



## Assignment – Universal design

### Objectives

The purpose of this assignment is to be able to explain principles of universal design in general and within web applications in particular and learn how to develop a web application that complies with the required standards of universal design.

### About this assignment

This assignment is divided into two parts, the second is not mandatory.

1. The first part is about explaining principles of universal design within a web application.
2. The second part is about developing a web application that complies with the required standards of universal design.

The whole assignment shall be submitted on Canvas in groups of 1-5 people.

The submission shall contain a zip file with the following content.

- A pdf with the names of all team members, may be included in the report
- A report where the web application is discussed regarding universal design
- Source code for the web application

Deadline: Monday 14. November 2021.

Things to remember to check with a WCAG tool on both questions.

- Logic order on tab-elements
- Jumping to the main content & Jumping to the menu
- ALT text on all images
- Correct Labels on schema elements

### Question 1

You are to evaluate the <https://www.sas.no/> website with respect to how it fulfils the current requirements for good Universal Design as given through WCAG. The evaluation should end up with a report similar in style to the example given by Difi in their evaluation of Norwegian Air Shuttle's web site back in 2016 (<https://www.uutilsynet.no/tilsynsrapporter/tilsynsrapport-norwegian-air-shuttle-asa/167> , this is in Norwegian but use Google Translate and study the report), or you can follow this template: <https://www.w3.org/WAI/test-evaluate/report-template/> (combine with the Norwegian Air Shuttle report).

**Warning: Do not finish the orders!**

Pages and services to cover as a minimum:

- Front page
- Order the cheapest ticket “next weekend” for an adult and a child from Bergen to Trondheim (out Friday and return Sunday late afternoon or evening).
- By the keyboard only (no mouse): Buy the same tickets as above using the low price calendar, first by using Norwegian as your language, and then by using English as your language.
- Order an Ungdomsbillett (youth ticket) from Bergen to Oslo for the first weekend in December.
- Find a video and evaluate/examine the page where it is found w/respect to the applicable principles.

Others...:

- Do the testing from two out of the following browsers: Chrome, Explorer and/or Firefox in addition to from a cell phone (free to choose between Android or IOS, or you can test from both).

## Question 2 (not mandatory)

Create a universal designed webpage for a car rental company which is based on responsive design, and preferable by the use of HMTL and CSS only. Javascript can be allowed if, and only if, combined with correct use of WAI-ARIA (ARIA for WCAG 2.1):

<https://www.w3.org/WAI/WCAG21/Techniques/aria/ARIA6.html> and various WCAG RAI-ARIA Cheat Sheets such as: <https://cheatography.com/jreiche/cheat-sheets/wai-aria-1-1/> .

Your car rental page must comply with WCAG 2.1.

- Make use of the [www.hertz.no](http://www.hertz.no) web page as the “template” for your web page, but stop at their social media bar (exclude everything below).
- On the “car Hire” in the top menu with vehicle guide, create another page with a list of categories of cars (A, B, C, D and V for Van (no separate Van Hire menu)) with images of typical cars in the category and daily/weekly/weekend rental price for each category. The user should be able to choose a car from here and then get to a form (new page for making the order).
- On the other main menus (at top) and the <Norway Sale>, <Offers>, <15%> etc. – lead these to the same info page (“Service not implemented yet”).
- From the main page – the user should also be able to rent a car.
- Information about the rental: location (return same place to simplify), date/time for pick-up and delivery, car category (option to get to the more information), and the Order option.
- The order option brings the user to a new page where info is displayed and can be changed, and then for the customer to confirm or regret. You do have some freedom here (can use dummy values)
- Correct use of fonts and contrasts
- Correct structure (h1, h2, and so on...)
- Links being correct
- Responsive Design