



**DSBN REGIONAL [WEB DESIGN & DEVELOPMENT](#) SKILLS CHALLENGE
2024 SECONDARY LEVEL SCOPE**

CHAIR: Jeff Mulder, Welland Centennial Secondary School - jeff.mulder@dsbn.org

PURPOSE OF THE CONTEST:

To provide competitors with the opportunity to demonstrate, through practical and theoretical application, their skills in client and server-side web design and development.

EVENT DETAILS:

Date: Wednesday, February 28, 2024

Time: 8:30 am

Location: Niagara College - Welland Campus - Rm TBD

ENTRY:

Students must register online at [2024 Skills Challenge Registration Form](#) with all the required information completed to be eligible to participate.

SKILLS AND KNOWLEDGE TO BE TESTED:

PRACTICAL 100%

The Web Design and Development contest challenges competitors to design a Web solution based on provided requirements. The implementation of functional and non-functional requirements – using the HTML, CSS, JavaScript, and PHP languages, a relational database, and software frameworks and tools – is the primary focus on this contest.

TEACHER'S ROLE:

Instructors are expected to acquaint their student participants with all of the enclosed guidelines. Teachers may accompany their students or visit any time during the competition but may not assist the competitors during the challenge.

EQUIPMENT, MATERIALS, TOOLS, AND SUPPLIES:

Equipment Supplied by the Contest Coordinator:

- Tables and chairs
- Maximum of 2 120V power outlets

Equipment Supplied by the Competitor:

- The competitor must bring a laptop or desktop computer with a PHP Development Environment installed.
- The use of Replit (using the “PHP Web Server” template) as a Development Environment is allowed.
- Latest versions of modern Web browsers:
 - Mozilla Firefox (<https://www.mozilla.org/firefox/>)
 - Opera (<https://www.opera.com/>)
 - Google Chrome (<https://www.google.com/chrome/>)
 - Microsoft Edge (<https://www.microsoft.com/edge/>)
 - Safari (<https://support.apple.com/downloads/safari>)
- XAMPP (<https://www.apachefriends.org/>):
 - Apache
 - MariaDB
 - phpMyAdmin
 - PHP
- Text editor
- Graphics and multimedia applications:
 - Inkscape (<https://inkscape.org/>)
 - Paint.NET (<https://www.getpaint.net/>)
 - Adobe Photoshop (<https://www.adobe.com/ca/products/photoshop.html>)
 - Adobe Illustrator (<https://www.adobe.com/ca/products/illustrator.html>)
- HTML/CSS/JS Frameworks:
 - Bootstrap (<https://getbootstrap.com/>)
 - jQuery (<https://jquery.com/>)

Books, notes, materials and assisting devices are not permitted unless listed above.

JUDGING CRITERIA:

Content:

- The purpose of the web application is clearly identified. Titles, logos, and headings, communicate intents and objectives of application.
- Content is organized in a logical and useful manner; it moves from introductory or general content to specific or detailed content.
- Content supports the intention of the application. The information is useful and creative. The content is presented in an interesting and original manner.
- Text and graphics are organized in a way to promote readability. White space and other devices make pages easy to tread or view.
- Graphics and text work together to realize the objectives of the application. Graphics are

not used for their own sake.

- Page format is appropriate. Pages are not inordinately long. Scrolling is kept to an acceptable level.
- Content must be only material that the contestants create during the contest or is provided to them by the contest organizers.

Navigation:

- Links are easily identifiable, and their use is intuitive. Users can move easily both forward and backward through the application.
- The path to desired information is clear. Menus direct visitors to relative information.
- The user experience is reasonable; visual elements are effectively used to provide the user with a high level of engagement.
- Links information located on the same page (anchors) are appropriate.

Visual:

- The application is aesthetically appealing. Use of background and foreground colour promotes readability.
- Graphic size, positioning and type enhance text and navigability.
- The visual theme is consistent. There are no jarring changes in layout, font usage, colour, as the visitor moves from page to page.
- Visual design is creative. The visual design has a high level of originality.
- The design includes original vector or bitmap graphics created by the competitor.
- The solution includes photographs and images (conversion to GIF or JPEG may be required).

Solution Structure:

- Web pages must validate as (X)HTML.
- Web application must be consistent across all Web browsers.
- Design a solution that allows for easy updates and maintenance.

Cascading Style Sheets:

- Clearly separate content from presentation through the use of Cascading Style Sheets.
- ID and class names are properly written and referenced using camel case notation.

Web Form:

- Demonstrate proficiency in the design of Web forms and the validation (client- or server-side) of form data.
- Ensure that Web forms are properly marked up and accessible.

Client-side Frameworks:

- Use of Bootstrap and/or jQuery in a meaningful and useful manner in the development of the competition project.

Database:

- Create a database and tables from a description using MariaDB and phpMyAdmin.

- Write PHP code to create, read, update, and delete data entries to a MariaDB database.

OVERVIEW & MARKING RUBRIC

There are two groups of judges:

- Coding judges who evaluate the technical aspects of the solution.
- Design judges who evaluate the appearance, content, usability and accessibility of the solution.

In the Event of a Tie:

Should the competitors be tied in total points, the individual with the best score in the coding components will break the tie.

*** Each competitor will be given a number by their coordinator upon registration at the location and will be judged anonymously during the competition.*

TRANSPORTATION:

Students are responsible for their own transportation.

CLOTHING REQUIREMENTS:

Casual business attire must be worn with DSBN Technology shirts. Clothes that identify your school are not permitted.

SAFETY REQUIREMENTS:

Competitors are required to follow all industry safety standards during the competition.

COMPETITION AGENDA:

8:30 AM	Orientation & Opening Remarks in the Auditorium
9:00 AM	Competition Begins (AM)
11:30 AM	Lunch
12:00 PM	Competition Resumes (PM)
2:30 PM	Competition Ends