



FT3 • JavaScript

FINAL EXAMINATION

Date/Day : 27 AUGUST 2025 / Wednesday

Time : 08:30 AM – 11.30 AM

Length : 2 Hours

Venue : Classroom

INFORMATION FOR CANDIDATE

1. This examination is worth **50%** of the overall semester assessment.
2. The total number of marks available for this examination is **100**.
3. This exam paper contains **Two (2)** tasks (**A & B**) of questions in **Seven (7)** pages excluding the cover page.

INSTRUCTIONS TO CANDIDATE

1. Answer all tasks.
2. Write all your code according to the tasks.
3. Demo your code at class on 27 August 2025.

Task A – Create a single-page weather forecast website. (50) MARKS

To obtain a forecast, use <https://openweathermap.org/>. Do not forget to register and get the key.

The page should have two tabs:

- Today is the weather forecast for today; (25) Marks
- 5-day forecast is the weather forecast for the next five days. (25) Marks

The **Today** tab is displayed when the page loads. The current city is determined by the user's coordinates; if the browser does not support geolocation, your city is displayed. To select another city, the user can enter its name in the search box.

The Today tab displays three blocks.

1. Current weather summary:
 - date;
 - icon;
 - text description;
 - temperature;
 - real feel;
 - sunrise;
 - sunset;
 - day length (duration).
2. Hourly forecast for the rest of the day:
 - time;
 - icon;
 - text description;
 - temperature;
 - real feel;
 - wind speed and direction.
3. Nearby cities and forecast:
 - name;
 - icon;
 - temperature.

The search box must always display the name of the city, for which the forecast is displayed, even if the geolocation was determined.

MY WEATHER


Baku, Azerbaijan

Today

5-day forecast

CURRENT WEATHER







30.06.2018


Sunny





29°C
Real Feel 30°

Sunrise: 7:04 AM
Sunset: 5:11 PM
Duration: 10:07 hr

HOURLY

TODAY	7pm	8pm	9pm	10pm	11pm	12am
						
Forecast	Sunny	Sunny	Clear	Clear	Clear	Clear
Temp (°C)	29°	28°	28°	27°	27°	27°
RealFeel	28°	27°	28°	27°	27°	26°
Wind (km/h)	11 ESE	9 ESE	6 SE	6 ESE	6 ESE	7 SE

NEARBY PLACES

Baladzhary		36°C	Bailov		29°C
Badamdar		36°C	Cherni Gorod		29°C


If the user enters a non-existent city or if API cannot return information on the entered city, inform the user about it using this page:

MY WEATHER

Qwerty

Today

5-day forecast



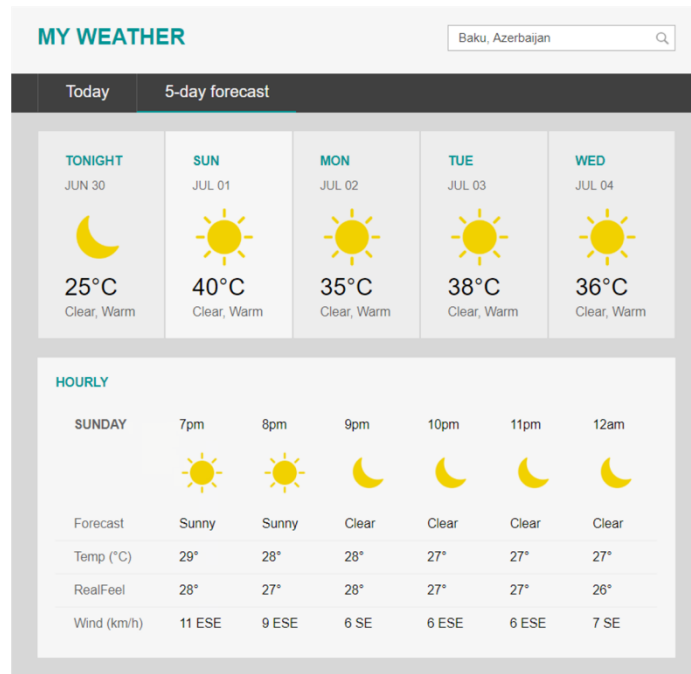
Qwerty could not be found.
Please enter a different location.

The 5-day forecast displays 2 blocks.

1. Short forecast for each of the five days:
 - day of the week;
 - date;
 - icon;
 - temperature;
 - text description.
2. Hourly forecast for the selected day:
 - time;
 - icon;
 - text description;
 - temperature;
 - real feel;
 - wind speed and direction.

When the short forecast of one of five days is clicked, it should be visually highlighted and have an hourly forecast below.

When this tab opens, today must be selected by default.



Remember that this is a single-page site. This means that clicks — be it searching for another city or navigating through tabs — must NOT (!) refresh the page in the browser. Change the page structure with JavaScript.

Task B – Create a website for a librarian to keep track of books. (50) MARKS

Create a website for a librarian to keep track of books.

The site should consist of four sections (menu items).

1. Books. (15) Marks

On this page you can:

- view a list of all books;
- add a new book;
- edit the existing book;
- delete the existing book.

