Test Project

Web Technologies

Module A - Speed Test

Submitted by:
Thomas Mak, Skill Competition Manager
David Cantwell
Chorng-shiuh Koong
Siew Hwa Kang
Seunglyul Ryu
Bruno Medeiros
Gilles Granger
Ryoju Ohata
Zhang Ling

Contents

Introduction

In this speed Test Project. You only need to complete the randomly picked one during the competition. Please follow the instruction to know which one to implement.

For each Easy, it worths 0.5 point.

For each Medium (Normal), it worths 1 point.

For each Difficult (Hard), it worths 1.5 point.

Please put your files in /XX_module_a/ and with the task ID as folder name, e.g. /XX_module_a/A1/

The XX is the workstation number.

Part A

A1: Masking Image (Easy)

Open the provided image (flower.jpg) in an image editor and change the image into greyscale. Once completed, you need to mask the flower and place it on the background image (background.jpg) provided. Save your new image as XX_A1.psd and XX_A1.jpg

A2: Vectored artwork (Normal)

Create the following icons with reference to the image provided (icons_sample.jpg).

Icons should be recreated as a vectored artwork. Once completed, save your working file as XX_A2.ai and XX_A2.jpg

A3: Double Exposure Effect (Easy)

Create a similar double exposure effect as in the example below. Save a JPEG file called double-exposure.jpg.

A4: Instagram Grid (Normal)

Add a profile pic (profile-pic.jpg), username(pedro.souza), and add 9 pics in the feed in the Instagram Grid mockup (Instagram-Profile-2022.psd) and then put it into the iPhone mock (iphone-mock.jpg). Save the output into a JPEG file called instagram-grid.jpg

A5: Resize and Grayscale Multiple Images (Medium)

There are many images in the provided "images" folder.

The images are color images with a size of 640 x N.

Edit all those images

- grayscale
- Reduce width to 320 while keeping proportions

Result

- Save all modified images in "images-modified" folder

A6: Spinning Globe Animation (Medium)

Create an animated gif of a spinning 3D globe using "world-map.png".

Refer to "sample.gif" for the rotation animation.

A7: Apply Background (Easy)

Apply the background image **2.jpg** to the image **1.jpg**

- Submit as result.jpg. (0 points when using **sample.jpg** from the media file)

1.jpg + 2.jpg	Result = sample.jpg

A8: Add a filter (Easy)

- Add a noise filter to the image **plane.jpg**. Submit as result.jpg. (0 points when using result.jpg)

plane.jpg	result.jpg

A9: Color Blending (Easy)

Recreate the following image (without the watermark) with the correct colors and save it as a PNG file.

(No media files)

A10: Mosaic (Easy)

Given a picture image, please use graphical software to put a mosaic effect, and save as a10.jpg.

A11: Banner creation (Normal)

Create a banner from the given material, please use graphical software, and save with 300x250 px as a11.jpg.

All material should be used, and text should be readable.

Part B

B1: CSS Counter (Medium)

Develop a HTML page with a few boxes containing numbers. Each box should be 80px by 80px. And the numbers are centralized in the box. Upon clicking each box, the sum will be tallied and displayed below. Eg, if the user clicks on both 10 and 64, the sum should display 74. You are only allowed to use **HTML and CSS** for this program. Upon clicking each box, the box should be highlighted in gold color and the border width becomes thicker.

Sum: 0

Sum: 74

Your task must be accessible by

B2: TODO List (Medium)

Referring to the provided media file, develop a TODO list on a webpage. It will show a customized strikethrough effect with a checkmark when the checkbox is checked. There should be a transition effect when transiting from unchecked to checked state. The transition should be smooth. You are only allowed to use **HTML and CSS** for this program.

B3: 9-Images (Medium)

Create an image grid container using CSS only. The maximum capacity of the container is nine. If the number of images is overload, the number of excess-images is displayed in the last grid.

You can only edit the style.css file.
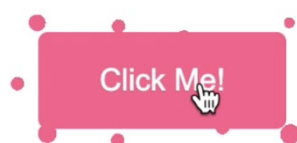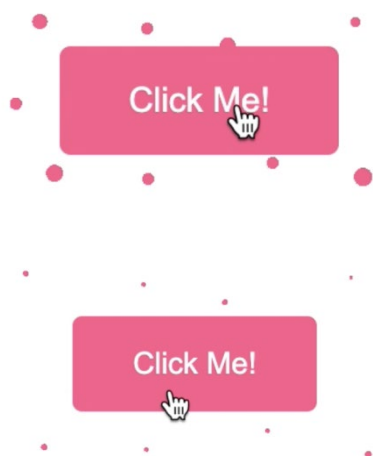
Tips: the "Remove First Image" button is the function provided.

B4: Particle Button (Medium)

Create an interactive animation using CSS only. When user click the "Click Me!" Button, many particles with diffusion effect will be displayed around the button.

You can only edit the style.css file.

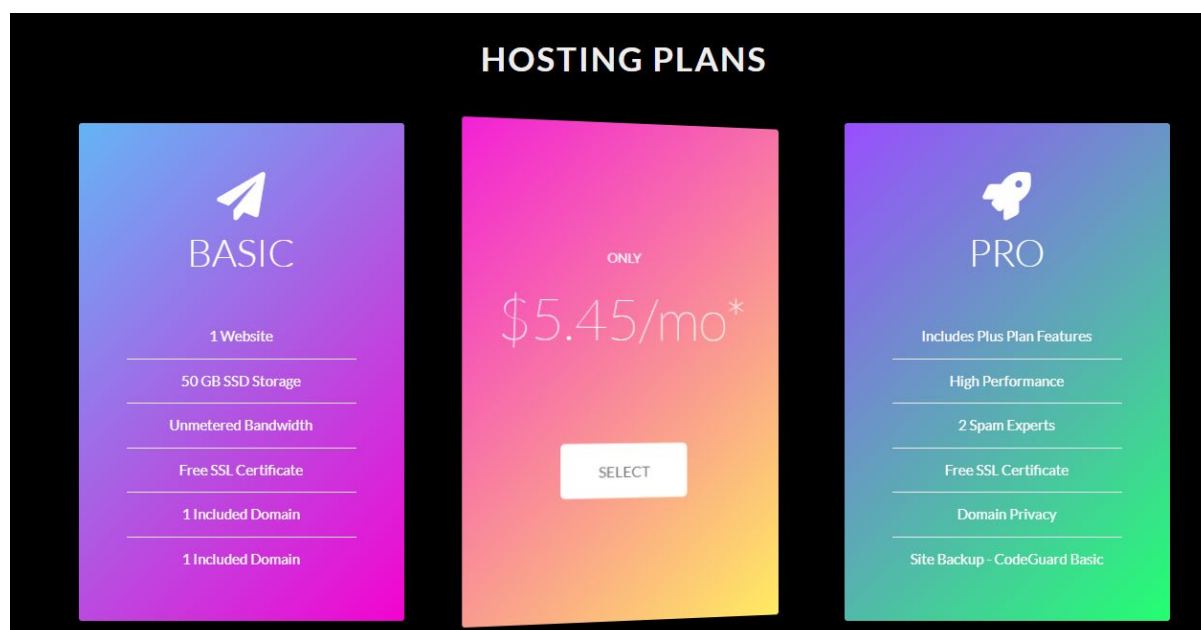## B5: Flip Gradient Elements (Medium)

Using the video as a reference, develop the same flip animation only with CSS and HTML. The colors, text and icons must be preserved.

