

WEB DESIGN

Manual

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Introduction

Rapid growth and development of Information Technology (IT) characterizes today's society. As a result, we have grown to depend on the knowledge and competence of an individual in the IT field. And although this dependence is growing from day to day, **the human right to education and information** has not been extended to the IT field. Problems, that impact our society as a whole, create obstacles and distance people from the main reason and motivation for advancement, from the **opportunity**.

Being computer illiterate in today's world means being someone who is unable to participate in modern society. It also means not to have opportunities. Despite the recognition of the European Commission, UNESCO, OECD and other relevant institutions on the necessity and benefits of computer literacy, there are still groups of people with hindered access to basic computer education (e.g. people with physical disabilities, people with learning difficulties, immigrant workers, the unemployed, people living in remote places where education is not accessible).

This Manual, together with additional material published on Itdesk.info website, represent our contribution to the realization and promotion of human rights to education and information in the IT field. We hope that this education will help you to master basic computer skills and in this hope we wish that you learn as much as possible and become an active member of the modern IT society.

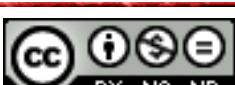
Sincerely yours,

ITdesk.info team



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1. WEB CONCEPTS

1.1. Key Terms

1.1.1. Understand that the Internet supports a range of services such as the World Wide Web (WWW), File Transfer, email, instant messaging (IM)

The Internet or "the network of networks" is a public network that connects computers and computer networks around the world through a common protocol (IP).

All connected computers and networks mutually exchange information and use various services. Hence, the Internet is not solely the WWW, or pages and content available from a browser. In fact, the WWW is just one of the services that the Internet offers to its users although it is the most commonly used service.

Other available services:

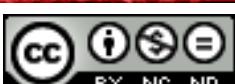
File transfer - the file transfer from one computer to another.

- E-mail (electronic mail) – it is the oldest Internet service, and it enables the exchange of digital messages between two or more people.
- Instant messaging (IM) – it enables the exchange of electronic messages between two or more people in real time. Such as chat rooms (Gtalk, MSN, Skype, etc.) that also support nowadays video/ audio/ photo communication exchange.

1.1.2. Understand the term client/server. Understand the functionality and relationship between the browser and the web server

The Internet is probably the best-known example of a client/ server relationship. The difference between a client and a server is big. Here we have two computers/ programs where the client sends requests to a server, and the server processes requests and returns the results to the client. A server is typically a remote computer not visible to the user.

- Web server: is the computer/ server whose entire content is visible on a website in a web browser. Web servers are constantly connected to the Internet. We access them through URL. Therefore, if we enter, for example, www.google.com in a web browser, we are accessing the Google server.
- Web browser: enables browsing through websites. Its mechanisms display the content, retrieved from the server, in a correct and understandable way. As such it is an intermediary between the user and the server. (e.g. Google Chrome, Firefox, Internet Explorer, etc.)



1.1.3. Understand the terms domain, Uniform Resource Locator (URL), hyperlink, web hosting, search engine.

The **domain** is a unique name on the Internet. We might say that what in real life the ID is for a human, this is what the domain name is for a web page.

URL (Uniform Resource Locator) is another term for a web address. A URL has three parts:

- protocol name (e.g., HTTP)
- domain name/ hostname (servers address that a user wants to connect with), for example, www.google.com
- file name is optional, implies the access to a file/directory into the principal webpage. It is separated by slash

Therefore, when we enter <http://www.google.com> in the address bar in our web browser, the browser is instructed to connect to a server with the domain www.google.com by using the HTTP protocol.

Hyperlinks are separately marked words, images and other elements on a web page that represent a direct link to additional information. Most often we open other web pages when we click on hyperlinks. Furthermore, we also might be able to open other parts of a web page, download content, and run applications.

The image below shows a hyperlink, which is usually marked blue in texts and sometimes underlined to stand out.

Web hosting: after we create a website, it is necessary to store it in a place where it is always available for users. We use Web hosting services/companies for this purpose. They own web servers that have the ability to store content.

Search engine: Search engines allow us to search in the Internet for information, images and other types of files stored in various locations available throughout the network. Search engines work according to certain algorithms that show the user relevant, requested search results. At first, information from the various websites is collected and stored and then analyzed to organize and save them in the database for future use. When a user enters an inquiry into the search engine, the database is organized by an index and the user is presented with results that match best the entered search terms. Therefore, it

is important to understand that by using the search engine one does not search the entire Internet but the search engine's database.

