ILIAS 3.10 and WCAG 2.0

Accessibility issues in the ILIAS system with respect to WCAG 2.0 A and AA criteria

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W3C WCAG 2.0

n   Web Content Accessibility Guidelines (WCAG) 2.0

n   W3C recommendation 11 December 2008

n   http://www.w3.org/TR/WCAG20/

n   Covers a wide range of recommendations for making Web content more accessible. Following these guidelines will make content accessible to a wider range of people with disabilities, including blindness and low vision, deafness and hearing loss, learning disabilities, cognitive limitations, limited movement, speech disabilities, photosensitivity and combinations of these. Following these guidelines will also often make your Web content more usable to users in general.

Accessibility

- blind, low visioned, colorblind, epileptic people, users with monochrome displays or with displays having a bad contrast (like mobile phones, PDA-s),

- hearing impaired people, users with no speakers or working in an open office or a noisy place,

- handicapped, people with Alzheimer disease, users with temporary disabilities, such as tenosynovitis, those using keyboard or mouse respectively,

- people with cognitive and learning disabilities, computer illiterates, children, users with changing abilities due to aging, people with different cultural background, people with having English as their second language,

- people working with mobile devices, using outdated hardware, old versions or contrary, newest versions of the browsers.

Perceivable

n   Information and user interface components must be presentable to users in ways they can perceive.

n   **Text Alternatives:** Provide text alternatives for any non-text content so that it can be changed into other forms people need, such as large print, braille, speech, symbols or simpler language.

Perceivable

n   All non-text content that is presented to the user has a text alternative that serves the equivalent purpose, except for the situations listed below. (Level A)

    n   **Controls, Input**: If non-text content is a control or accepts user input, then it has a name that describes its purpose. (Refer to Guideline 4.1 for additional requirements for controls and content that accepts user input.)

    n   **Time-Based Media**: If non-text content is time-based media, then text alternatives at least provide descriptive identification of the non-text content. (Refer to Guideline 1.2 for additional requirements for media.)

    n   **Test**: If non-text content is a test or exercise that would be invalid if presented in text, then text alternatives at least provide descriptive identification of the non-text content.

    n   **Sensory**: If non-text content is primarily intended to create a specific sensory experience, then text alternatives at least provide descriptive identification of the non-text content.

    n   **CAPTCHA**: If the purpose of non-text content is to confirm that content is being accessed by a person rather than a computer, then text alternatives that identify and describe the purpose of the non-text content are provided, and alternative forms of CAPTCHA using output modes for different types of sensory perception are provided to accommodate different disabilities.

    n   **Decoration, Formatting, Invisible**: If non-text content is pure decoration, is used only for visual formatting, or is not presented to users, then it is implemented in a way that it can be ignored by assistive technology.

Perceivable

Some images have no alt text in the ILIAS system, like the logo on the main page (tpl.login.html).


```
<img src="./templates/default/images/ilias_logo_big.png" style="margin: 20px; border:0px;" alt="ILIAS logo" />
```
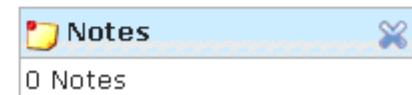
Perceivable
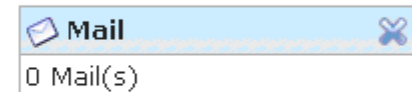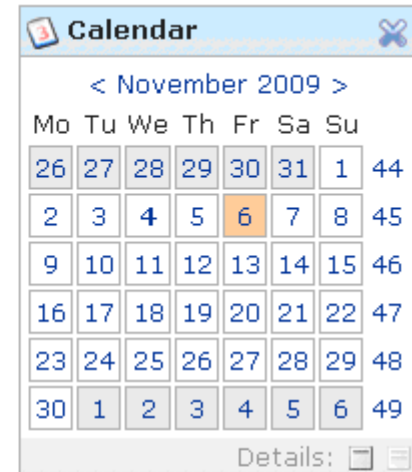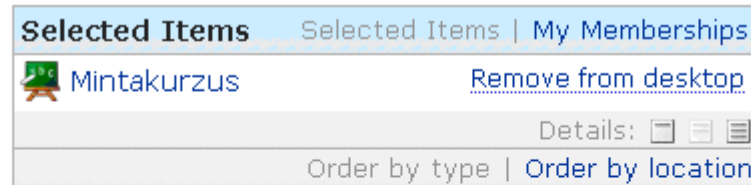

