WSUK – National Finals Competition Web Development

2024

MODULE D SPEED TASKS

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Introduction

This module will test your ability to apply your HTML, CSS, JS/PHP knowledge effectively and creatively. You will be required to complete several mini-test projects within 3 hours. You need to submit it before the time runs out. No additional time will be given for submission. *There will be both easy and routine tasks, as well as more complex ones. For each mini–test project, there are three levels.*

- ***Level 1*** *(Easy – between 5 and 10 min to complete it)*
- ***Level 2*** *(Medium – between 10 and 20 min to complete)*
- ***Level 3*** *(Difficult – 20 and 30 min to complete)*

*Each mini-test project folder should be separated and self-contained. Please put your files in /XX_module_d/ and include the task ID in the folder name (e.g. /**`XX_module_a/d1`**/; **`XX_module_a/d2`**/ etc.) where **XX** is your station number.*

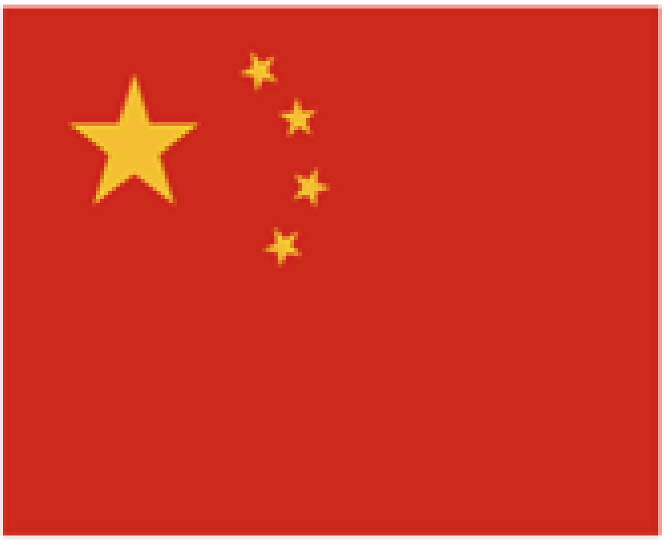
Some tasks can be solved using either JS or PHP – provide only one solution.

****Please check the next page if the task has no continuity on the following page as content or samples.***

Tasks to Complete

D1 - Flag (L1)

Using CSS only (no JavaScript allowed), create a representation of the Chinese flag. The flag should be positioned in the middle of the page and have a size of 500 x 400 px. The provided CSS should not be modified above the designated area. A PNG star image is provided in the ***img*** folder. You should not manipulate this image through photo manipulation software (e.g. Photoshop), but instead through CSS. Do not use the provided sample image as your solution.



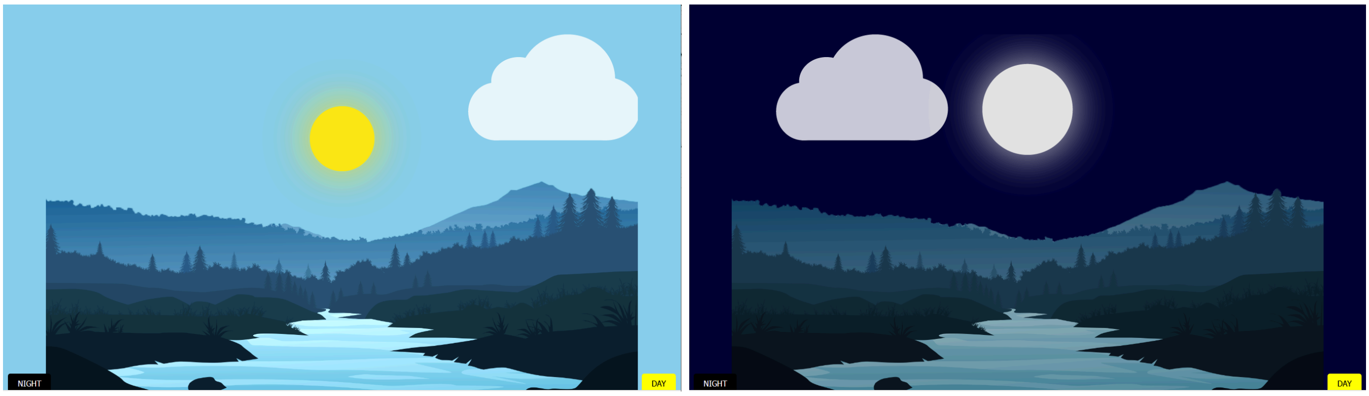
D2 - Day/Night Cycle (L3)

You are presented with the scene and using your coding skills create the following animations.

- The cloud continuously moves from left to right.
- When the "Day" button is pressed, the scene brightens, and the Sun rises in an arc from the left to the centre.
- When the "Night" button is pressed, the scene darkens, and the Moon rises in an arc from the left to the centre while the Sun sets in an arc from the centre to the right.