Therefore, we might get different results each time we use different web engines. This information is important from a website owner's view, who wants to make sure that the website is represented in various search engines once he created it. Otherwise, it will only be possible to access the website when a user enters the exact address in the web browser address bar. Currently, the most known search engine is "Google."

1.1.4. Understand the use of primary protocols: Transmission Control Protocol/Internet Protocol (TCP/IP), Hypertext Transfer Protocol (HTTP), File Transfer Protocol (FTP)

TCP/IP protocol: TCP / IP: This protocol is the main protocol for Internet communication. It defines the rules that computers need to follow to communicate with other computers via a network.

TCP is responsible for separating messages. They are then send across the network in smaller packets (packages). They reassemble again at the destination to present the initially sent message. This means that a sent e-mail, for example, does not travel through the network in one piece. It breaks down into smaller parts that travel separately through the network, not necessarily through the same channel, and then reassemble, according to the information that each packets carries, at the destination. Each packet includes information to which address it should travel (IP address). It is namely the IP protocol that is responsible for each packet to arrive at their destination.

HTTP (Hypertext Transfer protocol): is a network protocol that ensures the exchange of almost all types of resources on the web. With resources, we mean files, pages, images, search results, etc. It is basically, the web browsers language to send requests to the server. There is also the HTTPS version, which is a secure and encrypted version for HTTP communications.

FTP(File Transfer Protocol): is used to load (upload) or retrieve (download) files between the client and server communication, or between two computers on the Internet. In other words, this protocol is responsible for file transfer on the Internet.



1.2. Web Publishing

1.2.1. Identify the main advantages of having a website: access to a global audience, ease of updating, audience interactivity and cost savings.

Nowadays more and more people/ companies opt to own a website. Positive sides of creating and having a website are:

- It is possible to reach a broad audience in an easy way.
- It is possible to change information from virtually anywhere in real time. If, for example, a website offers some products, it is possible to update prices with just a few clicks.
- Web sites allow a much better relationship with customers compared to conventional printed materials or advertisements on television or radio. The user can receive information more easily, answer questions, share experiences on a forum (if the page has one), etc.
- Maintaining a website is far less expensive than advertising on other media. Therefore, an online business can significantly reduce costs for staff, office space, etc.
- Obtain information of their consumers and create a specific target of their promotion

1.2.2. Understand the process of putting a website online: domain registration, selecting a web hosting service.

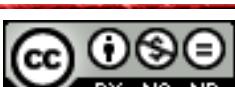
The process of putting a website online consists of several steps:

- Once we create a web page, it is necessary to register a domain, register a unique name that will represent the web page on the Internet. When choosing a domain name one should preferably take into account that the domain should not be too long, it should be constructed well, and customers should be able to remember it easily.
- We did not reserve a spot for the webpage on the Internet by registering a domain, but we have only defined the website's address. The next step is selecting a web hosting service or finding a company that offers servers to host a web page. There is a wide range of hosting providers and it is the website owner's decision to choose a service that suits him the best.

1.2.3 Recognize search engine optimization techniques e.g. including relevant metadata, including a sitemap and website links, registering with a search engine.

Search engine optimization techniques serve to increase the probability that exactly your website ranks at a higher position among existing search results. In fact, it is the web results on the first few pages that will be visited the most during a web search. The further we look so decreases the results credibility, and thus the attendance of such websites decreases.

Some of the available techniques are:



Including relevant metadata: metadata is used to list website's relevant data. This data is not visible on the webpage, and their task is to provide relevant data to help search engines index web pages easier, which means they help search engines in ranking web pages.

The basic syntax is:

```
<meta name="author" content="ime autora" />
<meta name="description" content="stranica o web dizajnu" />
<meta name="keywords" content="web dizajn html css" />
```

Meta element names, then contain the author's name, website description, and keywords linked to the web page content.

Including site maps and web links: a sitemap is a list of all the pages that a web page contains. By including site maps, we make sure that all web pages are registered to the search engine.

Registering to a search engine: as stated above, it is not enough to simply develop and publish a page, but it is necessary to inform search engines that the web page exists.