None of the block icons has
an ALT text either
(tpl.block.html)

```
<!-- BEGIN block_img --><img border="0" src="{IMG_BLOCK}" alt="" /><!-- END block_img -->
{BLOCK_TITLE}
<!-- BEGIN block_subtitle --><div>{BLOCK_SUBTITLE}</div><!-- END block_subtitle -->
```

Perceivable


```
<!-- BEGIN tbl_header_cell -->
    <th class="std" nowrap="nowrap"{TBL_COLUMN_WIDTH}>
            <a class="tblheader" href="{TBL_ORDER_LINK}" alt="{TBL_ORDER_ALT}"
title="{TBL_ORDER_ALT}">{TBL_HEADER_CELL}
<!-- BEGIN tbl_order_image -->
            <img src="{IMG_ORDER_DIR}" border="0" style="vertical-align: middle;"
alt="{TBL_ORDER_ALT}" />
<!-- END tbl_order_image -->
            </a>
        </th>
<!-- END tbl_header_cell -->
```

Perceivable

n **Time-based Media:** Provide alternatives for time-based media.

n For prerecorded audio-only and prerecorded video-only media, the following are true, except when the audio or video is a media alternative for text and is clearly labeled as such: (Level A)

  n **Prerecorded Audio-only**: An alternative for time-based media is provided that presents equivalent information for prerecorded audio-only content.

  n **Prerecorded Video-only**: Either an alternative for time-based media or an audio track is provided that presents equivalent information for prerecorded video-only content.

Perceivable

n Captions are provided for all prerecorded audio content in synchronized media, except when the media is a media alternative for text and is clearly labeled as such. (Level A)

n An alternative for time-based media or audio description of the prerecorded video content is provided for synchronized media, except when the media is a media alternative for text and is clearly labeled as such. (Level A)

n Captions are provided for all live audio content in synchronized media. (Level AA)

n Audio description is provided for all prerecorded video content in synchronized media. (Level AA)

Perceivable

n **Adaptable:** Create content that can be presented in different ways (for example simpler layout) without losing information or structure.

n Information, structure, and relationships conveyed through presentation can be programmatically determined or are available in text. (Level A)

Perceivable

The header elements are not used, so the pages have no structure, on most pages there is only one H1 element.
On the Overview page for example, the "Personal Desktop" is the only header element.

On this page the titles of the blocks should also be marked as headers, in this case *h2* (tpl.block.html).

Perceivable

```
<!-- BEGIN ilias_login -->
<h1>{TXT_ILIAS_LOGIN}</h1>
        <!-- BEGIN login_information -->
                <p>{TXT_LOGIN_INFORMATION}</p>
        <!-- END login_information -->
                <!-- BEGIN auth_selection -->
                        {TXT_AUTH_MODE}
                                <!-- BEGIN  auth_mode_row -->
                                        <input type="radio"
id="{VAL_AUTH_MODE}" name="auth_mode" value="{VAL_AUTH_MODE}" {AUTH_CHECKED} />
<label for="{VAL_AUTH_MODE}">{TXT_AUTH_MODE}</label><br />
                                        <!-- END auth_mode_row -->
                <!-- END auth_selection -->
<label for="username">{TXT_USERNAME}</label>: <input type="text" id="username"
name="username" value="{USERNAME}"/><br />
<label for="password">{TXT_PASSWORD}</label>: <input type="password" id="password"
name="password" value="{PASSWORD}"/><br />
<input class="submit" type="submit" name="butSubmit" value="{TXT_SUBMIT}"/><br />
<!-- END ilias_login -->
```

Perceivable

n When the sequence in which content is presented affects its meaning, a correct reading sequence can be programmatically determined. (Level A)

n Instructions provided for understanding and operating content do not rely solely on sensory characteristics of components such as shape, size, visual location, orientation, or sound. (Level A)

