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Technical Writing HQ – Capstone Project

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Example 1: Product Description

PRODUCT DESCRIPTION

We recognize that all students are different and, thus, require different learning environments. To eliminate distractions during studying and exams, we have created a learning environment in Accessible School that can be made clean for those who need it, with the option to lock it.

Accessible School can be used by teachers and students during lessons or tests, in a browser, or as an app. Students can concentrate in a safe learning environment, and teachers have less administration and can spend more time with students.

Adaptations to the student's needs

Using the system, the teacher can customize the learning environment to the student's needs or let the student do it. A teacher can simplify a student's desktop by personalizing features or setting the correct accessibility features.

Simplicity

The system allows the teacher to import their teaching and testing materials and create them. It warns the teacher if the material needs to be adjusted to fit the student's needs.

Teachers can save a lot of time during lessons and tests with settings they make at the start of the year. Teachers can reuse or create student settings for different subjects.

Tests

We have made a system that meets all national test requirements. The teacher can lock a student's computer during the test, preventing them from accessing other functions.

Accessibility

We have optimized the students' reading and writing environments for accessibility. Among other things, this allows users to use speech synthesis and dictate their responses. The teacher, or student, if allowed, can remove the features from a student account if they don't use them or find them distracting.

There are predefined accessibility modes in the system, which are usually suitable for students with different disabilities. The teacher can select an accessibility mode likely to suit the student and then enable or remove the features that the student needs.

Free account

Teachers can create a free account with one student. Later, they can upgrade the account to a real account.

Different sizes of accounts

Depending on the number of teachers and students, there are different sizes of accounts, from one teacher with one student up to an infinite number of teachers with many classes.

No hidden costs

School subscriptions are the only costs. We do not charge additional fees.

Safe to operate

The system is available as an app and as a web-based client. Students and teachers can use the app even without an internet connection. Data is stored locally until a connection can be established again.

Example 2: Information architecture

Accessible school is a service for schools. With the system, teachers can create all the materials they need for their lessons and tests. Students can do a given assignment or test and make notes through their login.

See the live file on Google Drive to zoom in on details.
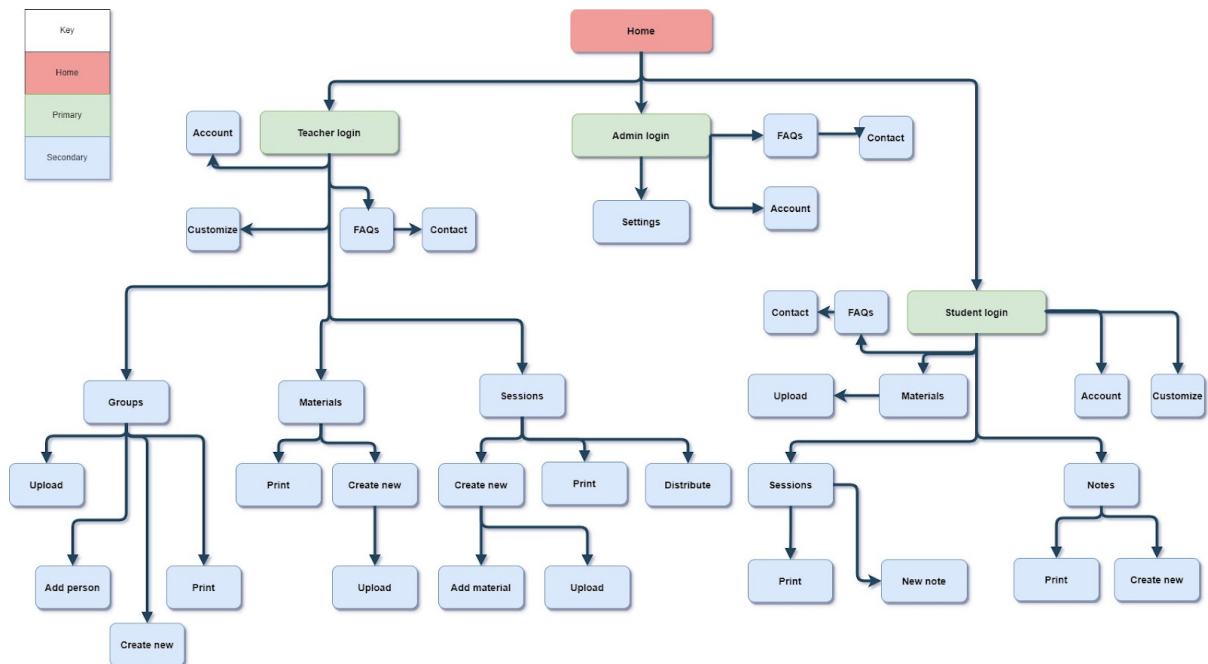
Example 3: Requirements (Quickstart)