Some of the options that Google offers are for example:

- Add your URL - URL adding
- App crawling - indexing
- Search Console- registering site maps

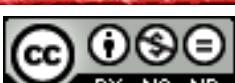
1.2.4 Recognize the factors that impact web page download speed: audio, video, graphical objects, animation content, and file compression

If the page contains, in addition to the text, a variety of other components such as video, sound, animation, etc. it affects the web page uploading speed. If we select these components in the wrong format, or if the page is overloaded with content it can lead to a slower web page download. The web page download speed is crucial to ensure a positive user experience, and it becomes even more important with the increasing mobile device use.

When selecting the size recommendations are as follows:

- Audio - .mp3 format
- Video - .flv format
- Graphic formats - .jpg picture in general, GIF, and PNG for images with few colors such as background images.

Data compression also affects the web page download speed. The recommendation is to compress HTML and CSS files before putting them on a web server, in order to reduce their size, and thus increase the webpage download speed.



1.3 Legal Issues

1.3.1. Understand the term copyright and its implications for text, images, audio, and video available on websites

It is a fact that we can easily download many contents from various websites. However, this does not mean that we can further use all website content. Quite contrary, in most cases content is under certain copyright rules. It is only possible to use content from another website freely if the website explicitly states it (“open content”, “Open Source”, “Creative Commons”, etc.). Otherwise, it should be verified under which circumstances it is allowed to download and use them.



HTML

2.1. Basics of HTML

2.1.1. Understand the term Hypertext Markup Language (HTML).

HTML is a presentational language that we use for the purpose of developing web pages. It is a descriptive language used to describe a document's layout, image position, font size, font color, etc. HTML is not a programming language, and it cannot complete tasks regarding programming (arithmetic or the use of variables), not even the simplest program logic such as, for example, the operation of addition.

HTML pages are nothing but plain text files with HTML Extension or .htm with instructions on how to display a page. Since they are ordinary text files, we can create them in any text editor such as, for example, Notepad. There are, of course, more advanced versions of visual editors also known as WYSIWYG editors - "What you see is what you get." These editors have the ability to display the page layout during the web page development.

To describe a web page we use marked tags, that are written between < i >. Every tag is a command that tells the browser how and what to do, or how it should display the content.

2.1.2 Understand the role of W3C consortium in making HTML recommendations.

W3C Consortium is an international organization with the aim of setting standards for HTML use.

Some of the recommendations are:

- Websites internal operability on search engines: recommendations on how to use HTML to show equally websites in different browsers
- Consistent document types declarations: Since international standards are applied, it means that we can use any HTML editor to develop a web page.
- Enhanced availability: W3C develops recommendations also taking the visually impaired into consideration.

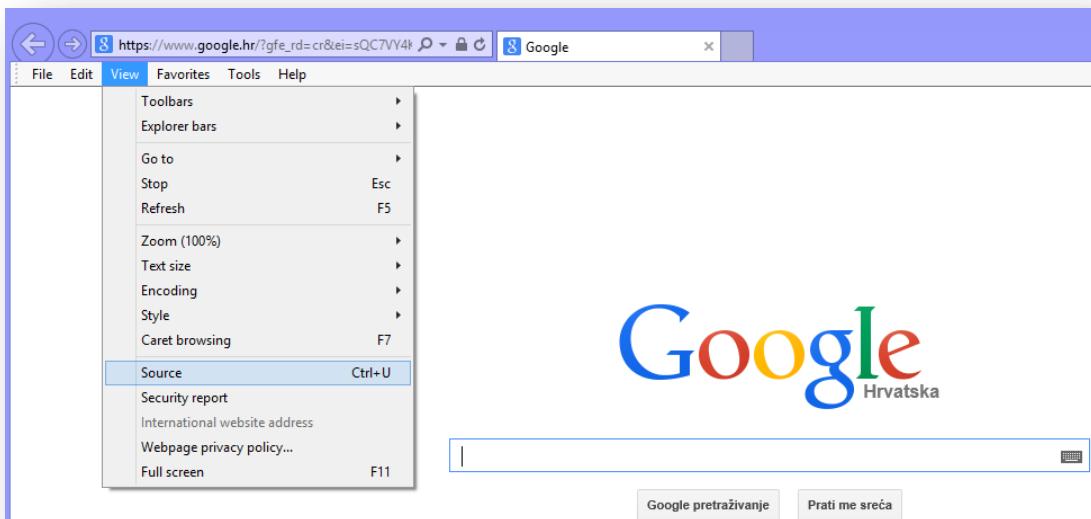
2.2. Using HTML

2.2.1. Using browser to view the website source code

All browsers have the possibility to view a website source code. The image below shows how Internet Explorer displays the code.