Place your code in ***`js/script.js`*** and ***`css/style.css`*** (optional)

Please refer to the sample folder and d2_sample.mp4 video.



D3 - Compressing folders (L2)

Using JavaScript or PHP implement a simple web page for compressing folders. Users can select a folder (not empty) and click the "Compress" button to compress it into a .zip file (The file name is the same as the uploaded folder name) and automatically download it. If the uploaded folder contains empty subfolders, those subfolders will not be included in the compressed archive.

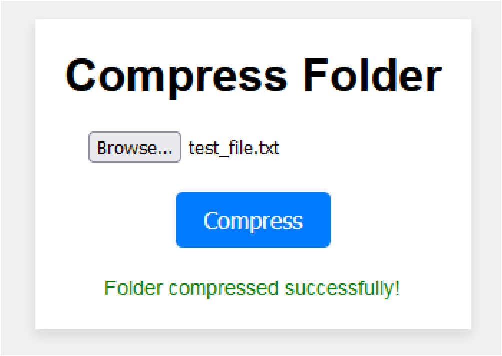
For JS compression to work, you need to include **JSZip**, a JavaScript library for creating zip files, provided in the js folder as an archive (***jszip.zip***). Extract the library file (***jszip.min.js***) and documentation (***JSZip_Documentation***) from this archive.

```
const zip = new JSZip();
```

If more information is required, refer to the documentation.

For a PHP approach, no additional libraries are required.

For testing, use the provided folder in the samples folder. Please refer to the **sample folder** and ***`d3_sample.mp4`*** video.



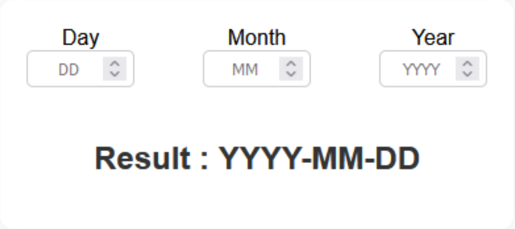
Compress Folder

Folder compressed successfully!

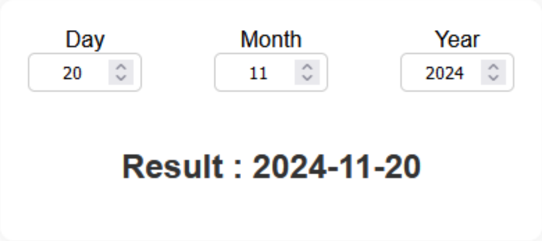
D4 - Date Converter (L1)

Using JavaScript only (do not modify the HTML or CSS) create a date converter from **DMY** to **YYYY-MM-DD**. Results are updated automatically when a date is inputted (no page refresh). The display results contain '-' between digits. The year is four digits long, while the month and date are two digits long. This means, for example, that even if the input for a day is as '2', the result will be '02'.

Please refer to the **sample folder** and ***`d4_sample.mp4`*** video.



Result : YYYY-MM-DD



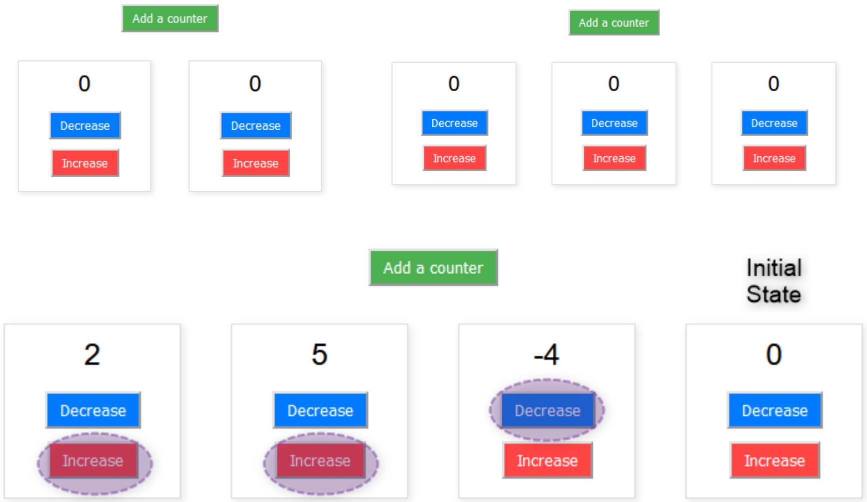
Result : 2024-11-20

D5 - Multiple Counters (L1)

Using JavaScript, create a dynamic counter interface where multiple independent counters can be added, each with its own increment and decrement functionality.