1. Windows 10 or Windows 11/Macbook Air or Macbook Pro.
2. Chrome (at least Version 107.0.5304.107).

To ensure the prerequisites are met, launch the script called **Prerequisites.bat** included with the Accessible School installation.

Do as follows:

1. Find the *Prerequisites.bat* file and run it as administrator.
2. Update any software that is marked as out of date.

Example 4: Your desktop (Quickstart)

Workspace buttons

Button	Administrator login	Teacher login	Student login
Account	Change your password.		
Customize		Accessibility and comfort settings. For example: hide links or videos in texts, change colors and add a speech synthesis button. Combine groups of settings for specific students.	Accessibility and comfort settings. For example: hide links or videos in texts, change colors and add a speech synthesis button.
FAQs	Frequently asked questions.		
Materials		Find and upload texts, videos, and pictures. Print and compose materials.	
Groups		Add students to groups.	
Sessions		Provide students with tests or lessons. Limit time and other restrictions.	
Settings	Add or delete accounts. Enable access to media, such as encyclopedias.		

Taskbar

You will find the taskbar at the bottom of the screen.

Screen is locked so that the Internet can't be reached.

Indicator for cloud access.

Indicator for notifications

Today's date.

Time.
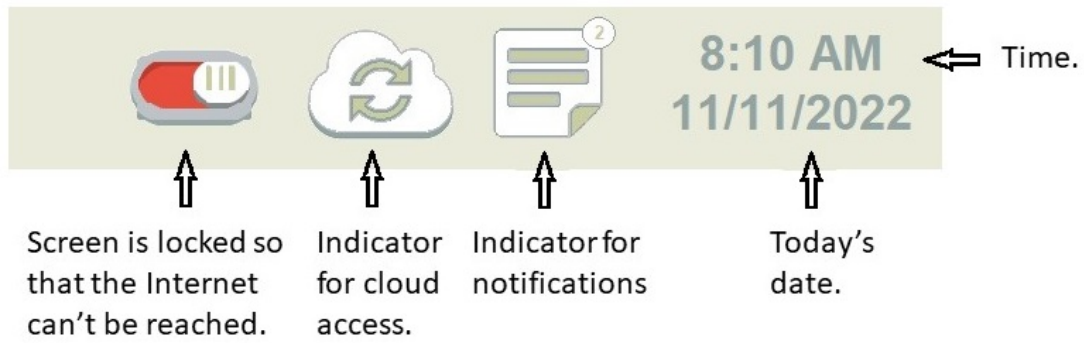
Example 5: FAQs x3

Teacher login > Frequently Asked Questions

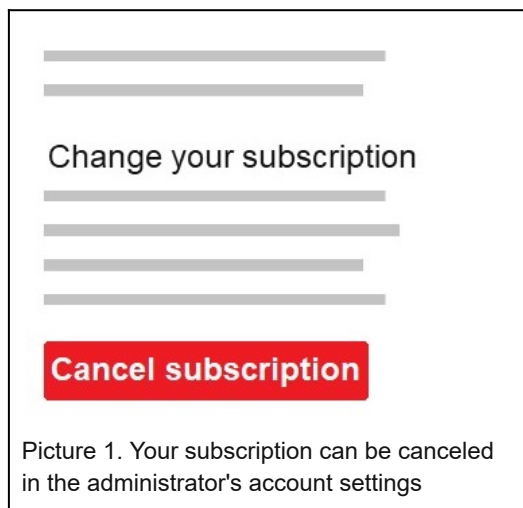## How do we cancel our subscription?

Note

Before you end your subscription, make sure that you download all the information from the individual accounts.