Go to **View** -> **Source** or right click on the page and select **View Source**.





Afterwards a document will open where we can see the website code.

```
www.google[1]
1 <!doctype html>
2 <html itemscope="" itemtype="http://schema.org/WebPage" lang="hr"><head><meta content="IE=edge" http-equiv="X-UA-Compatible">
3 <meta content="text/html; charset=UTF-8" http-equiv="content-type">
4 <meta content="/images/google_favicon_128.png" itemprop="image"><title>Google</title>
5 <script>(function() (window.google=(KEI:'QC7VfD9DNW67gbFobPoAg',kEXPI:
'20157,3700332,3700372,4026241,4028875,4029815,4031109,4032235,4032500,4032678,403307,4033344,4034882,4036149,4036527,4036848,403733
3,4037457,4037531,4037569,4038011,4038464,4038821,4039386,4039462,4039879,4039886,4039937,4040020,4040028,4040060,4040112,4040136,404
360,4040849,4040863,4040959,4040976,4040982,4041079,4041159,4041304,4041323,4041440,4042014,4042384,4042446,4042502,4042695,4042782,83
00095,8300200,8300203,8500394,8500948,8501260,8501295,8501406,8501489,8501767,10200083,10201103,10201251,16200005,16200009,16200011',
authuser:0,j:{en:1,bv:21,pm:'p',u:'c59e5a55',qbp:0,rre:false},kscs:'c59e5a55_21'}:google.kHL='hr'})():(function()(google.lc=[];
```

2.2.2. Use markup tags to structure a web page layout: <html>, <head>, <title> i <body>

<html> element defines the entire document. It is the root element, and all other elements are located within. Like most other elements it has its starting and ending tag <html> and </html>. Since most elements have a final tag, the manual will not separately mention it for each element. We will only point out if an element does not have an end tag.

The recommendation is to use <html> tag to insert language tags that search engines further use.

For English language we would therefore define <html lang = „eng”>.

<head> element is used to store metadata, mentioned previously in the manual.

<title> element is used to define a document's title. This title appears as the title of an opened browsers page or when we add a page to Favorites.

<body> element defines the document's body, and it contains the entire content such as text, images, tables, lists, etc.

According to HTML5 standard <html>, <body> and <head> tags are not required, but it is certainly recommended to use them, since some browsers may produce unpredictable results. The problem is, namely, that there is yet no standard applicable to all browsers and all their versions.

Great effort is invested to achieve page layout unification, and this is achieved in newer versions of browsers. However, older versions can still lead to incompatibility problems.



When creating a website, we should always keep in mind that different users choose different browsers and thus, we should try to create a website that most browsers can correctly display.

2.2.3. Use markup tag to develop the layout of a web page: <h1>, <p>
, <a href>,

Tags <h1> and <h2> refer to titles within the page. The range of tags goes from <h1> to <h6> and they are arranged according to importance where <h1> is the title with the greatest importance, and <h6> of least importance. In most cases, we use a maximum of <h1> and <h2> for titles and subtitles.

Titles are important since search engines use titles to analyze a page content and by the words in the title they analyze what the content might possibly be about. Under no circumstance should you use tags for titles to emphasize another text within the page, as this could result in reducing the web page ranking in search engines.

Search engines base their popularity on how accurate their search results are. Any attempt to raise the page ranking, using methods that do not comply with the standards, is punished by marking the web page as unreliable.

<p> is the tag for paragraph and we use it to separate particular parts of a text.

 stands for a line brake. It belongs to a group of tags that do not have a starting and ending tag. Therefore, it looks somewhat different and it has the sign / at the end of the tag.

<a href> element consists of tag a that represents a hyperlink that we use as a link to another page or some element within the site, and href tag contains the location to which a hyperlink is moving.