Perceivable

n   **Distinguishable:** Make it easier for users to see and hear content including separating foreground from background.

n   Colour is not used as the only visual means of conveying information, indicating an action, prompting a response, or distinguishing a visual element. (Level A)
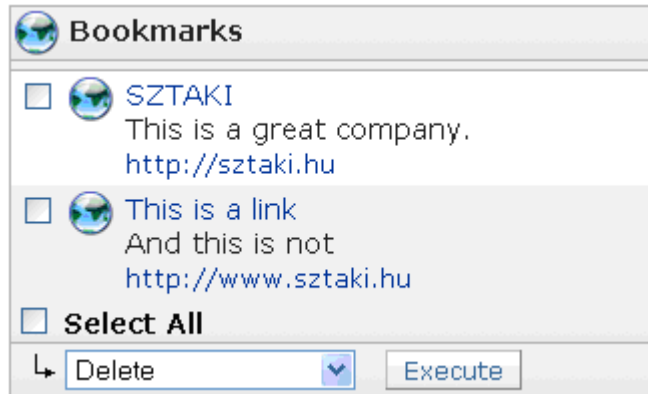
Perceivable

This is good.

Perceivable

Links are not underlined in the ILIAS system, so they can be distinguished from the normal text only by colour. The same is true for the currently selected menu item as well.
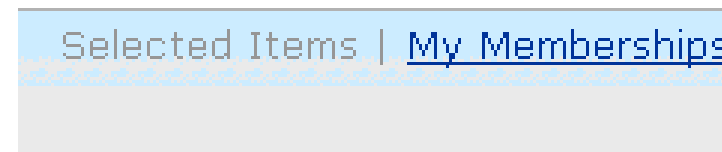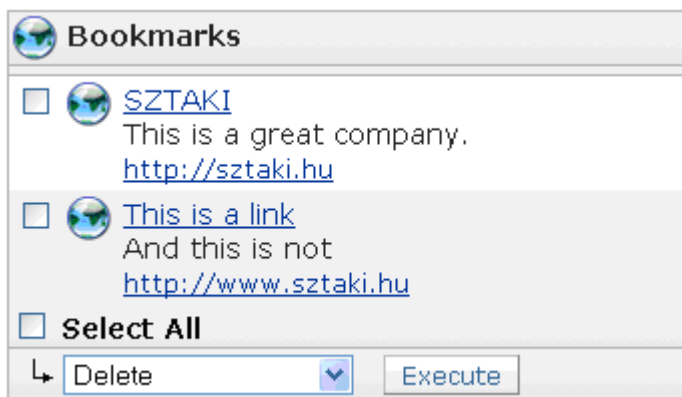

```
a:link, a:visited {
        text-decoration: none;
        color:#0033AA;

}
```
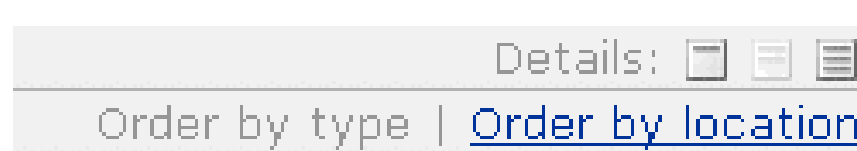
Perceivable