- Clicking the provided "Add a counter" button creates a new counter
- Each new counter starts with a value of zero.
- Decrease Button: Decreases the counter's value by 1.
- Increase Button: Increases the counter's value by 1.
- Each counter operates independently of others.

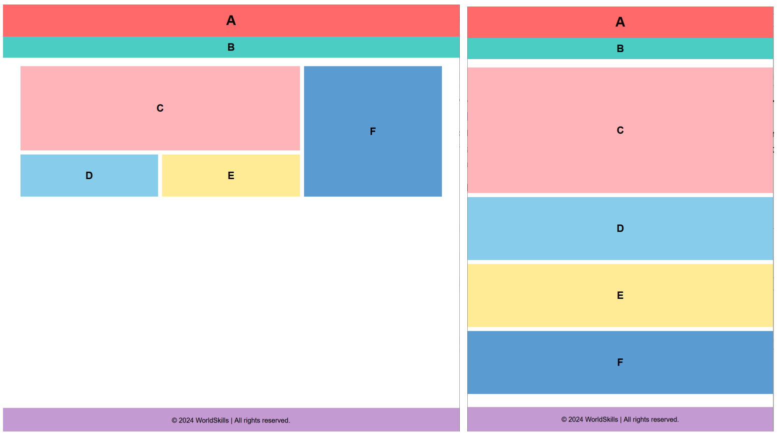
Place your code in ***`js/script.js`***
Please refer to the ***sample folder*** and ***d5_sample.mp4*** video to see an example of the desired behaviour.



D6 - Responsive layout (L1)

Using HTML & CSS only create the following layout. The design must be responsive and work on both large screens and mobile devices, as shown in images below. The breakpoint should be 768px and the container for C, D, E, F elements should be 1000px.

Please refer to the ***sample folder*** and ***d6_sample.mp4*** video.


A
B
C
F
D
E
© 2024 WorldSkills | All rights reserved.
A
B
C
D
E
F
© 2024 WorldSkills | All rights reserved.

Large Screen Mobile

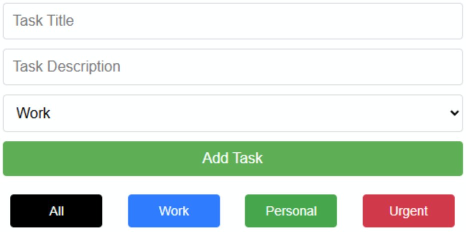
D7 - Interactive Todo List (L2)

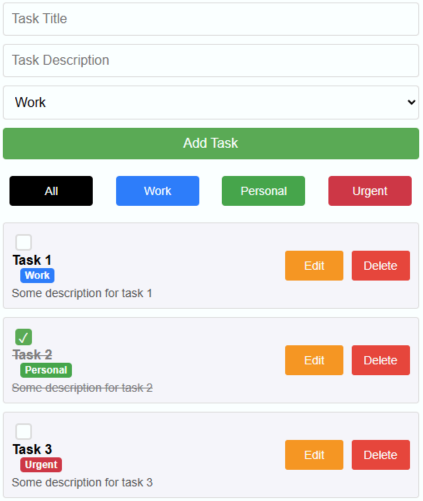
Using your JavaScript skills, create an interactive functionality for a to-do list application. Users should be able to add, filter, and manage tasks efficiently, with tasks automatically saved for future sessions.

- **Add Task**: Enable adding tasks with a title, description, and category.
- **Filter by Category**: Implement category-based filtering with pre-defined buttons (All, Work, Personal, Urgent).
- **Mark as Complete**: Add functionality to toggle task completion using the checkbox.
- **Persist Tasks**: Use ***`localStorage`*** to save tasks across page reloads.

HTML and CSS are provided. Focus on JavaScript functionality only. Place your code in js/todo.js.

Please refer to the **sample folder** and **d7_sample.mp4** video.





□ **Task 1**
Work
Some description for task 1

☑ ~~**Task 2**~~
Personal
~~Some description for task 2~~

□ **Task 3**
Urgent
Some description for task 3

D8 - Registration Form and Data Storage (L3)

Using either Node.js or PHP, build a simple user registration form that collects a username, email, and password. When the form is submitted:
Validate the Inputs (regex patterns are provided in the files):

- Username: Must be 3-15 alphanumeric characters.
- Email: Must follow a valid email format.
- Password: Must be at least 8 characters and contain at least one number and one special character.
- Display a message confirming successful registration or highlighting any validation errors.
- Ensure the form submits without reloading the page.
- Only save the data if all validations pass.

Save the User Data:

Append the validated data in JSON format to a file named testing/users.json without overwriting existing entries.