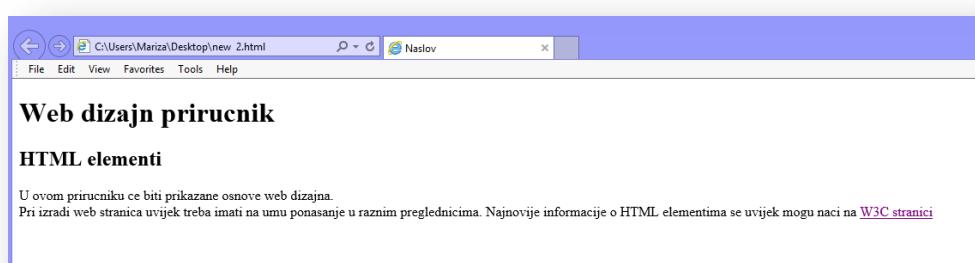
 element is used to include images into a document

```
<!DOCTYPE html>
<html>
<head>
<title>Naslov</title>
</head>
<body>
    <h1> Web dizajn prirucnik </h1>
    <h2> HTML elementi </h2>

    <p> U ovom prirucniku ce biti prikazane osnove web dizajna.
    <br/>
    Pri izradi web stranica uvijek treba imati na umu ponasanje u raznim preglednicima.
    Najnovije informacije o HTML elementima se uvijek mogu naci na <a href="http://www.w3schools.com/"> W3C stranici</a>
    </p>

</body>
</html>
```

The above code would we will see in a web browser as follows:



CREATING A WEB PAGE

3.1. DESIGN

3.1.1. Recognize planning and design techniques

As with all jobs, before developing a web page it is necessary to make some planning and preparations:

- It is necessary to determine the target audience. Namely, the web page with information about cooking will be probably significantly different from a web page with content for children.
- It is necessary to create a story framework draft; it is necessary to set the main guidelines of what the web page will contain
- The page structure has to be well thought through, and it should be easy to navigate the page with useful links.
- A page layout template is connected to the general page layout. It includes all design information such as the table layout, background wallpaper, and the title's color.
- The navigation scheme allows users to find quickly and easily what they're searching for.

3.1.2. Recognize a good font. Using fonts such as Arial, Courier, Helvetica

Since, in most cases, a text takes up a large part of a web page, selecting a font can have a major impact on the design. Generally, there are two types of fonts: Serif and Sans - serif. We can see their difference in the following image. Namely, serif fonts have additional ornaments on the letters.



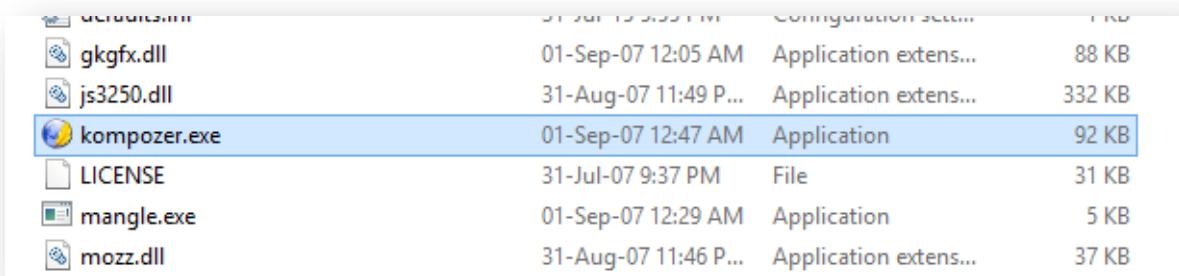
For the purpose of text legibility, serif fonts are not recommended for longer texts. Instead, they are recommended for titles and similar.

Arial, Courier, and Helvetica are sans serif fonts representatives and as such they are suitable for web page content. Their characteristic is that they look good in almost all sizes.