n   If any audio on a Web page plays automatically for more than 3 seconds, either a mechanism is available to pause or stop the audio, or a mechanism is available to control audio volume independently from the overall system volume level. (Level A)
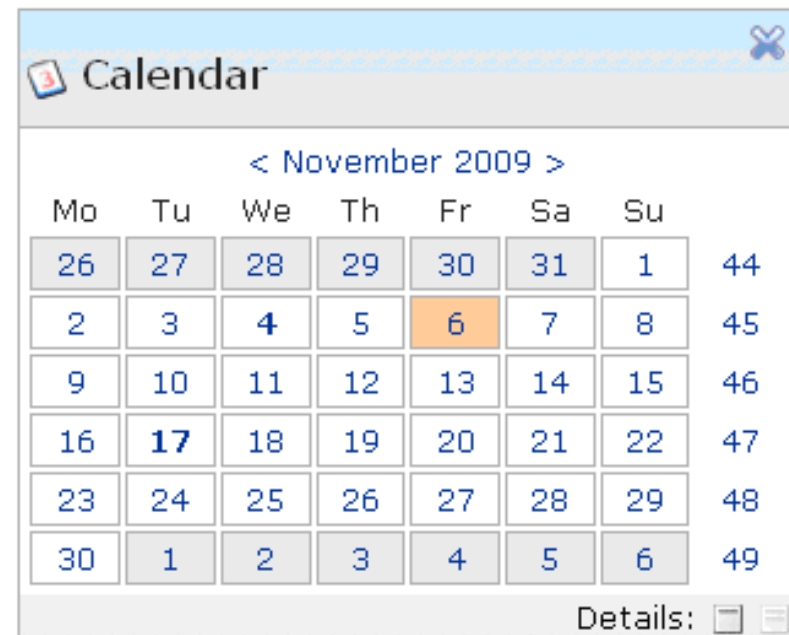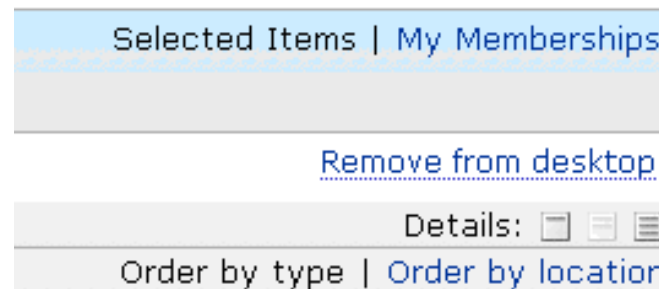
Perceivable

n The visual presentation of text and images of text has a contrast ratio of at least 4.5:1, except for the following: (Level AA)

   n **Large Text**: Large-scale text and images of large-scale text have a contrast ratio of at least 3:1;

   n **Incidental**: Text or images of text that are part of an inactive user interface component, that are pure decoration, that are not visible to anyone, or that are part of a picture that contains significant other visual content, have no contrast requirement.

   n **Logotypes**: Text that is part of a logo or brand name has no minimum contrast requirement.

Perceivable

Details: ☐ ☐ ☰
Order by type | Order by location

This can be easily changed even to black, without causing any problems.

Selected Items | My Memberships

Remove from desktop

Details: ☐ ☐ ☰
Order by type | Order by location

Calendar

< November 2009 >

Mo	Tu	We	Th	Fr	Sa	Su	
26	27	28	29	30	31	1	44
2	3	4	5	6	7	8	45
9	10	11	12	13	14	15	46
16	17	18	19	20	21	22	47
23	24	25	26	27	28	29	48
30	1	2	3	4	5	6	49

Details: ☐ ☐

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Perceivable

n   Except for captions and images of text, text can be resized without assistive technology up to 200 percent without loss of content or functionality. (Level AA)

n   If the technologies being used can achieve the visual presentation, text is used to convey information rather than images of text except for the following: (Level AA)

    n   **Customizable**: The image of text can be visually customized to the user's requirements;

    n   **Essential**: A particular presentation of text is essential to the information being conveyed.

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Operable

- *Operable:* User interface components and navigation must be operable.

- **Keyboard Accessible:** Make all functionality available from a keyboard.

- All functionality of the content is operable through a keyboard interface without requiring specific timings for individual keystrokes, except where the underlying function requires input that depends on the path of the user's movement and not just the endpoints. (Level A)

Operable

Operable

n   If keyboard focus can be moved to a component of the page using a keyboard interface, then focus can be moved away from that component using only a keyboard interface, and, if it requires more than unmodified arrow or tab keys or other standard exit methods, the user is advised of the method for moving focus away. (Level A)

Operable

- **Enough Time:** Provide users enough time to read and use content.