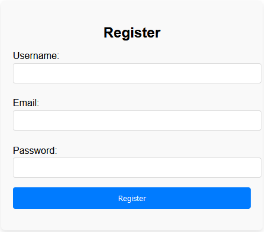
NOTE for JS:

- If using Node.js - Extract node_modules (no other action needed)
- Start the server with ***`node server.js`***
- Use the two files in the **`js`** folder (clientside.js and serverside.js) for handling both client-side and server-side logic.

NOTE for PHP:

- Use the provided local server
- Place client-side validation in `js/script.js`
- Place your server-side code in php/register.php

Please refer to the **sample folder** and ***d8_sample.mp4*** video to see an example of the desired behaviour.

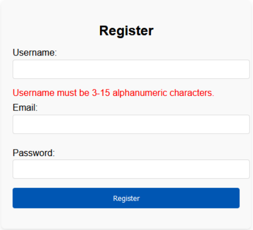


Register

Username:

Email:

Password:



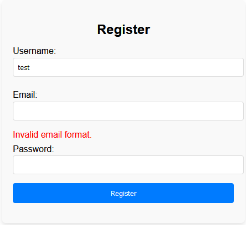
Register

Username:

Username must be 3-15 alphanumeric characters.

Email:

Password:



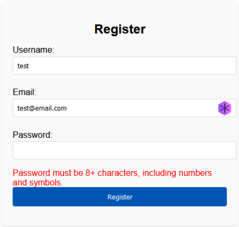
Register

Username: test

Email:

Invalid email format.

Password:



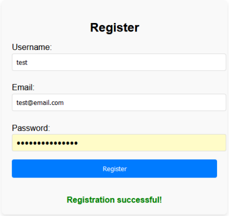
Register

Username: test

Email: test@email.com

Password:

Password must be 8+ characters, including numbers and symbols.



Register

Username: test

Email: test@email.com

Password: •••••••••••••••

Registration successful!

D9 - Image Transition (L1)

Using only HTML and CSS, create an interactive image transition effect. The image should:

- Start in greyscale with a slight blur, and transition to full colour and sharp focus when hovered.
- Zoom in slightly and rotate 5 degrees on hover for a dynamic effect.
- Include a coloured overlay that fades out on hover, revealing the full-colour image.
- Display a caption overlay that fades in on hover, centred on the image with a semi-transparent background.

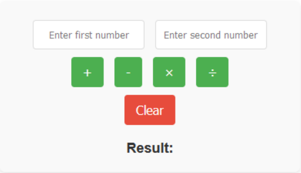
Ensure smooth transitions for all effects.
Please refer to the ***sample folder*** and ***d9_sample.mp4*** to see an example of the desired behaviour.

D10 - Basic calculator (L1)

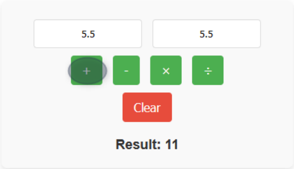
Create a basic calculator that performs addition, subtraction, multiplication, and division. The calculator should work for both integers and decimals, and display the result instantly without reloading the page.

- When an operation button (**+**, **-**, **×**, **÷**) is clicked, retrieve the two input values, perform the calculation, and display the result instantly in the designated result area.
- The "Clear" button that resets both input fields and the result display without refreshing the page.
- Place your JavaScript code in ***`js/calculator.js`***.
- If using PHP, place your code in ***`php/calculator.php`*** and ensure calculations are processed and returned without a page refresh

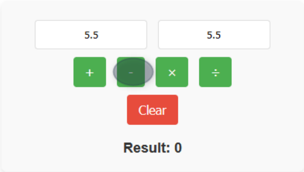
Please refer to the ***sample folder*** and ***d10_sample.mp4*** video as an example of the desired behaviour.


Enter first number
Enter second number

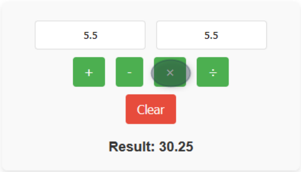
Result:


5.5
5.5

Result: 11


5.5
5.5

Result: 0


5.5
5.5

Result: 30.25

Task Submission

Archive your mini projects using native archive software on Windows or 7ZIP, naming the archive with your station number and module letter (e.g., ***XX_module_d*.zip**). You need to submit it before times run out. No additional time will be given for submission. Each task must have it's own folder with the task ID (e.g. d1, d2 etc.)

Marking Scheme Summary

SECTION	Level	JUDGEMENTS MARKS	MEASUREMENTS MARKS
D1	Level 1	0	1.25
D2	Level 3	0	3.75
D3	Level 2	0	2.5
D4	Level 1	0	1.25
D5	Level 1	0	1.25
D6	Level 1	0	1.25
D7	Level 2	0	2.5
D8	Level 3	0	3.75
D9	Level 1	0	1.25
D10	Level 1	0	1.25
TOTAL ALLOCATE MARKS		**20**	