When viewing a list of all books, you can sort and search. You can sort by name of the book, author's name, or number of copies in the library. The user begins entering the word in the search box, and the program checks it in the name of a book or author or publisher.

When adding or editing a book, validate the following data: all fields are required, numeric fields cannot contain negative values.

2. Visitors. (15) Marks

On this page you can:

- view a list of all visitors;
- add a new visitor;
- edit the existing visitor.

When viewing the list of all visitors, you can sort and search. You can sort by ID or name. The user starts entering a word in the search box, and the program checks it in the visitor's name or phone number.

When adding or editing visitors, validate the following data: all fields are required, and the phone number must contain only numbers, space, and a dash.

3. Cards. (10) Marks

A card is one book lent by one visitor with the borrow and return dates. The return date is set only after the book is returned.

On this page you can:

- lend out a book (create a new card);
- take a book (set the return date).

When a book is borrowed, the number of its copies in the library decreases by 1.
When returned, it increases by 1.

When creating a card, the drop-down list must display only the books currently available in the library (the number of copies must be greater than 0).

4. Statistics. (10) Marks

On this page you can:

- view the list of five most popular books;
- view the list of five most active visitors.

The main entities that you will need when developing the site (there may be more, this is the minimum list).

Book:

- ID;
- name;
- author's name;
- year of publishing;
- publisher name;
- number of pages;
- number of copies in the library.

Visitor:

- ID;
- full name;
- phone number.

Cards:

- ID;
- visitor's ID;
- book's ID;

- borrow date;
- return date.

Data must be stored in [localStorage](#) or [sessionStorage](#).

- The below Figures show a variant of the interface for [Visitors](#) and [Cards](#).
- **List of visitors, sort and search**

LIBRARY

Books
Visitors
Cards
Statistics

ALL VISITORS:
New visitor

Sort by: ID
Sort
Search:
Search

ID	Name	Phone	Edit
1	Colette Kelley	012 435 45 67	
2	Ruby-Rose Lennon	012 647 34 24	
3	Leanne Gibbons	012 879 78 45	
4	Rumaisa Peel	012 456 64 67	
5	Gene Medrano	012 245 47 89	

Editing a visitor (the same form is used for creating a user)

LIBRARY

Books
Visitors
Cards
Statistics

ALL VISITORS:
New visitor

Sort by: ID
Sort
Search:
Search

X

Edit visitor:

Full name:
Colette Kelley

Phone number:
012 435 45 67

Save

ID	Name	Phone	Edit
1	Colette Kelley	012 435 45 67	
2	Ruby-Rose Lennon	012 647 34 24	
3	Leanne Gibbons	012 879 78 45	
4	Rumaisa Peel	012 456 64 67	
5	Gene Medrano	012 245 47 89	
6	Sheridan Tucker	012 345 85 90	
7	Christina Mack	012 123 36 46	
8	Everly Moses	012 678 99 74	
9	Kara Feeney	012 456 96 53	
10	Cameron Rennie	012 967 47 85	

List of cards, sort and search

The Return Date column displays either the return date or a button (an arrow). Click on the button to return a book, and the current date appears in the Return Date column.

LIBRARY

Books

Visitors

Cards

Statistics

ALL CARDS:

New card

Sort by: Return date
Sort

Search:
Search

ID	Visitor	Book	Borrow Date	Return Date
1	Colette Kelley	JS Part 1	12.01.2019	12.03.2019
2	Ruby-Rose Lennon	JS Part 2	12.01.2019	↩
3	Leanne Gibbons	HTML+CSS book	12.01.2019	↩
4	Rumaisa Peel	Bootstrap	12.01.2019	12.03.2019
5	Gene Medrano	SQL Part 1	12.01.2019	12.03.2019
6	Sheridan Tucker	SQL Part 2	12.01.2019	12.03.2019
7	Christina Mack	SQL Part 3	12.01.2019	12.03.2019
8	Everly Moses	PHP for beginner	12.01.2019	↩
9	Kara Feeney	C# for beginner	12.01.2019	↩
10	Cameron Rennie	C++ for beginner	12.01.2019	↩

Creating a new card

To create a new card, select a Visitor and a book from the drop-down lists, and the current date appears in the Borrow date column.

LIBRARY

Books

Visitors

Cards

Statistics

ALL CARDS:

New card

Sort by: Return date
Sort

Search:
Search

1

Colette Kelley

JS Part 1

12.01.2019

12.03.2019

2

Ruby-Rose Lennon

JS Part 2

12.01.2019

↩

3

Leanne Gibbons

HTML+CSS book

12.01.2019

↩

4

Rumaisa Peel

Bootstrap

12.01.2019

12.03.2019

5

Gene Medrano

SQL Part 1

12.01.2019

12.03.2019

6

Sheridan Tucker

SQL Part 2

12.01.2019

12.03.2019

7

Christina Mack

SQL Part 3

12.01.2019

12.03.2019

8

Everly Moses

PHP for beginner

12.01.2019

↩

9

Kara Feeney

C# for beginner

12.01.2019

↩

10

Cameron Rennie

C++ for beginner

12.01.2019

↩

New card:

Visitor:

Book:

Save

The End