE html>
<html>
<head>
<script src="script.js" type="text/javascript"></script>
<title>Címke</title>
<link rel="stylesheet" href="styles.css" />
</head>
<body>
<h1>Példa Cím</h1>
<p>Ez az én példa oldalam.</p>
<p><a href="https://google.com">És a kedvenc weboldalam</a></p>
<input id="hello-gomb" type="button" value="Click me!" />
</body>
</html>
```

## 10. webes alkalmazás RIA felülettel – egy webes alkalmazás

**Példa Cím**

Ez az én példa oldalam.

[És a kedvenc weboldalam](#)

```
E:\Training360\githubra\szvarc-gyak\uz_gyak>docker start locations-mariadb my-locations
locations-mariadb
my-locations

E:\Training360\githubra\szvarc-gyak\uz_gyak>docker container ls
CONTAINER ID   IMAGE          COMMAND                  CREATED        STATUS        PORTS
6c1fcc475491   training360/locations   "java org.springfram..."   2 days ago    Up About a minute    0.0.0.0:8080->8080/tcp
2bbb40097e3c   mariadb        "docker-entrypoint.s..."   2 days ago    Up About a minute    0.0.0.0:3306->3306/tcp
locations-mariadb

E:\Training360\githubra\szvarc-gyak\uz_gyak>
```

Locations

Name\*

div.form-group

1110 × 70

Coordinates (format: 47.4979,19.0402, no spaces, max. 6 digits after decimal point!)\*

Interesting at (format: 2019-09-11T15:31:04)

Tags (format: favourite, capital)

Create location

Cancel

Refresh table

| Id | Name     | Coordinates            | Interesting at      | Tags              |                                   |
|----|----------|------------------------|---------------------|-------------------|-----------------------------------|
| 1  | Budapest | 47.497912, 19.040235   | 2019-09-17T05:00:00 | capital,favourite | <div>Edit</div> <div>Delete</div> |
| 2  | Debrecen | 47.5316049, 21.6273124 |                     |                   | <div>Edit</div> <div>Delete</div> |
| 5  | Győr     | 47.6874569, 17.6503974 |                     |                   | <div>Edit</div> <div>Delete</div> |
| 7  | parti    | 3, 1                   |                     |                   | <div>Edit</div> <div>Delete</div> |
| 6  | új város | 1, 4                   |                     |                   | <div>Edit</div> <div>Delete</div> |
| 4  | Veszprém | 47.1028087, 17.9093019 |                     |                   | <div>Edit</div> <div>Delete</div> |

[SOAP webservises](#)  
[Swagger](#)

Elements