B6: Sticky Footer (Easy)

Create a fixed/sticky footer with background-color #222 using only HTML and CSS. The footer stays in the bottom of the window even when the browser window is resized.

(No media are provided.)

B7: Korean flag (Normal)

Please, write the CSS code to create the korean flag like the one you can see here.

(No media files)

B8: Rotating Star (Easy)

Please, draw a yellow rotating five-pointed star using CSS.

(No media files)

B9: Dice Roller (Hard)

Create a 3D random dice roller. **(use HTML/CSS only)**

Clicking on the screen will trigger a rotation animation starting from the current dice eye.

The rotation animation must rotate at least three times in any direction (x,y,z).

The dice results are random.

When the result of the dice is rolled, the current number of eyes on the dice should appear above the dice.

Use the dice image provided.

B10: 5 Stars Rating Animation (Easy)

Create a 5 Stars Rating UI using the provided "stars.png" image. **(Use HTML/CSS only)**

When you hover your mouse over a star, an animation that smoothly fills in from the left to the star's score proceeds.

Score 0.5 point unit: 0, 0.5, 1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5

Example

Refer to animation.mp4 for the star filling animation.
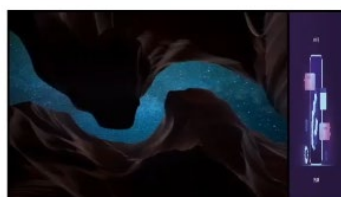
B11: Sunrise and sunset (Medium)

Create a sunrise and sunset, follow the video **Sunrise.mp4** as an example of how it should work and look.

The images are located in the **images** folder.
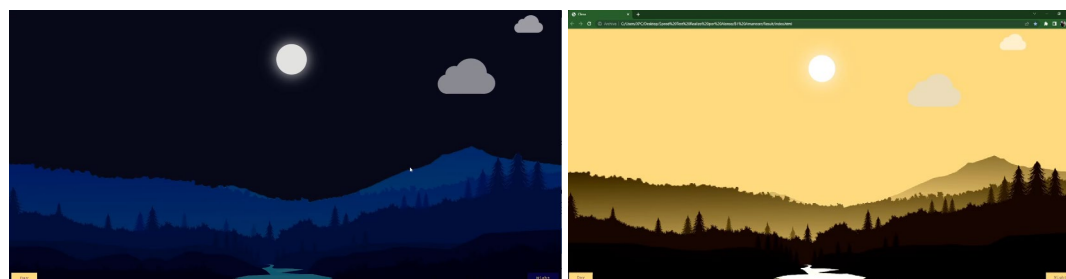
B12: Rectangle rotation (Normal)

Create a rectangle in 3D, and generating an infinite rotation animation, follow the video **rectangle.mp4** as an example of how it should work and look.

B13: Accessibility (Medium)

Any time you are developing a web site or web application you should ensure you follow any applicable guidelines for accessibility. This will help ensure it can be used by people with disabilities including visual disability.

You have been provided with a single HTML page named accessibility.html in the provided-assets folder that has five common accessibility issues. Your task is to identify and implement a fix for these issues.

Save your solution as accessibility-fixed.html inside of a new folder.

B14: CSS Animated Traffic Light (Medium)

Without touching the HTML code and without using JavaScript, reproduce a traffic light cycle from the provided template (see example):

- Green: four seconds
- Orange: one second
- Red: three seconds

An inactive light must have an opacity of 20 %. This cycle must repeat infinitely.

B15: Responsive grid layout (Easy)

Please create this responsive layout with the following blocks:
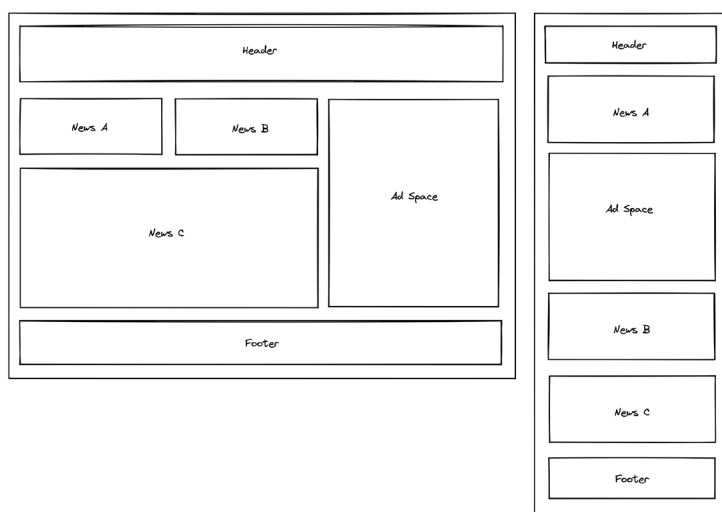
The mobile version is tested with a 480px width. The Desktop version is tested with a 1280px width.

B16: CSS marquee effect (Difficult)

Please create the animation shown in the video.

The animation must run infinitely, **without visible "jump effect" between iterations**.

You are not allowed to use <marquee></marquee> nor JavaScript to complete this task.

B17. Pie charts (Medium)

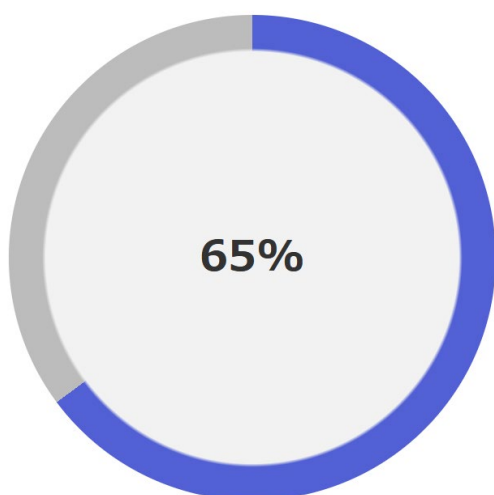Create a pie chart as the following layout.

Part C

C1: Keyword Highlighter (Normal)

In the media file, you are provided with a paragraph of text. You are expected to copy the text into your HTML page and implement a search keyword function. When the search button is clicked, highlight all the words that matches the search string. The highlight color should be random. Kindly note that the search is case-sensitive.

C2: Spotlight (Medium)

Referring to the given media, you are required to show a spotlight over an image when the mouse moves over the image. The spotlight should be white in color, translucent, and has some blur effects. When you move the mouse wheel up or down, the size of the spotlight will increase or decrease respectively. Your program should detect a minimum size of 10px for the dimension of the spotlight. At all times, ensure that the mouse cursor is in the middle of the spotlight.

C3: Get the data type (Easy)

Create a function, that when you enter a value, it returns the type of the input data.

You can only add your code in the "getType" function in index.html.

The test code is in test.js.