- For each time limit that is set by the content, at least one of the following is true: (Level A)

  - **Turn off**: The user is allowed to turn off the time limit before encountering it; or
  - **Adjust**: The user is allowed to adjust the time limit before encountering it over a wide range that is at least ten times the length of the default setting; or
  - **Extend**: The user is warned before time expires and given at least 20 seconds to extend the time limit with a simple action (for example, "press the space bar"), and the user is allowed to extend the time limit at least ten times; or
  - **Real-time Exception**: The time limit is a required part of a real-time event (for example, an auction), and no alternative to the time limit is possible; or
  - **Essential Exception**: The time limit is essential and extending it would invalidate the activity; or
  - **20 Hour Exception**: The time limit is longer than 20 hours.

Operable

- For moving, blinking, scrolling, or auto-updating information, all of the following are true: (Level A)

  - **Moving, blinking, scrolling**: For any moving, blinking or scrolling information that (1) starts automatically, (2) lasts more than five seconds, and (3) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it unless the movement, blinking, or scrolling is part of an activity where it is essential; and

  - **Auto-updating**: For any auto-updating information that (1) starts automatically and (2) is presented in parallel with other content, there is a mechanism for the user to pause, stop, or hide it or to control the frequency of the update unless the auto-updating is part of an activity where it is essential.

Operable

n   **Seizures:** Do not design content in a way that is known to cause seizures.

n   Web pages do not contain anything that flashes more than three times in any one second period, or the flash is below the general flash and red flash thresholds. (Level A)

n   Web pages do not contain anything that flashes more than three times in any one second period.
(Level AAA)

Operable

n **Navigable:** Provide ways to help users navigate, find content, and determine where they are.

n A mechanism is available to bypass blocks of content that are repeated on multiple Web pages. (Level A)

```
<div class="ilMainHeader">
        <!-- BEGIN top_section -->
        <div style="display: none; visibility: hidden;">
                    <a href="#content">Jump to content</a>
        </div>
        <!-- BEGIN userisanonymous -->
```

```
<div style="margin-left:15px;
clear:both;">{SUB_TABS}</div>
<a name="content"></a>
<!-- BEGIN page_form_start --><form
action="{PAGE_FORM_ACTION}" method="post"><!--
END page_form_start -->
```

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Operable

n Web pages have titles that describe topic or purpose. (Level A)

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1 plus MathML 2.0 plus SVG 1.1//EN"
        "http://www.w3.org/2002/04/xhtml-math-svg/xhtml-math-svg.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
<head>
        <title>{WINDOW_TITLE} {PAGETITLE} {SUBTITLE}</title>
        <meta http-equiv="content-type" content="text/html; charset=UTF-8" />
        <meta http-equiv="content-language" content="{META_CONTENT_LANGUAGE}" />
```
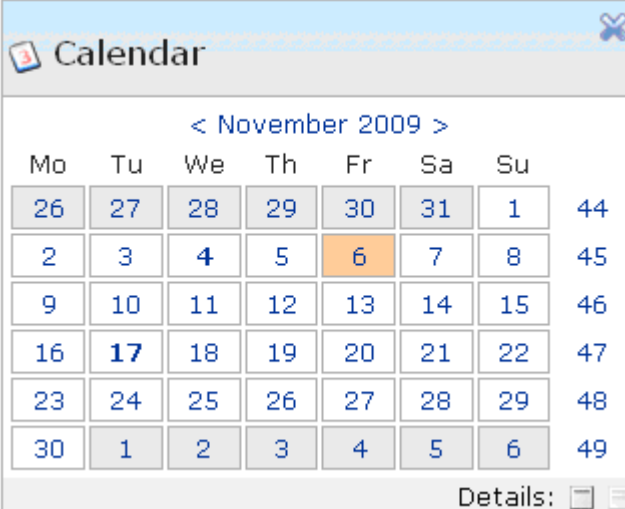
Operable

n   If a Web page can be navigated sequentially and the navigation sequences affect meaning or operation, focusable components receive focus in an order that preserves meaning and operability. (Level A)

In this case the reading order is as follows: 26, 27, 28, 29, 30, 31, 1, 44, 2, 3, 4, 5, 6, 7, 8, 45, 9 etc.

The right reading order would be: 26, 27, 28, 29, 30, 31, 1, 2, 3, 4, 5, 6, 7, 8, 9 etc. and then 44, 45, 46, 47, 48, 49.

Calendar							
< November 2009 >							
Mo	Tu	We	Th	Fr	Sa	Su	
26	27	28	29	30	31	1	44
2	3	4	5	6	7	8	45
9	10	11	12	13	14	15	46
16	17	18	19	20	21	22	47
23	24	25	26	27	28	29	48
30	1	2	3	4	5	6	49

Details:

Operable

n The purpose of each link can be determined from the link text alone or from the link text together with its programmatically determined link context, except where the purpose of the link would be ambiguous to users in general. (Level A)