```
<!DOCTYPE html>
<html lang="en">
<head>...</head>
<body>
  <div class="container">...
    <h1>Locations</h1>
    <p id="message-div"></p>
    <p id="create-location-link" hidden="hidden">Create location</p>
    <div id="location-form">
      <div class="form-group">
        <label for="location-name">Name</label>
        <input type="text" id="location-name" class="form-control" max-length="25">
        <div id="location-name-feedback" class="invalid-feedback" hidden="hidden">
          Invalid name!
        </div>
      </div>
      <div class="form-group">
        <label for="location-coords"></label>
        <input type="text" id="location-coords" class="form-control" max-length="20">
        <div id="location-coords-feedback" class="invalid-feedback" hidden="hidden">
          Invalid coords!
        </div>
      </div>
    </div>
  </div>
</body>
</html>
```

html body div.container

Filter

element.style {

@media (min-width: 1200px)

.container {

max-width: 1140px;

@media (min-width: 992px)

.container {

max-width: 960px;

@media (min-width: 768px)

.container {

max-width: 720px;

@media (min-width: 576px)

Console

What's New

Highlights from the Chrome 88 update

New CSS angle visualization tools

Better visualize and edit CSS angle in the Styles pane.

Emulate unsupported image types

2 new emulations to disable AVIF and WebP image formats in the Rendering tab.

Simulate storage quota size

Locations

Location has been created

Create location

Refresh table

| Id | Name     | Coordinates            | Interesting at      | Tags              |                                   |
|----|----------|------------------------|---------------------|-------------------|-----------------------------------|
| 1  | Budapest | 47.497912, 19.040235   | 2019-09-17T05:00:00 | capital,favourite | <div>Edit</div> <div>Delete</div> |
| 2  | Debrecen | 47.5316049, 21.6273124 |                     |                   | <div>Edit</div> <div>Delete</div> |
| 5  | Győr     | 47.6874569, 17.6503974 |                     |                   | <div>Edit</div> <div>Delete</div> |
| 7  | parti    | 3, 1                   |                     |                   | <div>Edit</div> <div>Delete</div> |
| 6  | új város | 1, 4                   |                     |                   | <div>Edit</div> <div>Delete</div> |
| 4  | Veszprém | 47.1028087, 17.9093019 |                     |                   | <div>Edit</div> <div>Delete</div> |
| 8  | Work     | 1, 1                   |                     |                   | <div>Edit</div> <div>Delete</div> |

[SOAP webservises](#)  
[Swagger](#)  
[OpenAPI](#)  
[REST webservises API documentation](#)

Elements

Filter

XHR JS CSS Img Media Font Doc WS Manifest Other

Blocked Requests

100000 ms

200000 ms

300000 ms

400000 ms

500000 ms

600000 ms

700000 ms

Name

localhost

service-rest.js

locations.js

locations

locations

1 {"id":"8","name":"Work","lat":1.0,"lon":1.0,"tags":[]}

6 requests | 2.0 kB | Line 1, Column 1

Console

What's New

Highlights from the Chrome 88 update

New CSS angle visualization tools

Better visualize and edit CSS angle in the Styles pane.

Emulate unsupported image types

2 new emulations to disable AVIF and WebP image formats in the Rendering tab.

Simulate storage quota size

## 11. webes alkalmazás REST webszolgáltatás – Swagger (asatlekérés GET-el)

The screenshot shows the Swagger UI interface in a web browser. The URL bar indicates the endpoint is `localhost:8080/swagger-ui/index.html?configUrl=/v3/api-docs/swagger-config#/Locations/listLocations`. The interface displays the details of a GET request to `http://localhost:8080/api/locations`. The server response is a 200 status code with a JSON body containing an array of location objects. The response headers include `connection: keep-alive`, `content-type: application/json`, `date: Wed, 10 Feb 2021 19:02:54 GMT`, `keep-alive: timeout=60`, `transfer-encoding: chunked`, and `vary: Origin, Access-Control-Request-Method, Access-Control-Request-Headers`. Below the response body, there is a table of responses with a 200 status code and the description "locations have been listed". A media type dropdown is set to `*/*`, and there are links for "Example Value" and "Schema".

```
{
  "id": 7,
  "name": "partii",
  "lat": 3,
  "lon": 1,
  "tags": []
},
{
  "id": 6,
  "name": "Gj város",
  "lat": 1,
  "lon": 4,
  "tags": []
},
{
  "id": 4,
  "name": "Veszprém",
  "lat": 47.1028087,
  "lon": 17.9093019,
  "tags": []
},
{
  "id": 8,
  "name": "Work",
  "lat": 1,
  "lon": 1,
  "tags": []
}
}
```