The result of this function must conform to the following example:

Example 1:

The function input: true

The function output: "boolean"

Example 2:

The function input: 123

The function output: "number"

Example 3:

The function input: 123n

The function output: "bigint"

Example 4:

The function input: "abc"

The function output: "string"

Example 5:

The function input: [1,2,3,4]

The function output: "array"

Example 6:

The function input: {a:1,b:2}

The function output: "object"

Example 7:

The function input: /d/

The function output: "regexp"

Example 8:

The function input: null

The function output: "null"

Example 9:

The function input: undefined

The function output: "undefined"

C4: Notebook (Difficult)

You should develop based on a page which is provided in media files. Develop a function when you click the "Render" button, the selected text should be marked ("yellow" background and "red" foreground),and when you mark other text, the previously marked text should be retained.

You can only edit "index.js" file.

You can not use JavaScript libraries.

Select Text:

WorldSkills

WorldSkills organises the world championships of vocational skills, and is held every two years in different parts of the world. The organisation, which also hosts conferences about vocational skills, describes itself as the global hub for skills.

WorldSkills brings together young people, industry, government, education, and institutions, to promote the benefits of and need for skilled trade professionals. The aims of the competition include demonstrating the advantages of learning a vocational skill, and encouraging 'parity of esteem' between vocational and academic qualifications.

The city of Kazan, Russia, hosted the 45th WorldSkills Competition in 2019.

At the previous event, WorldSkills Abu Dhabi 2017, there were competitions in 51 skills areas with close to 1,300 young people taking part. WorldSkills Abu Dhabi 2017, took place between 15 and 18 October 2017 at Abu Dhabi, United Arab Emirates.

WorldSkills currently has 85 Member countries and regions, most of which organise national skills competitions that help to prepare the workforce and talent of today for the jobs of the future.

WorldSkills International, formerly known as the International Vocation Training Organisation (IVTO), was founded in the 1940s and emerged from a desire to create new employment opportunities for young people in some of the economies that were devastated by the Second World War.

[Render]

Mark Text:

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Render

C5: Color Transform (Easy)

Develop a color transform application, when you input HEX or RGB format color value. The result area will show the color format and transformed (HEX or RGB) value.

Input your color

Result

The color type is : { RGB ‖ HEX }
HEX value : { Value sample : #ffffff }
RGB value : { Value sample : rgb(255,255,255) }

When the input value is not HEX or RGB value, the result area should show "Error".

Input your color

#abcdefj

Result

Error

C6: Deep Clone (Easy)

Please implement "deepClone" function and open the index.html to make sure the console can show "success" text.

You can only modify the main.js file.

C7: Rainbow Trail (Normal)

Implement an animation. When the mouse moves on "#canvas" element, several balls (at least four color) with diffusion effect are generated around the mouse. The effect sample was provided in trail.gif file.
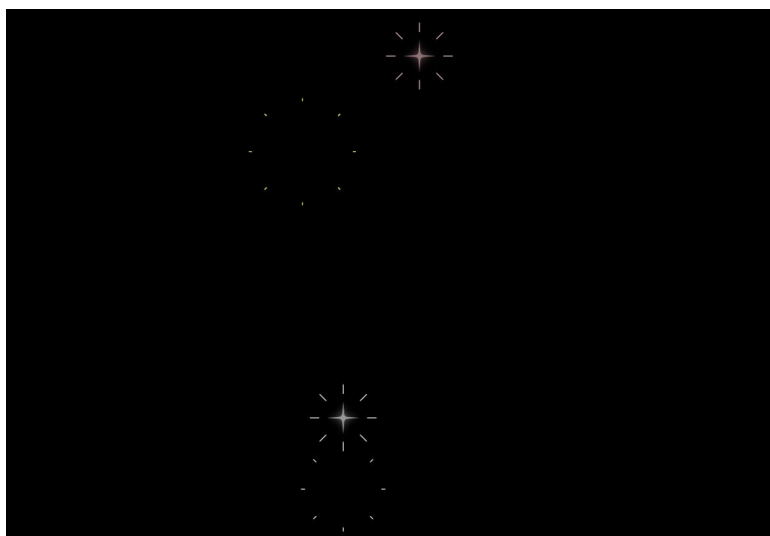
You can modify any files.

C8: Firework (Normal)

Develop a firework effect. The colorful firework generate randomly on the page. The effect sample was provided in firework.gif file.

You can modify any files.

C9: Particle Clock (Hard)

Develop a particle clock effect. The clock group should by many particles. When the time was changed, the changed number will have a colorful particle animation. The effect sample was provided in clock.gif file.

You can modify any files.

C10: Text Ellipsis (Normal)

When the text container resizes, we keep the text online and have ellipsis in the middle.

You can edit any files to implement the effect. The effect sample was provided in ellipsis.gif file.

C11: Like button (Difficult)

You have been provided with a webpage that has several fake user comments. There is a "thumbs up" and "thumbs down" button associated with each comment, but there is no functionality associated with the buttons.

Your task is to make these buttons functional. There are several requirements for the buttons:

A user can only have one button selected for each comment (either the "thumbs up" or "thumbs down" but not both)

A user can click back and forth between each button.

The user should be provided feedback for which button is selected.

Clicking the same button again will remove the selection from that comment (i.e. no like or unlike selected)

In addition to the buttons associated with each comment, there is a button at the bottom of the page called "check ratings". At any time when this button is clicked, the user should be presented with summary information that includes the total number of "thumbs up" and "thumbs down" buttons that are selected.

C12: Native JavaScript Routing (Medium)

Three html files have been provided, named as follows: a.html, b.html, and c.html.

- Each html file imports myScript.js.
- Each html contains different contents, with links that can be linked separately to a.html, b.html, and c.html.

You are to complete myScript.js so that when links are clicked the page is not refreshed but the URL and body area of the page changes correspondingly. Packages are not allowed.

C13: Markdown Preview (Difficult)

You are to create a webpage with two sections (left and right).

Inputting Markdown scripts on the left section should lead to a "live" preview of the result on the right section.

Definition of "live": any character inputted in the left section should be immediately executed and shown on the right section.

Supported functions (in order of priority):

1. Paragraphs and line breaks format: (support tab not needed)
2. Heading format: Ex: # Heading
3. Bold format: Ex: **bold**
4. Horizontal rule format: Ex: ---
5. List format: Ex: - item
6. Link format: Ex: [example link] (http://example.com/)
7. Image format: Ex: ![alt text](img.jpg)

Note: Markdown is a lightweight markup language for creating formatted text using a plain-text editor. John Gruber and Aaron Swartz created Markdown in 2004 as a markup language that is appealing to human readers in its source code form. Currently, it is commonly used on platforms such as GitHub and SourceForge, etc. (No media file)

C14: Image Colour Inspector (Medium)

User can select any images to load into this tool. Upon the user selecting an image to load, the screen should display the selected image.

When mouse-hovering over the image, the color code and the color at the mouse pointer position is displayed in an area under the image.

There should also be a "magnifying glass", which can magnify the area around the mouse pointer position (with a radius of around 7 px)

- The "magnifying glass" function should be around 100px by 100px, with each pixel separated by a grid line so that the colour can be clearly inspected.
- The "magnifying glass" function should be positioned to the bottom-right of the mouse pointer, so that the edge of the "magnifying glass" is around 10 px away from the pointer.

C15: Night mode (Easy)

You are to create a webpage that supports night mode. Characters should be shown at the centre of the webpage.

When light mode is selected, the background is to be white (#ffffff), and the characters are to be black (#000000). The typeface is not to be changed in any other way. The characters "Light Mode Test" is to be shown (at the centre of the webpage).