Cancel subscription

To cancel your subscription, you must log in as an administrator.
Then, follow these steps:
1. Log in as an administrator.
2. Visit the Account page.
3. Click the Cancel subscription button under the headline Change your subscription (See picture 1.). The system will send an email to the administrator about your cancellation.

Change your subscription

Cancel subscription

Picture 1. Your subscription can be canceled in the administrator's account settings

Recover permanently deleted files

When you cancel your subscription, we keep the information one month before the permanent deletion. If you regret the cancellation, contact our customer service at kundtjanst@tillgangligskola.se or +46 40 628 0400 if you need assistance. Be sure to have your registration number on hand when contacting customer service.

How can I integrate encyclopedias into my students' learning environment?

The accounts administrator can help you set up your account with encyclopedias. Under Account, you can find information about how to contact the administrator.

The following encyclopedias are available:

Swedish
- Nationalencyklopedin

English
- Encyclopedia.com
- Encyclopedia Britannica
- Scholarpedia
- World Book Encyclopedia

Other languages
- Brockhaus Enzyklopädie (German)
- Den Store Danske Encyklopædi (Danish)
- Encyclopædia Universalis (French)
- Encyclopedia of China (Cantonese)
- Krugosvet (Russian)
- Wikipedia (Many different languages)
- Winkler Prins (Dutch)

How do I download information from my account?

You can download individual items. Or you can save all information from Materials, Sessions, or Groups.

Navigate to:
- *Teacher Login > Materials* to save materials.
- *Teacher Login > Sessions* to save exams or tests.
- *Teacher Login > Groups* to save student information.

For example, to download information on a student grade in Groups, follow these steps:
1. Select the student you want to save information about, from the dropdown menu. See picture 1.

2. Tick the information that you want to save. In the example, *Grade* is ticked.
3. Click the *Print button*.
4. Click the *Save* button under *Save as writable PDF* to save as a writable PDF. Please refer to picture 2.
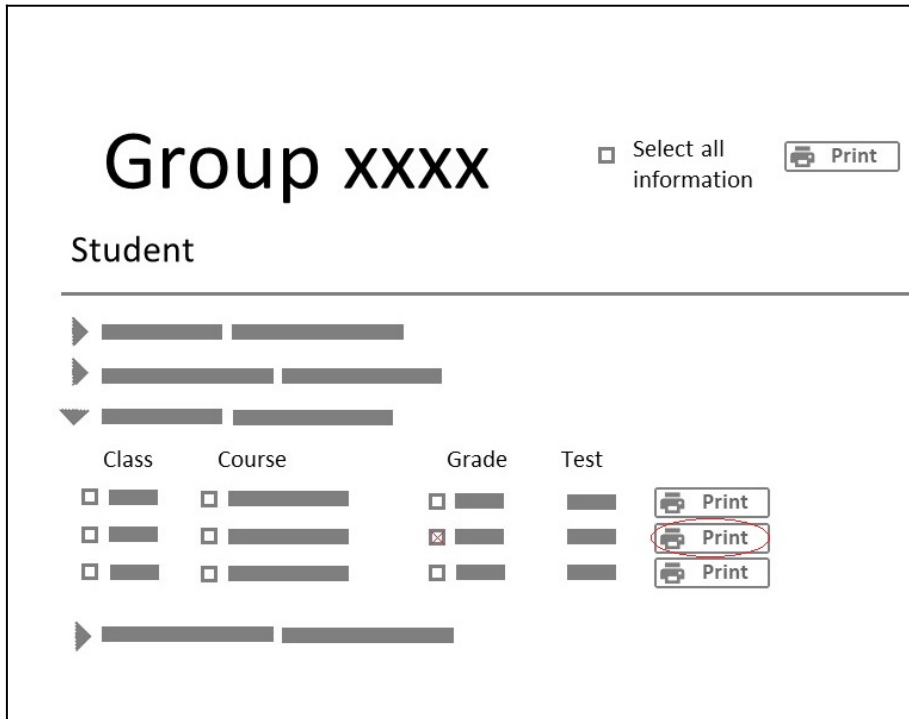
Bild 1. Save the student grade.
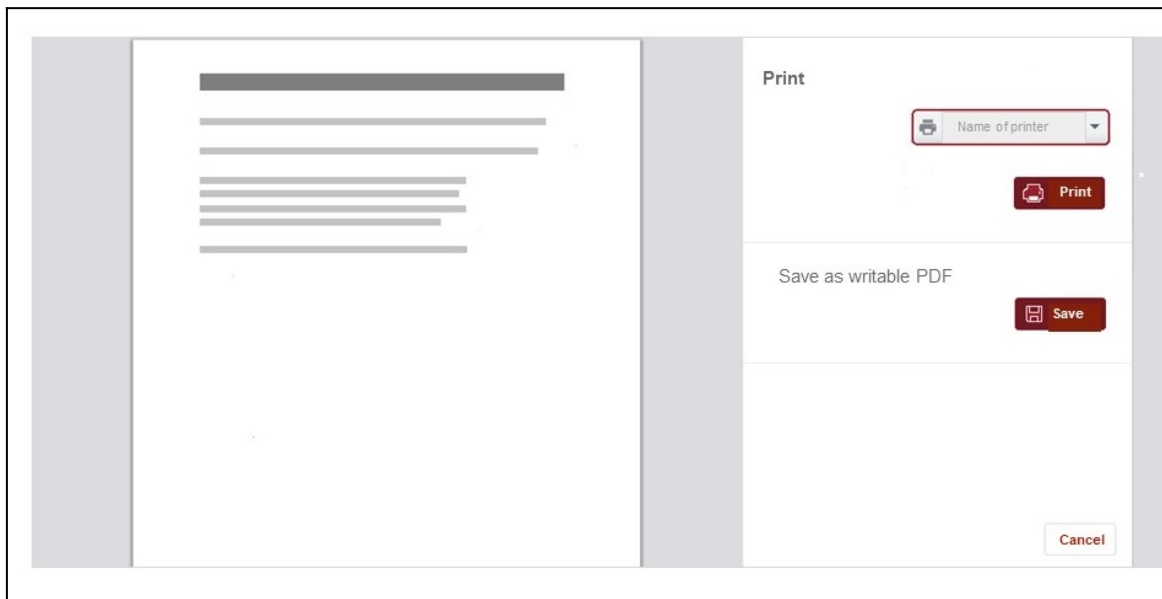
Picture 2. Save to PDF.