```
connection: keep-alive
content-type: application/json
date: Wed, 10 Feb 2021 19:02:54 GMT
keep-alive: timeout=60
transfer-encoding: chunked
vary: Origin, Access-Control-Request-Method, Access-Control-Request-Headers
```

| Code | Description                | Links    |
|------|----------------------------|----------|
| 200  | locations have been listed | No links |

Media type: `*/*`  
Controls Accept header  
Example Value | Schema

## webes alkalmazás REST webszolgáltatás – Swagger (http kérés POST-al, adat rögzítés)

The screenshot shows the Swagger UI interface in a web browser. The URL bar indicates the endpoint is `localhost:8080/swagger-ui/index.html?configUrl=/v3/api-docs/swagger-config#/Locations/createlocation`. The interface displays the details of a POST request to `http://localhost:8080/api/locations`. The request body is a JSON object with the following fields: `name` (Nagykőrös), `coords` (2,5), `interestingAt` (2021-02-10T19:06:25.335Z), and `tags` (színház, kiállítóhely). The server response is a 201 status code with a JSON body containing the created location object. The response body includes `id` (9), `name` (Nagykőrös), `lat` (2), `lon` (5), `interestingAt` (2021-02-10T19:06:25.335Z), and `tags` (színház, kiállítóhely). There is a "Download" button for the response body.

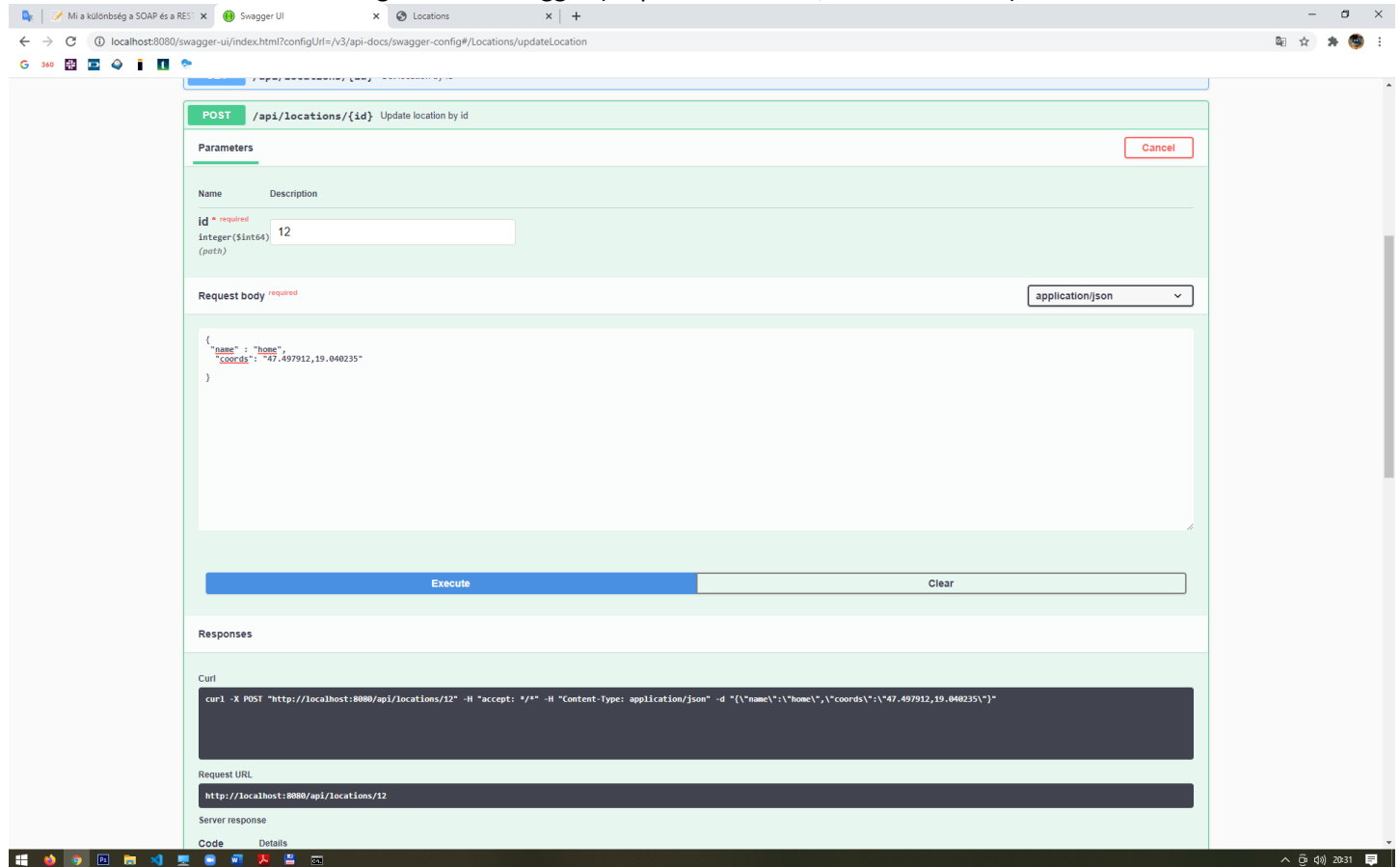
```
{
  "name": "Nagykőrös",
  "coords": "2,5",
  "interestingAt": "2021-02-10T19:06:25.335Z",
  "tags": "színház, kiállítóhely"
}
```