When night mode is selected, the background is to be black (#000000), and the characters are to be white (#ffffff). The typeface is not to be changed in any other way. The characters "Night Mode Test" is to be shown (at the centre of the webpage).

(No media files)

C16: Drawing tool (Medium)

You are to create a client-side drawing tool, with a canvas on which one may freely draw.

- Five different colour buttons are to be provided for the user to select from
- The default canvas size is to be 300px by 300px
- Clicking and dragging the bottom-right corner of the canvas is to modify the canvas size
- One button to save the drawing as a jpg and 1 button to save the drawing as a png onto the client-side computer are to be provided
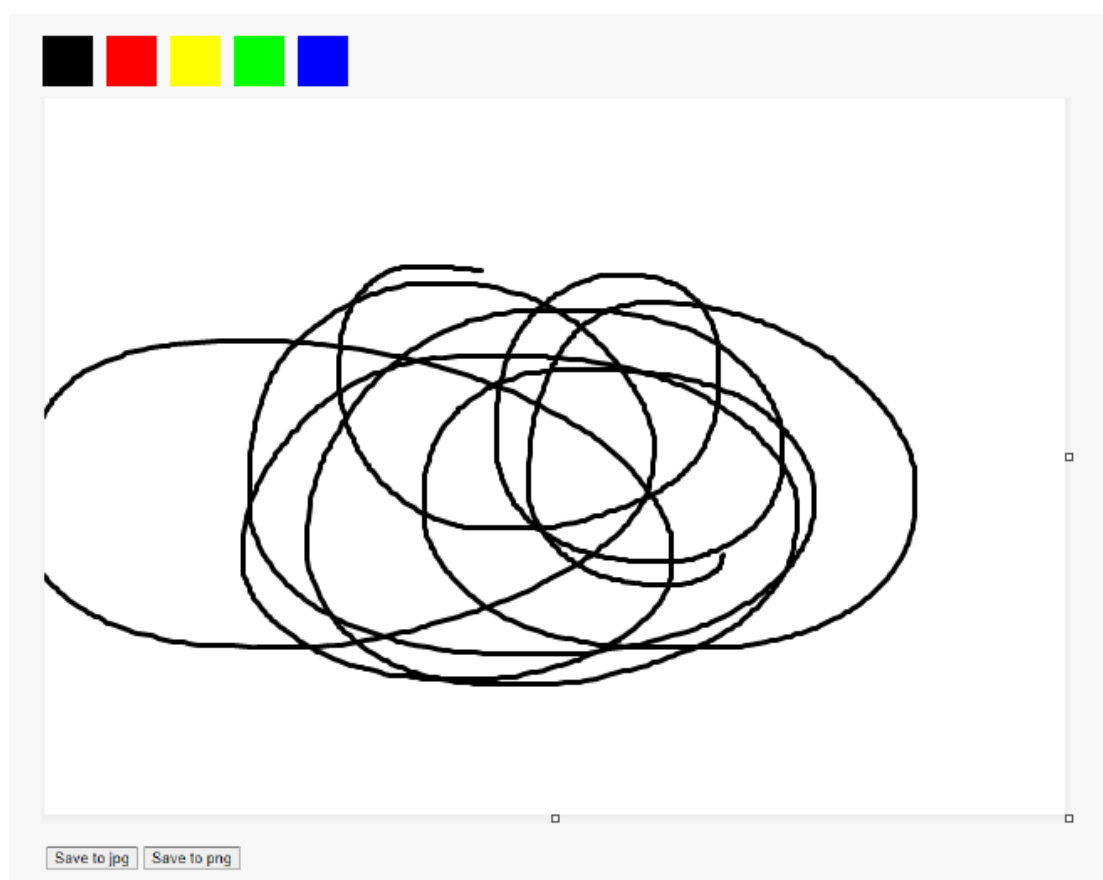
C17: Ripple Effect (Easy)

You are to create a 300px by 200px button on the screen. When mouse-clicked, a ripple effect should emanate outwards from the point clicked, as shown in the video provided; ripple effect should be contained within the area encompassed by the button.

C18: Image Preview Window (Difficult)

You are to develop a JavaScript plugin library. The plugin library should only need to import one JavaScript file to function properly.

When the user mouse clicks any image on the webpage, a lightbox popup (showing a preview of the image) should cover the original webpage.

Clicking on the 'close button' of the lightbox— or any blank area outside of the lightbox— should close said lightbox.

There should be two buttons on the div block to allow for switching to the previous or next image on the webpage.

C19: Roman Converter (Difficult)

Create a function that will take either a string containing a roman numeral, or an integer.

I ➡ 1
V ➡ 5
X ➡ 10
L ➡ 50

C ➡ 100

D ➡ 500

M ➡ 1000

Given a string, return the integer value of that roman numeral.

Given an integer, return the equivalent roman numeral.

No media are provided.

C20: Word Rank (Easy)

Create a function that takes a string of words and returns the highest scoring word. Each letter of a word scores points according to its position in the alphabet: a/A = 1, b/B = 2, c/C = 3, etc.

If two words score the same, return the word that appears first in the original string.

The returned string should only contain alphabetic characters (a-z).

Preserve case in the returned string.

No media are provided.

C21: Random Bubbles (Normal)

Please, create a web page named bubble.html. You have to write JavaScript code to create ten random coloured circles. They have to be located in different positions and random colours when you refresh the page. If you need some CSS you have to write as part of the JavaScript.

If you create more than ten circles, then, the first created bubbles must be erased.

All bubbles must be inside the screen.

(No media files)

C22: Kanban Board Sortable (Medium)

Implement the sortable function in the provided kanban board layout.

- Moving elements should look slightly slanted.
- The place where the moving element will be placed must be empty.

Example (sortable.mp4)

C23: Range Slider (Medium)

Implement the slider function using the provided Range Slider layout.

- You can adjust the range from 0 to 1000 in increments of 50.
- The two handles to adjust the slider cannot cross or overlap each other.
- If you move the handle, the numbers below the slider should also be updated.
- Initial value 400 ~ 600
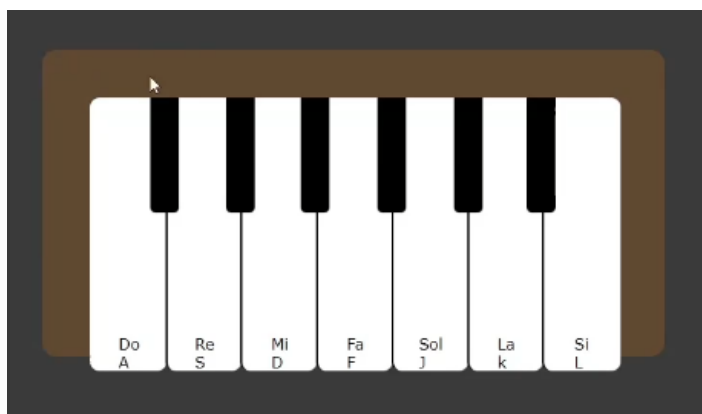
Example (range-slider.mp4)
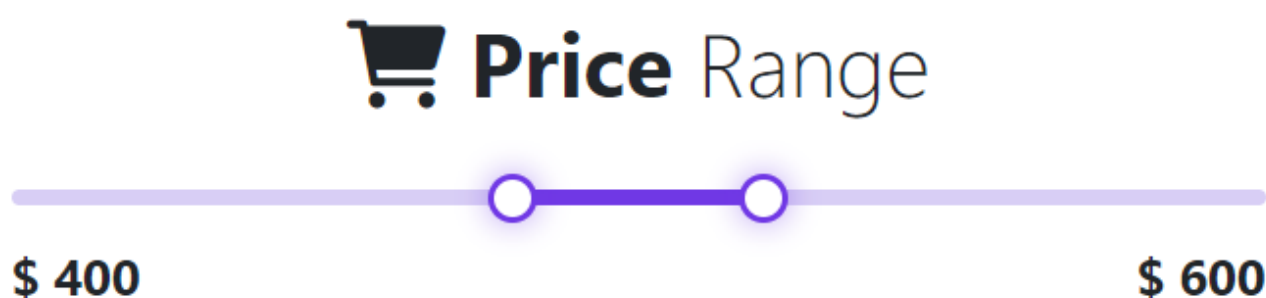
C24: Piano (Medium)