```
<tr class="calminiheader">
        <th class="calmini" width="12.5%">Mo</th>
        <th class="calmini" width="12.5%">Tu</th>
        <th class="calmini" width="12.5%">We</th>
        <th class="calmini" width="12.5%">Th</th>
        <th class="calmini" width="12.5%">Fr</th>
        <th class="calmini" width="12.5%">Sa</th>
        <th class="calmini" width="12.5%">Su</th>
        <th class="calmini" width="12.5%">Week</th>
</tr>
```

Operable

n   More than one way is available to locate a Web page within a set of Web pages except where the Web Page is the result of, or a step in, a process. (Level AA)

Operable

n   Headings and labels describe topic or purpose. (Level AA)

n   Any keyboard operable user interface has a mode of operation where the keyboard focus indicator is visible. (Level AA)

Understandable

- n ***Understandable:*** Information and the operation of user interface must be understandable.

- n **Readable:** Make text content readable and understandable.

- n The default human language of each Web page can be programmatically determined. (Level A)

Understandable

n Login page

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1 plus MathML 2.0 plus SVG 1.1//EN"
        "http://www.w3.org/2002/04/xhtml-math-svg/xhtml-math-svg.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
<head>
        <title>a bILIAS Loginpagec</title>
        <meta http-equiv="content-type" content="text/html; charset=UTF-8" />
        <meta http-equiv="content-language" content="" />
```

n Other pages

```
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1 plus MathML 2.0 plus SVG 1.1//EN"
        "http://www.w3.org/2002/04/xhtml-math-svg/xhtml-math-svg.dtd">
<html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en">
<head>
        <title>aILIAS bc</title>
        <meta http-equiv="content-type" content="text/html; charset=UTF-8" />
        <meta http-equiv="content-language" content="hu" />
```

Understandable

n No language at all

Understandable

n   The human language of each passage or phrase in the content can be programmatically determined except for proper names, technical terms, words of indeterminate language, and words or phrases that have become part of the vernacular of the immediately surrounding text. (Level AA)

n   When any component receives focus, it does not initiate a change of context. (Level A)

n   Changing the setting of any user interface component does not automatically cause a change of context unless the user has been advised of the behavior before using the component. (Level A)

Understandable

- Navigational mechanisms that are repeated on multiple Web pages within a set of Web pages occur in the same relative order each time they are repeated, unless a change is initiated by the user. (Level AA)

- Components that have the same functionality within a set of Web pages are identified consistently. (Level AA)
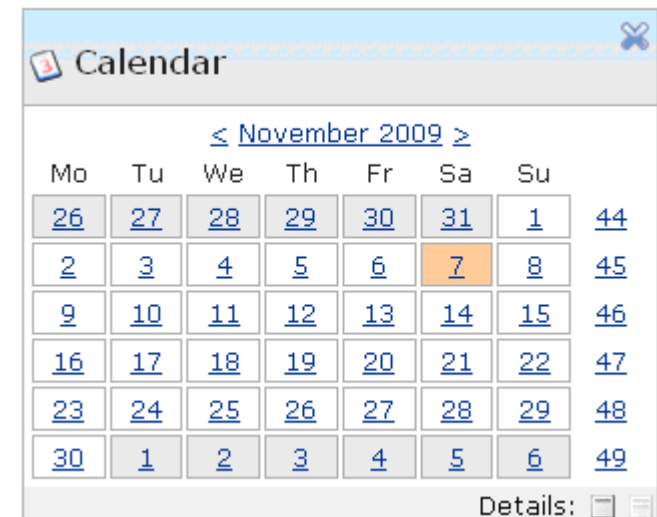
Understandable

n **Input Assistance:** Help users avoid and correct mistakes.