Aide-mémoire for saving Group information

You want to save:
    ● Student name, course, test, and grade -> tick *Grade*.
    ● All information about the student in the class -> tick Class.
    ● All information about all students in the group -> tick *Select all information*.

Note

Selecting *Print to PDF* under *Name of printer* allows you to print a simple PDF (image of the text) that cannot be changed by the recipient. Please note, however, that this file will not be accessible to students with disabilities.

Example 6: White paper 'How can I make my information more accessible?'

Summary and purpose

You have a client who requests that you adapt your information to make it more accessible. Working with accessibility can be tricky if you don't have the habit of doing so. The purpose of the whitepaper is to show you how to make your information accessible, given your client's needs.

This paper will not make you an accessibility expert. It provides a basic understanding of accessibility and guidance on where to find more information if needed.

Accessibility of information involves two aspects. First, a person must be able to access information. Secondly, accessibility also requires an understanding of information.

In the paper, you will learn about

- U.S. and European electronic standards for documents

- assistive technology and how they affect accessibility

- different formats

- some design principles.

Information is more than text

Information is not equivalent to text. However, there is much more to information, including images, sounds, and moving images. Remember this when talking to a new customer who wants accessibility since some prefer video, while others prefer plain text. For example, you might favor other formats if your reading ability is impaired. Please do not assume anything is a given but ask what format/formats they prefer.

What is accessibility?

There are many aspects of accessibility, for instance, when creating information, services, and buildings. Nevertheless, this paper focuses only on information accessibility.

20 to 30% of the world's population is estimated to be disabled, ranging from mobility to cognitive impairment. The remaining 70 to 80% may also experience a temporary disability, such as breaking the dominant arm or losing the voice for a few days, so they cannot move or speak at some point.

Situations can also disable any person, such as when they have the sun in their eyes and cannot see the screen or when they are underground and cannot access the Internet.