Using HTML, CSS and JavaScript, create an interactive piano.

- The piano should have in the sound: do (C), re (D), mi (E), fa (F), sol (G), la (A), si (B).
- The sound is mapped to keyboards A,S,D,F,J,K,L

View the video **Piano.mp4** in the given folder to understand the functionality.

C25: Mouse style (Easy)

Change the style of the mouse.

- When clicked, it should display an animation.

See **mouse.mp4** in the given folder to understand the functionality.

C26: Electronic Lock (Medium)

You are given a template for an electronic lock.
It must be usable only by using the mouse.

- A beep sound (beep.mp3) must be played when any button is clicked.
- When the 4 last numbers entered match the expected code (6789), the light must turn green (see comments in the provided HTML) and a sound must be played (success.mp3)

C27: Customer Reviews (Medium)

A **data.json** file, which contains JSON-formatted customer reviews on a hotel, is provided.

A review has many fields :

- A rating, integer between 1 and 5.
- A text
- The author's name
- A creation date
- A published field. If the value is false, the review won't appear on the page, and its rating won't be used to compute the average.
- A certified field, which if is true, displays a little badge next to the author's name.

Tasks

- You must compute the average rating, rounded to the nearest decimal, and display it in the "average rate" div.
- Display the published reviews, ordered by desc chronological order (the most recent come first), including :
    - Stars (between one and five)
    - The text
    - The certified badge if needed
    - The author's name.

C28: Pixel editor (Medium)

Create a pixel editor as the following.

- Drawing squares should consist of 16 x 16
- The palette should show the selected colour
- When the palette is selected, clicking on a drawing square draws it as the selected colour
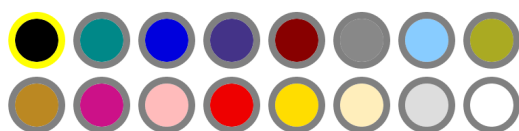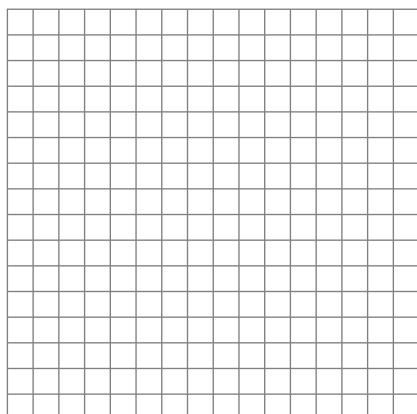
C29: Create modal window (Medium).

Implement a modal with the modal class element.

- While the modal is visible, the body element should not scroll
- The modal can be closed by background click and close button

The modal is responsive and can be viewed with a width of 375px

Part D

D1: Answer Checker (easy)

You are provided with two CSV files. One file contains the actual answers, and the other file contains the submitted answers. You are expected to develop a web page, displaying a table showing the question number, actual answer and submitted answer. At the bottom of the table, display the scores for this submission. Eg, if there are 8 correct answers and there are 10 questions. Display the score as "8/10".

Question	Actual Answer	Submitted Answer
1	A	A
2	B	A
3	B	C
4	C	C
5	D	D
6	A	C
7	B	B
8	C	A
9	D	D
10	C	C

Score: 6/10

D2: Array manipulation (easy)

You are NOT allowed to use PHP loop for this question (e.g. while, do while, for, foreach)

In your index.php program, create an array containing the numbers 1 to 40.

When the file is run using index.php?factor=n, the content of the array changes to indicate which are the numbers that are multiple of n.

Example:

For example index.php?factor=4

```
Modified Array
(
    [0] => 1
    [1] => 2
    [2] => 3
    [3] => 4 is a multiple of 4**
    [4] => 5
    [5] => 6
    [6] => 7
    [7] => 8 is a multiple of 4**
    [8] => 9
    [9] => 10
    [10] => 11
    [11] => 12 is a multiple of 4**
    [12] => 13
    [13] => 14
    [14] => 15
    [15] => 16 is a multiple of 4**
    [16] => 17
    [17] => 18
    [18] => 19
    [19] => 20 is a multiple of 4**
    [20] => 21
    [21] => 22
    [22] => 23
    [23] => 24 is a multiple of 4**
    [24] => 25
    [25] => 26
    [26] => 27
    [27] => 28 is a multiple of 4**
    [28] => 29
    [29] => 30
    [30] => 31
    [31] => 32 is a multiple of 4**
    [32] => 33
    [33] => 34
    [34] => 35
    [35] => 36 is a multiple of 4**
    [36] => 37
    [37] => 38
    [38] => 39
    [39] => 40 is a multiple of 4**
)
```

D3: Tic-Tac-Toe (Difficult)

{{ X || O }} Win!
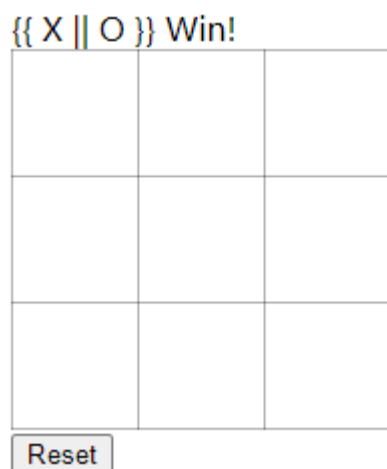
Reset

Create a Tic-Tac-Toe game, according to the following requirements:

1. When you click a cell, your piece "X" is placed in the cell, and the robot who operating the "O" will place a piece randomly.
2. If you click the reset button, the game will be initialized, the win prompt will be hidden.
3. The win prompt will be hidden at initial status.
4. If you refresh the page, game status should not be initialized.
5. All data should be stored in the backend.
6. The page data should be taken from backend asynchronously.

D4: Infinite scroll (Medium)

A dataset (json file) has been provided, saved in the server-side root directory of this question. You are to complete the server-side and client-side codes so that…

1. The client-side uses the ajax method to request information from said json file.
2. The server-side responds with 10 data maximum per request.
3. The data acquired shows on the client-side in a "data display" area.

   (a) The "data display" area should show 5 data obtained from the request, and possess a scrolling function
   (b) When scrolling to the bottom and reaching the last data obtained from the current request, the data from the subsequent request should load, and so on.