```
curl -X POST "http://localhost:8080/api/locations" -H "accept: */*" -H "Content-Type: application/json" -d '{"name":"Nagykőrös","coords":"2,5","interestingAt":"2021-02-10T19:06:25.335Z","tags":"színház, kiállítóhely"}'
```

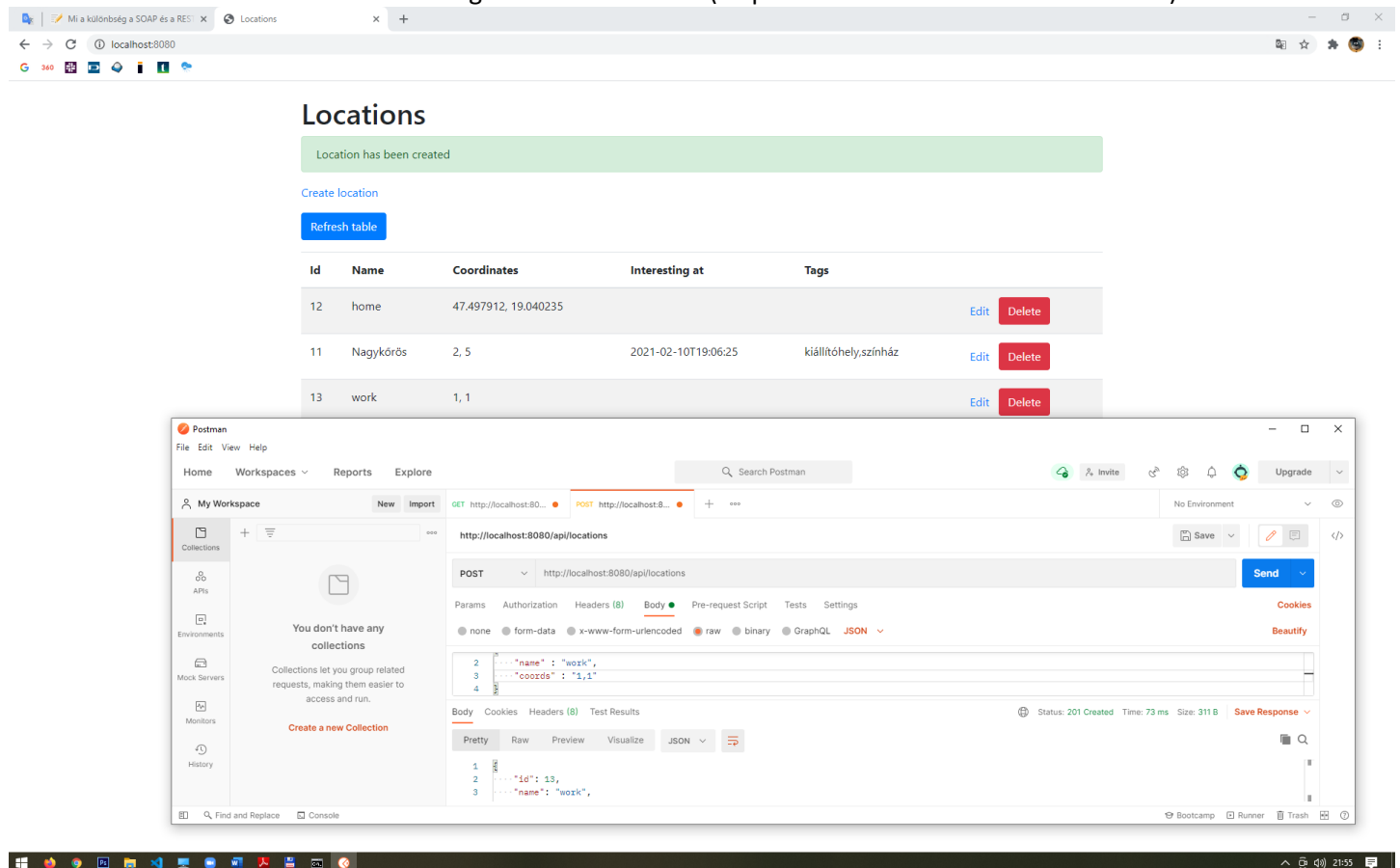
```
http://localhost:8080/api/locations
```