n If an input error is automatically detected, the item that is in error is identified and the error is described to the user in text. (Level A)

Understandable

Understandable

n Labels or instructions are provided when content requires user input. (Level A)

```
<!-- BEGIN instant_messengers -->
<tr class="tblheader">
        <th class="std" colspan="4">{TXT_INSTANT_MESSENGERS}</th>
</tr>
<!-- BEGIN im_row -->
<tr>

        <td class="option"><label for="{USR_IM_NAME}">{TXT_IM_NAME}</label>
        <img src="{IMG_IM_ICON}" alt="{TXT_IM_ICON}" title="{TXT_IM_ICON}" border="0"/>
        </td>
        <td class="option_value">
                <input type="text" id="{USR_IM_NAME}" name="{USR_IM_NAME}" maxlength="40"
size="40" value="{IM_ID}" {DISABLED_IM_NAME} />
        </td>
        <td class="option_value" colspan="2" headers="pub_profile"><center><label
for="chk_im_{USR_IM_NAME}">public:</label><input type="checkbox" id="chk_im_{USR_IM_NAME}"
name="chk_im" {CHK_IM} /></center></td>
</tr>
<!-- END im_row -->
<!-- END instant_messengers -->
```

Understandable

n   If an input error is automatically detected and
    suggestions for correction are known, then the
    suggestions are provided to the user, unless it would
    jeopardize the security or purpose of the content.
    (Level AA)

The user is allowed to upload
even an .exe file not only
without being warned, but even
getting a "Saved Successfully"
message.

Understandable

n   For Web pages that cause legal commitments or financial transactions for the user to occur, that modify or delete user-controllable data in data storage systems, or that submit user test responses, at least one of the following is true: (Level AA)

- n   **Reversible**: Submissions are reversible.

- n   **Checked**: Data entered by the user is checked for input errors and the user is provided an opportunity to correct them.

- n   **Confirmed**: A mechanism is available for reviewing, confirming, and correcting information before finalizing the submission.

Robust

n   Content must be robust enough that it can be interpreted reliably by a wide variety of user agents, including assistive technologies.

n   **Compatible:** Maximize compatibility with current and future user agents, including assistive technologies.

Robust

n In content implemented using markup languages, elements have complete start and end tags, elements are nested according to their specifications, elements do not contain duplicate attributes, and any IDs are unique, except where the specifications allow these features. (Level A)

```
❌ <a href="http://www.domain.com/cgi?x=123&y=456">
✅ <a href="http://www.domain.com/cgi?x=123&amp;y=456">
```

```
htmlspecialchars($string, ENT_QUOTES, 'ISO-8859-1', false);
```

Robust

Markup Validation Service
Check the markup (HTML, XHTML, ...) of Web documents

Jump To: Notes and Potential Issues   Validation Output

Errors found while checking this document as XHTML 1.1 plus MathML 2.0 plus SVG 1.1!

Result:	1153 Errors, 1096 warning(s)
Source :	```<?xml version="1.0" encoding="UTF-8"?> <!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.1 plus MathML 2.0 plus SVG 1.1//EN" "http://www.w3.org/2002/04/xhtml-math-svg/xhtml-math-svg.dtd"> <html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en"> <head> <title>ILIAS - Personal Desktop</title> <meta http-equiv="content-type" content="text/html; charset=UTF-8" /> <meta http-equiv="content-language" content="en" /> <link rel="stylesheet" type="text/css" href="./Customizing/global/skin/wcag2/wcag2.css?vers=3-10-8-2009-07-08" /> <!-- <link rel="P3Pv1" href="" /> --> <link rel="stylesheet" type="text/css" href="./Customizing/global/skin/wcag2/wcag2_cont.css?vers=3-10-8-2009-07-08" />```
Encoding :	utf-8 (detect automatically)
Doctype :	XHTML 1.1 plus MathML 2.0 plus SVG 1.1 (detect automatically)
Root Element:	html
Root Namespace:	http://www.w3.org/1999/xhtml