D5: Image Watermark (Medium)

When the browser requests any jpg or png image file from the "media" folder in the server-side root directory, a white horizontal "WorldSkills" text watermark should be applied to the bottom-right corner when displaying said image on the browser; the image on the server-side must not be changed in any way. Apply the watermark using PHP method.

For example, when the browser load the following URL, /XX_module_a/D5/media/image1.jpg ,a watermark effect should be applied to image1.jpg on the fly in the response, but not modifying the original image1.jpg.

D6: Live chat (Difficult)

You are to develop a real-time chatroom; screenshots have been provided for reference below.

When the user inputs the URL, the user interface should appear in the state depicted in image 1.

- There should be a "Join Chat" button. All other contents are to be blank.
- Clicking the "Join Chat" button should allow users to enter the chatroom once they have entered their own nickname.

When the user enters the chatroom, all previous messages in said chatroom should display; the user interface should appear in the state depicted in image 2.

- The left section should include:

  - "Leave Chat" button
  - the user's own nickname
  - a list of all current users.

- The right section should include:

  - All messages
  - Message sender
  - Input field and button to send message

One chatroom is shared between all users. They should be able to send each other messages (text), which should show in real-time for others to see. Clicking the "Leave Chat" button should return the user interface back to the state depicted in image 1.
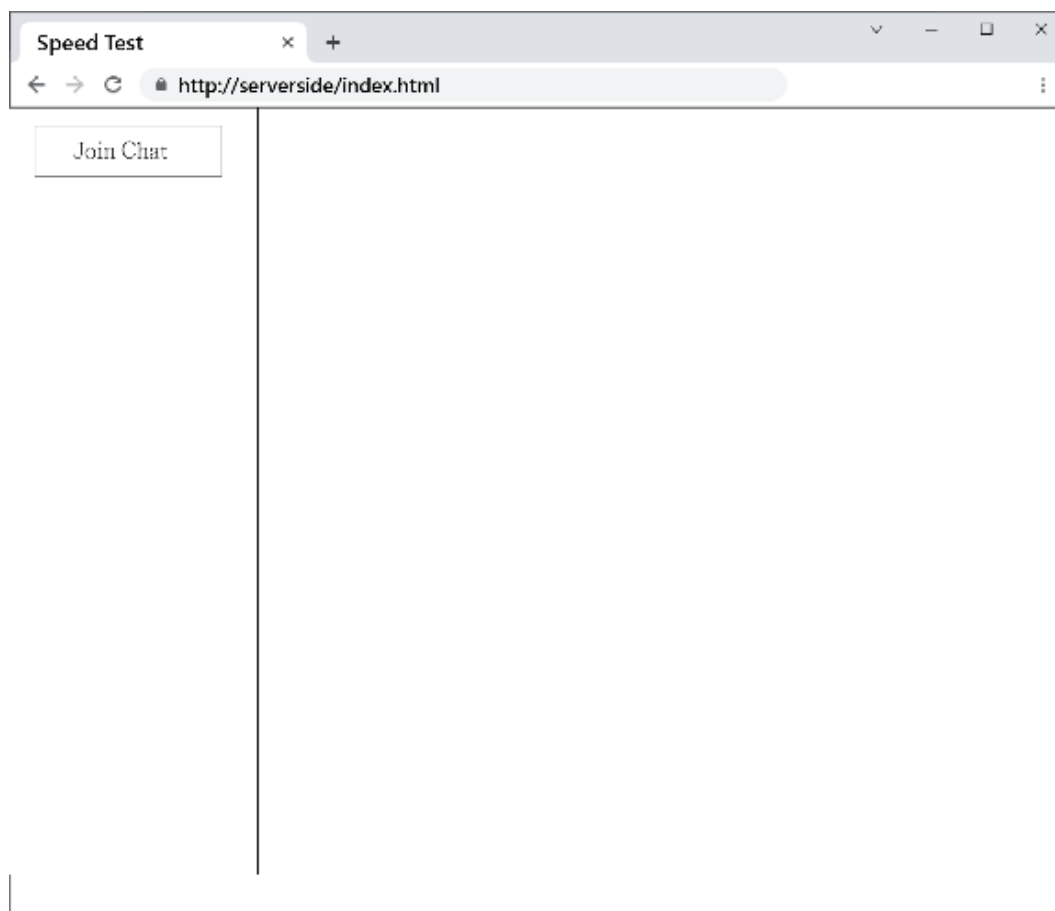
Image 1: Not yet entered chatroom
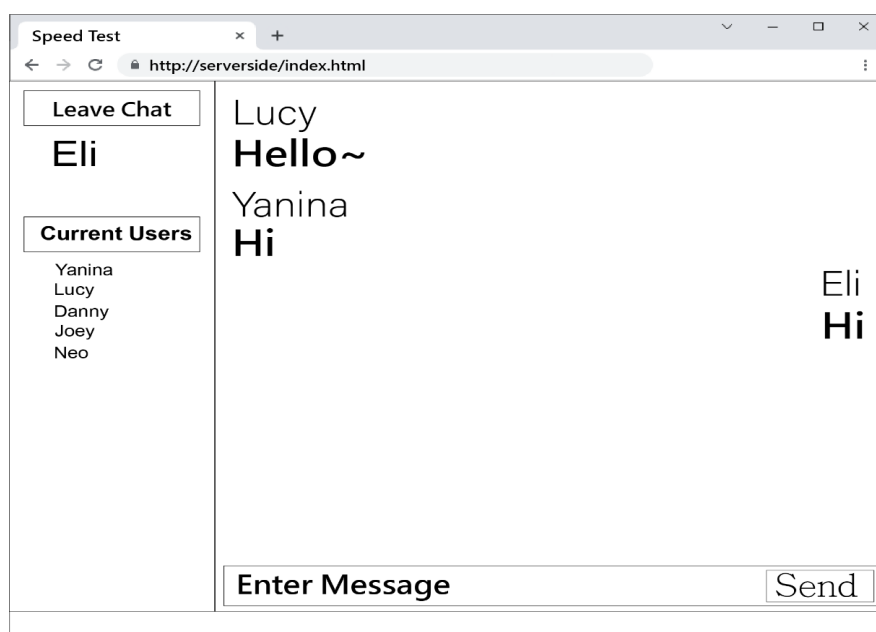

Image 2: Entered chatroom

(No media files)

D7: Number of Days (Easy)

Show the number of days between two given dates. The user must enter as data in the input date. The date is in YYYY-MM-DD (ISO8601) format.

Input: index.php?date1=1992-07-19&date2=1992-07-22

Output: three days

D8: RGB to HEX (Medium)

Given three integers between 0 and 255, corresponding to the red, green, and blue channel values of a color, return the hex string for that color.

hexcolor(255, 99, 71) => "#FF6347"

D9: PHP list of even numbers (Easy)

Please, create a web page with a textarea and a button.

The user of the page can write a list of numbers. Each number will be placed in one line. You have to retrieve all the numbers, divide them by 2 and sort and show them but only when the result is an integer. You have to store the result in the same field.

(No media files)

D10: PHP Remove numbers (Easy)

Please, create a web page with a text field and a button.

The user of the page can write any string. You have to remove all the numbers from the String and write the result in the field.