Accessibility is logical and also beneficial to all users. If you design for all ability levels, you can create products and services that anyone can use and enjoy. Therefore, you can reach more users on several types of machines.

Customization and standards

Many governmental agencies require you to follow a standard due to legislation that requires accessibility. Additionally, there are used standards unrelated to legislation.

However, not everything is standardized yet, and cognitive accessibility, for instance, is not covered by most standards. Consider this when discussing your customer needs and what standard to follow.

In many cases, your customer wants to adhere to a specific standard. U.S. and European accessibility standards include:

- Section 508 — is part of The Rehabilitation Act under U.S. law. On this site, you can find guidance for information accessibility.
- EN 301 549 — is a European standard for digital accessibility. Version 2.1.2 references WCAG 2.1 AA but cover more.
- The Web Accessibility Directive — is a directive on the accessibility of websites and mobile applications adopted by the E.U. It refers, among other standards, to the EN 301 549 standard.
- WCAG 2.1 levels A-AAA— The Web Content Accessibility Guidelines is an international standard for web content accessibility that was developed by The World Wide Web Consortium (W3C). WCAG 2.0 is equivalent to ISO/IEC 40500.
- PDF/UA (ISO 14289) — it's a standard that defines how the PDF format can be made accessible.
- ADA Compliance (ADA = Americans with Disabilities Act)— refers to the text of the ADA and other similar disability regulations.

[Read more about accessible publishing at the publications office of the European Union.](#)

Adjust for assistive technology

Some people with disabilities have assistive technology, meaning your information must work with their technology. Others have never received personal assistive technology, so you need to customize it to meet their needs.

Among the most common assistive technologies are:
- Screen readers that enable people with visual impairments or who are blind to read the information displayed on the screen (links, headings, texts, tables). Screen readers read the text and other significant elements aloud.
- Braille readers, used by blind or visually impaired persons, that convert text into braille characters in the reader.
- Text-to-speech tools that help people with reading disabilities to hear all or select parts of the text on the screen.

Two things to keep in mind here are:

- Those who cannot see might use only a keyboard. Therefore, it should be possible to tab through the screen. By pressing the tab key on the keyboard, a person can navigate between menus, headings, and paragraphs.
- When the speech synthesis or screen reader reads your text, you must have used the correct characters. For example, - (minus), - (hyphen), and – (en dash) are different signs and are therefore pronounced in different ways.

Document format

Your customer may know which format suits them, but their assistive technology may also work best with a specific format. Read more in the paragraph "Adjust for assistive technology?".

If intended for the general public, adjust the information for lack of assistive technology.

Microsoft Word

Microsoft Word is one of the most widely used document tools and formats. Though, you cannot assume that the file format is accessible to the public since it is a commercial tool.

Today, Word includes helpful accessibility controls that help you create accessible documents. You can use the accessibility control to add alternative text to images and mark up tables, among other things.

PDF

Free reading tools are one of the advantages of PDF as a document format.

You can create the PDF in two ways:

- from a source document created with Microsoft Word, Google Docs, or Adobe InDesign
- by scanning a physical document

As to the latter PDF files, they are usually just pictures and are not accessible at all.

You can make the former PDF accessible if you tag the content to identify headings, lists, etc. and if you add alternate text for images. You must also set the logical reading order. Assistive technology uses all these features to access PDF content.

Adobe has a tool that you can use to check for full accessibility.

You can also [read about creating accessible PDFs under Section 508 of U.S. law at www.section508.gov](#).

See also the [section about accessibility in Adobe's user guide](#).

HTML

WordPress has become increasingly popular for creating websites over the last few years.

You can find code standards for accessibility on the WordPress website. There you will learn how to mark up your site and how to make your content accessible.

You can find WordPress themes that are accessible, as accessibility has become legally required. As a result, you do not have to do everything yourself but can partly rely on an existing theme.

Note

- That you should use the aria-label/aria-labelledby attribute for interactive elements.

- That the pronunciation of different screen readers and speech synthesizers might differ. Test some to see in what way — especially for non-standard language.

[Read more about aria-label and aria-labelledby on the W3 page.](#)

Design principles

We will discuss different aspects of information and how it can be adapted to be accessible.