```
201
{
  "id": 9,
  "name": "Nagykőrös",
  "lat": 2,
  "lon": 5,
  "interestingAt": "2021-02-10T19:06:25.335Z",
  "tags": [
    "színház",
    "kiállítóhely"
  ]
}
```

## webes alkalmazás REST webszolgáltatás – Swagger (http kérés POST-al, adat módosítás)



## 12. webes alkalmazás REST webszolgáltatás Postman-el (http kérés GEST és POST metódusok -al)



localhost:8080

Location has been created

Refresh table

| ID | Name      | Coordinates          | Interesting at      | Tags  |
|----|-----------|----------------------|---------------------|---|
| 12 | home      | 47.497912, 19.040235 |                     | <a href="#">Edit</a> <a href="#">Delete</a>                       |
| 11 | Nagykőrös | 2, 5                 | 2021-02-10T19:06:25 | kiállítóhely, színház <a href="#">Edit</a> <a href="#">Delete</a> |

The screenshot displays the Postman application interface. On the left sidebar, the 'My Workspace' section is active, showing a collection named 'Locations API'. Under this collection, the 'apilocations' folder is expanded, and the 'GET List locations' request is selected. The main panel shows the details of this request. The URL is 'http://localhost:8080/apilocations/listlocations'. The method is 'GET'. The request body is empty. The response status is '200 OK', and the response time is '27 ms'. The response size is '448 B'. The response body is displayed in JSON format, showing a list of locations with fields like 'id', 'name', 'lat', 'lon', and 'interestingAt'.

**Postman Interface Details:**

- Left Sidebar:**
  - My Workspace
  - Collections
  - Locations API
  - apilocations
  - (id)
  - GET Get location by id
  - POST Update location by id
  - DEL Delete location by id
  - GET List locations (Selected)
  - locations have been listed
  - POST Create location
  - DEL Delete all locations
  - GET List locations
- Top Bar:**
  - File Edit View Help
  - Home Workspaces Reports Explore
  - Search Postman
  - Invite
  - Upgrade
- Request Details:**
  - Locations API / apilocations / List locations
  - Method: GET
  - URL: http://localhost:8080/apilocations/listlocations
  - Params: Authorization, Headers (6), Body, Pre-request Script, Tests, Settings
  - Query Params: KEY, VALUE, DESCRIPTION
- Response Details:**
  - Status: 200 OK, Time: 27 ms, Size: 448 B
  - Save Response
  - Body: Pretty, Raw, Preview, Visualize, JSON
  - JSON Response:

```

{
  "tags": []
},
{
  "id": 11,
  "name": "Nagykőzös",
  "lat": 2.0,
  "lon": 5.0,
  "interestingAt": "2021-02-10T19:06:25",

```