(No media files)

D11: Bar Chart (Medium)

"random.php" that generates random data to create charts is provided.
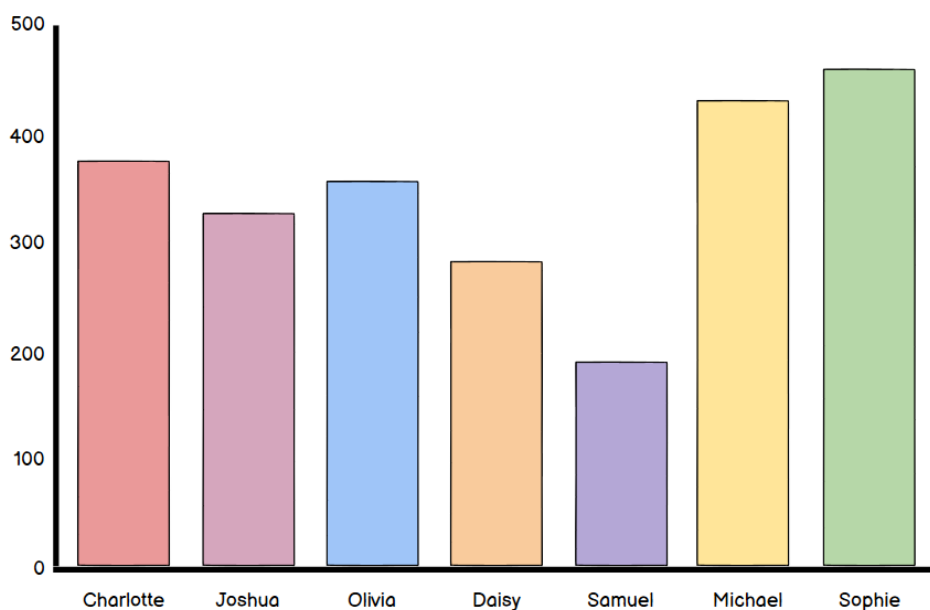
Draw a bar chart using all data from "random.php"

- Y tick labels (vertical axis number) must not have a decimal point, and there must be at least 5.
- The number of bars is randomly selected between 5 and 15.
- The color of the bars is applied randomly.
- For X Axis Data Labels, name must appear.

random.php data

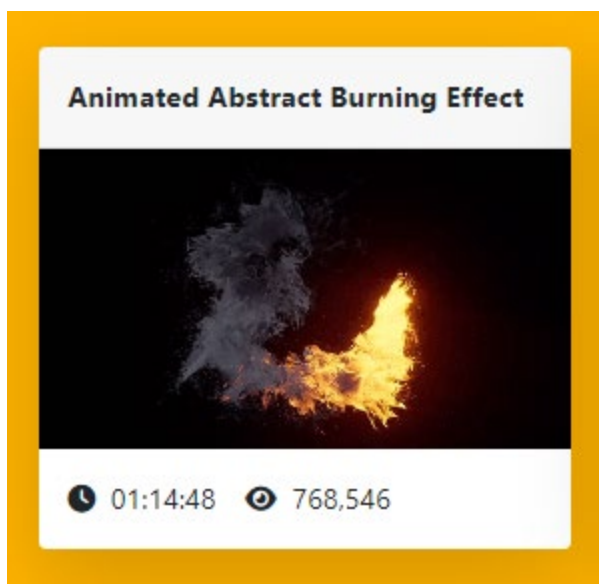[{ name: "Charlotte", value: 380, }, ...]

Example

D12: Video List Page (Medium)

Create a Preview Video List Page using the provided layout.

Items in "videos.json" should be displayed correctly on the page.

Title, preview media, duration, and views are shown for each piece of video information.

It plays when the mouse enters the preview media and pauses when the mouse leaves. When the mouse enters again, it plays from the paused point.

D13: Generate image with Base64 (easy)

With a text area you must insert an image in **Base64,** when sending the code you must create a folder and then insert the image in **PNG**

See **code64.mp4** in the given folder as an example.

D14: Generate file DOC (Easy)

- In a form you must insert a title and then its content, when submitting the form you must download a DOC document where you can open it and view the content in the DOC file.
- The file must be called as the title of the form.
- The content must be included in the file with its respective title and paragraph.

Example video: **create_file.mp4**

An HTML_TO_DOC PHP class is provided.

D15: Write a Secure Login (Difficult)

Security is a key consideration when writing web applications. In this task, you are provided with a small website that includes an authentication system. However, upon reviewing this code you notice several issues including:

- Passwords are stored in plain text
- Cookies contain information about the user
- There is no accommodation for SQL injection attacks
- There is no accommodation for brute force attacks
- No feedback is provided to the user on bad logins

Your task is to fix the highlighted issues with the existing system to make it more secure.

You have been provided with a basic user table for your database, but you will need to add fields to implement your updates.

The functionality for checking if a user is logged in as well as handling the login request is also provided but is also insecure.

When you are finished, please ensure you **provide the judges with valid login information** for your secure website!

D16: API Request Logger (Medium)

Create a PHP endpoint that accepts application/json as POST data payload.

Each time it is called, the request body must be stored in a text file in the folder, named HH:MM:SS-request.txt (replace HH:MM:SS with the current hour, minute and second).

You can create a README.txt file to indicate which URL to call and where the files are stored.

(No media files)

D17: Create simple noticeboard (Normal).

Create a simple noticeboard for post and display on the same page. This page shows all logged posts. And there

is a form in the same page to create new posts, that saves to log.json.

- JavaScript is not available
- Save post data to "log.json"
- Input content should be "name" and "content"
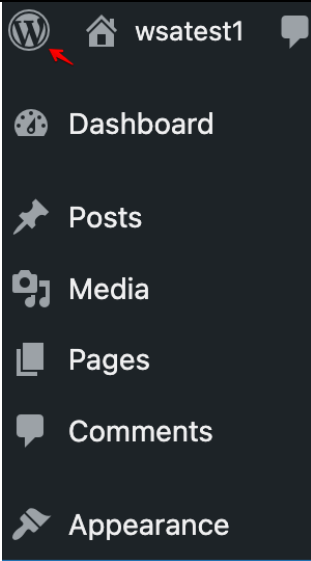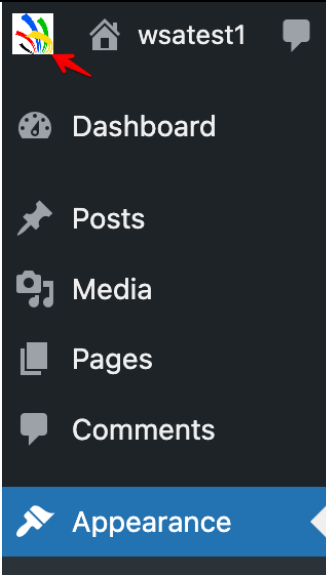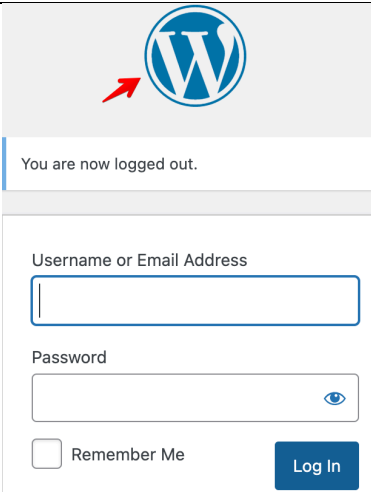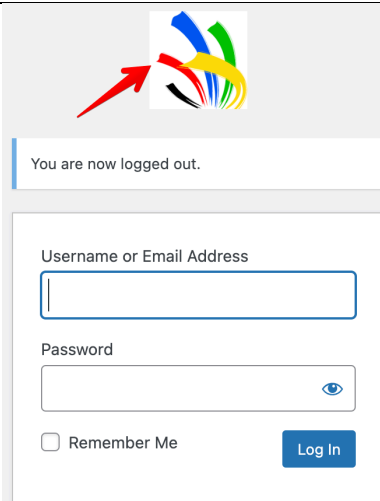
Display "name", "content", and "post date."