Robust

n   For all user interface components (including but not limited to: form elements, links and components generated by scripts), the name and role can be programmatically determined; states, properties, and values that can be set by the user can be programmatically set; and notification of changes to these items is available to user agents, including assistive technologies. (Level A)

Robust

```
<table class="fullwidth">
        <tbody>
        <tr class="tblheader" colspan="2">
                <th id="header-message" class="std">Message</th>
        </tr>
        <tr class="std">
                <td headers="header-message" class="std" colspan="2">Hi Root!<br>
                        <br>
                        I would like to have a new feature. I have a lot of old<br>

                        features but no new ones.<br>
                        <br>
                        Thank you!<br>
                </td>
        </tr>
        </tbody>
</table>
```
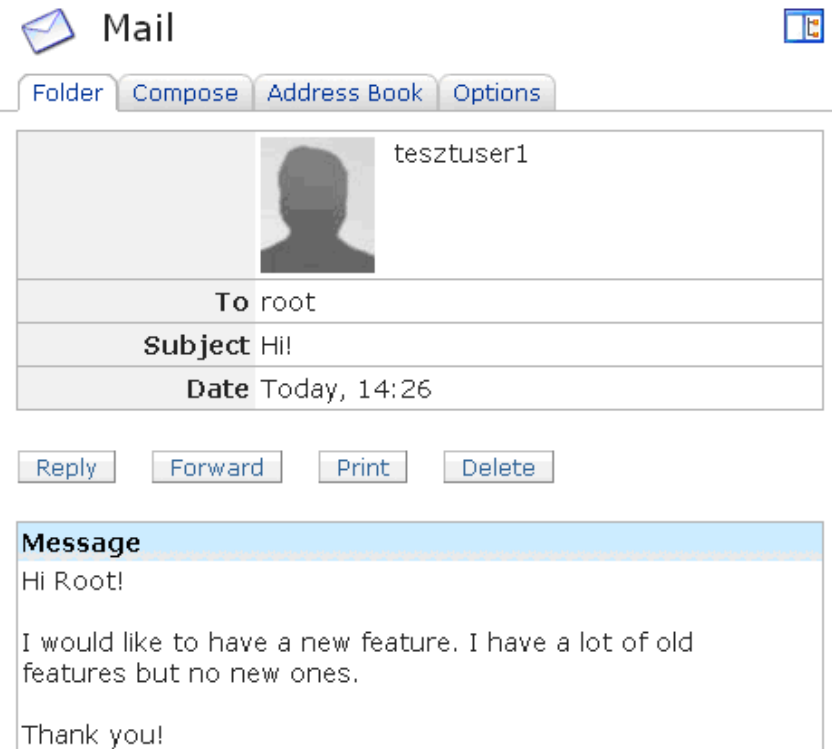
Robust

```
<div class="fullwidth">
        <div id="header-message" class="std">Message</div>
        <p>Hi Root!<br>
        <br>
        I would like to have a new feature. I have a lot of old<br>
        features but no new ones.<br>
        <br>
        Thank you!<br>
        </p>
</div>
```

Mail

| Folder | Compose | Address Book | Options |

tesztuser1

| **To** root |
| **Subject** Hi! |
| **Date** Today, 14:26 |

Reply   Forward   Print   Delete

Message

Hi Root!

I would like to have a new feature. I have a lot of old
features but no new ones.

Thank you!

Move to: Inbox   Submit

Next

Conclusion

- ILIAS did already a big leap towards accessibility
- There are still some points which have to be met, before ILIAS can claim accessibility
  - invalid HTML pages and the intensive use of HTML formatting parameters, as well as inline CSS code
  - The use of frames and iframes could also be easily replaced by something else, like two divs and a little CSS.
  - Accessible skin with accessible templates

Thank you!

http://www.w3c.hu

Email: Mate.Pataki@w3c.hu