Provide the reader with alternatives

There should always be at least two ways to absorb information. For example, you could offer the following:

- both text and text-to-speech reading of the text

- both video and the transcribed text

Keep in mind that you have to provide all non-text content with text. Symbols and images, for example, must be described. See further under the chapter Make image accessible.

Consistent och structured

Many disabilities come with cognitive challenges. Consistent and predictable information is the best support you can give those people. It should also be easy to navigate, find specific information, and find your way around.

Keep these things in mind:

- Ensure that you write your information so that everyone can understand it without assistance from teachers or others. Communicate in plain or easy-to-understand language.
- Maintain consistency in the presentation of information of the same type.
- Give those who need it access to enhanced background knowledge. You could use a glossary for technical terms.
- Provide the most relevant information first.
- Delete all unnecessary information.
- Provide extra clarity when the reader needs to make a decision.

- Make sure you create headings at the correct level. At level one (h1), there should never be more than one heading.

Ensure that the information source is as robust as possible to work with future assistive technology.

Read more about cognitive accessibility [in the material by the Coga research group on the World Wide WebConsortium.](#)

Time and cognitive load

A well-designed information presentation gives the working memory enough time to process words, sounds, and images. More complex information ought to have a lower cognitive load. Also, you should avoid creating unnecessary cognitive burdens by placing time constraints on readers.

Different people have different processing capacities, which are partly determined by

- the reader's level of expertise
- the reader's age
- if the reader has problems with their working memory or other processes that affect it

Make text accessible

Here are some tips on how to organize information, write links, and how you can enable the reader to choose fonts.

Organize information

In non-fictional texts, we do not read from the first to the last letter. Our eyes scan the page for places to start reading and jump from one paragraph to the next. (The same cannot be said for fiction.)

It is best to begin the text with a summary so poor or slow readers will know what the text is about.

Further guide the reader by:

- keeping paragraphs short
- always starting the paragraph with the most critical information first
- including subheadings when appropriate

A natural place to begin reading is at the beginning of the paragraph or the subheading.

Add lists to make the text easier to understand. Although lists are good, they should be short. Try instead to divide the information into groups and make a list of each group.

Also, divide information in tables into smaller groups to make it easier to understand.

The final step is to add space to your text so that the reader feels like they can follow it and understand it.

Links

If the text contains a link, tell the reader what happens when they click on it and where they end up. For example:

- I always <u>watch cat movies on Youtube</u>.
- <u>Download the manual as a PDF</u>.

In the latter case, if you use a screen reader, you hear "link" and "download the manual as a PDF."

Fonts

Enable the reader to:

- Choose from a variety of commonly used fonts and sizes. (There is no single accessible font for all people. It's just a sales gimmick.)
- Increase the space between individual letters in the font. It increases accessibility.

For more tips on accessible text, see <u>the World Wide Webb Consortium's guide on accessible text.</u>

Make video and audio accessible

Factors influencing video accessibility are, among others:

- On the screen, display only a little information.
- Make sure there is enough time to read the subtitles.
- To prevent cognitive overload, avoid having too much information.
- Always provide the reader with a transcript of the video.
- Do not set too high a pace for the audio or the description for the blind. However, allow readers to speed up the reading if they wish.

One of the most important adaptations of sound is to make sure to avoid background noise while someone is speaking. You should also provide a transcription of the audio to your reader.

[Read the EASIT project reports on webs.uab.cat](#) for more information. On this page, you will find information on how to make subtitles that are easy to understand, audio descriptions of what is happening in the picture (for people who cannot see), and news that is easy to understand.

See also [the audio and video media guide from World Wide Web Consortium.](#)

Make images accessible

Describe all images for those who cannot see them. What is relevant to describe naturally depends on the context.

If the image is decorative, add the description "" to the image so that screen readers can ignore it.

Exemple 7: Release Notes - December 1, 2022

New + Improved

- New encyclopedias are available. You will find the updated list under Encyclopedias in the administrator's account.
- Extended log files:
  - The log now encompasses changes in Groups (Teacher login).
  - There is a new history section under the Teacher login. It follows the previous log files.
- New location for Contacts:
  - You can find forms and details under the Frequently Asked Questions section.

Fixes

- The encyclopedias no longer expire falsely.
- Administrators are now notified of updates the same day a problem is detected.

Release 4.1