Part E

When creating database, please name your db speed_test_EX, where X is the task number. Please use username: admin, password: admin for all the tasks in part E. If we cannot login to check, mark is deducted.

E1: Customise Wordpress Logo Plugin (Normal)

Create a plugin to allow change WordPress logo for Wordpress Login screen and Admin bar. Admin User should be able to configure the logo used under Appearance->Themes->Customizer->Site Identity-> Change Logo.

Before	After
Click on logo will open wordpress.org	Click on logo will open current blog's home page

E2: Whatsapp Widget (Difficult)

Create a widget to provide a whatsapp hyperlink using Whatsapp Icon configured at a widget area.


```
<a href="https://wa.me/6565501790?text=This%20is%20a%20test%20message" target="_blank"> == $0
  <img src="http://                                    /whatsapp_logo-2x.png">
</a>
```

The phone number and pre-filled message to be configurable at dashboard

The phone number should have + and – removed and message to be url encoded

----------Extract from whatsapp FAQ--------------------

Use https://wa.me/<number> where the <number> is a full phone number in international format. Omit any zeroes, brackets, or dashes when adding the phone number in international format.

Use: https://wa.me/1XXXXXXXXXX   Don't use: https://wa.me/+001-(XXX)XXXXXXX

Create your own link with a pre-filled message

The pre-filled message will automatically appear in the text field of a chat.
Use https://wa.me/whatsappphonenumber?text=urlencodedtext where whatsappphonenumber is a full phone number in international format and urlencodedtext is the URL-encoded pre-filled message.

Example: https://wa.me/1XXXXXXXXXX?text=I'm%20interested%20in%20your%20car%20for%20sale

----------End Extract from whatsapp FAQ--------------------

E3: Currency Exchange Rate Widget (Normal)

Create a widget to show the currency exchange rate. Put the widget in a sidebar, use the json provided, usd.json. Compress the widget plugin files created in zip format.

E4: Color or Image Plugin for Login screen (Difficult)

Using the wordpress features to select color or to select an image, create a plugin that you can choose between changing the background color or adding an image in the login screen.

Only Input color and input file will not be accepted.

No media are provided.

E5: Show Many Movie Data (Difficult)

Save all provided "movies.json" in DB.

And show all the movie data using the homepage in layout folder.

"poster image", "title", "popularity", "release_date", "runtime", "vote_average", "genres" should all be there.

The movie data list is sorted in descending order by "Popularity" and can be searched by "Title".

E6: Statistics Plugin (Difficult)

Create a plug-in that displays statistics from the browsers that accessed your homepage.

There are 4 browsers: Chrome, Firefox, Edge, and Other.

If you click the "Browser Statistics" menu in the admin dashboard, the statistics of the browser accessed to the homepage are displayed.
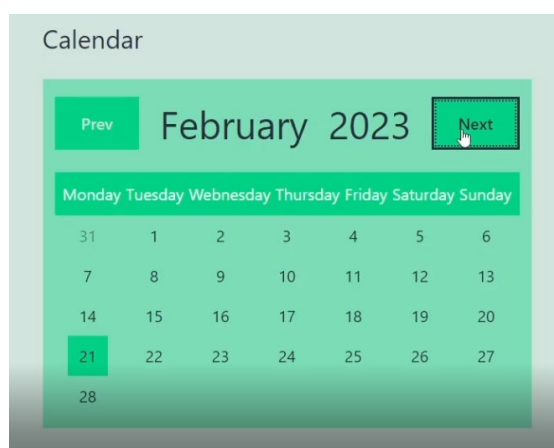
In "Browser Statistics", the pie graph and the number of hits for each browser are shown.

# E7: Calendar (Difficult)

Create a plugin that has a calendar.

- The calendar must show the current date, month and year.
- See **calendar.mp4** in the given folder as an example.

E8: Modal POST (Difficult)

Create a theme where you can create a customizable header and also where you can display all posts and when you click view post a floating window will appear with the content of the post.

- See **theme_post_modal.mp4** in the given folder as an example.
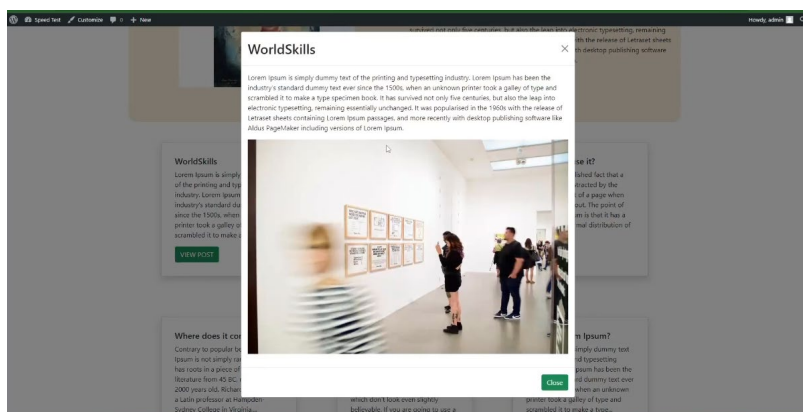
E9: Plugin Activation (Easy)

Create a plugin, that, when is activated, creates a myplugin_data table in the DB.
When the plugin is deactivated, the table and its contents must be deleted.

(No media files)

E10: Admin-only Page (Medium)

Create a plugin, that, when is activated, adds a link to a "About" page. This page must contain "Lorem Ipsum" content.

The page must be part of the WP Backoffice (no blank page, or similar templating).

The link must appear in the WP backoffice navbar, only for Administrator users. A user with "Editor" rights isn't able to view this page.

(No media files)

E11: Post calendar plugin (Normal)

Create a plugin to display the current month's post dates in a calendar on the dashboard.

- Calendar design is optional
- Show the date of posting on a calendar date
- Hover a calendar date to see the posting time

(no media files)

E12: Change Login path (Easy)

Change the wp-login.php into member-login.php and keep the Wordpress login still working as usual.

Instructions to the Competitor

- Please ensure your name the files according to the description and organize your files for assessment.
- All assessment is done on server. No assessment process in workstation.

Marking Scheme

		COMMUNICATION AND PRESENTATION	DESIGN	LAYOUT	FRONT-END	BACK-END	CMS	TOTAL
A1	Design	0.5	4	-	-	-	-	4.5
A2	Layout	-	-	4	-	-	-	4
A3	Front-end	-	-	-	4	-	-	4
A4	Back-end	-	-	-	-	2	-	2
A5	CMS	-	-	-	-	-	2	2
	Total							16.5