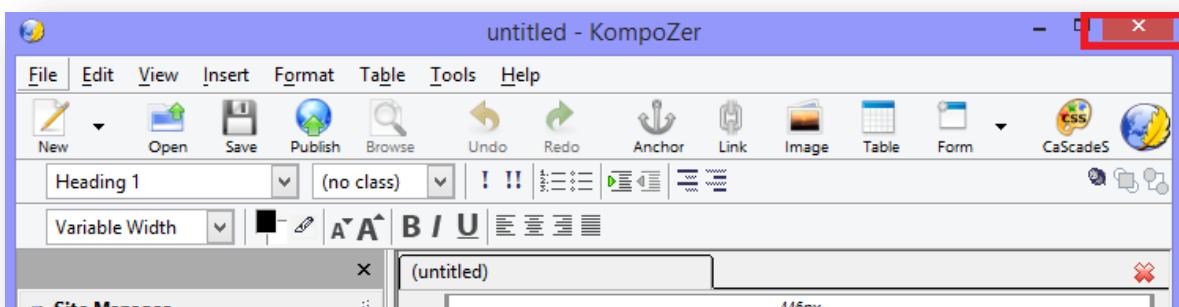
3.2 Using the Application

3.2.1 Open, close a web authoring application. Open, close web pages.

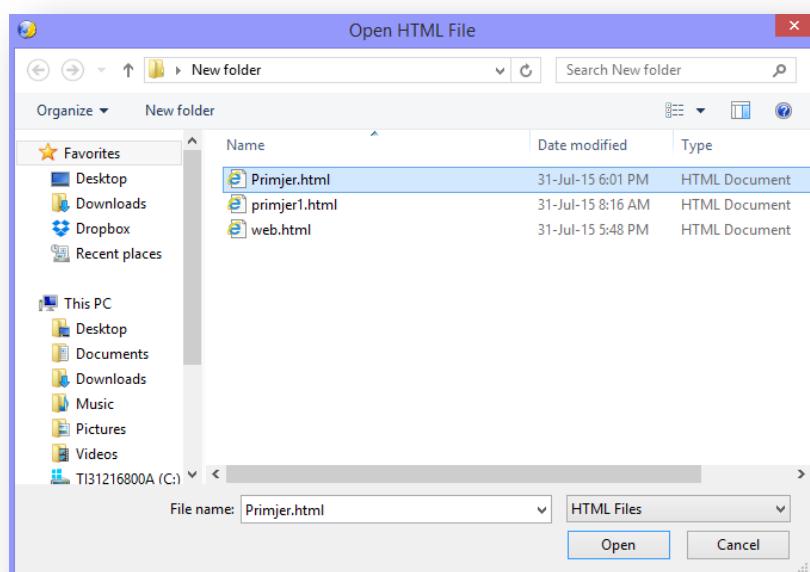
For the manuals practical part, we use the application KompoZer and you can download it for free from <http://www.kompozer.net/download.php>. Once downloaded the application does not require any installation, it is enough to download the content to a location of your choice and to start it simply double click kompozer.exe.



To close the application, click on X on the applications top right corner.

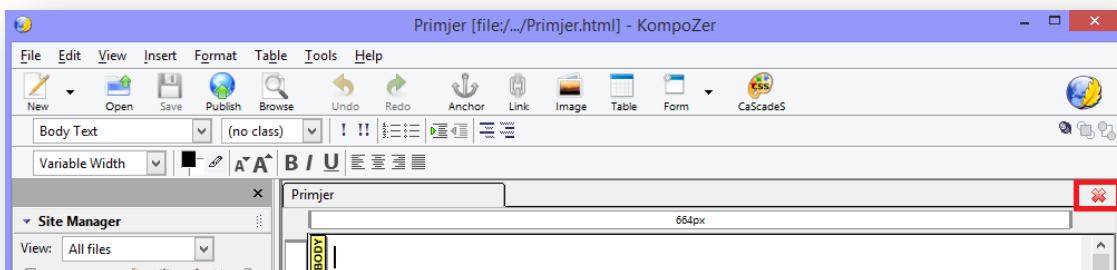


To open a web page select File -> Open File and select the desired page from the menu.



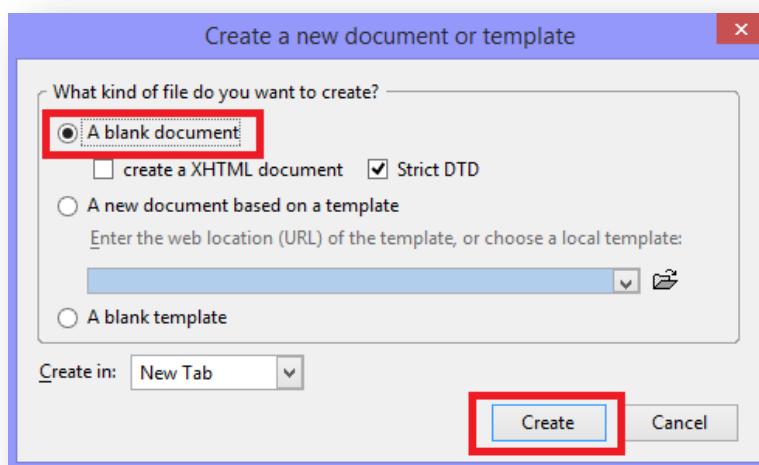
To close the page, click on X, marked on the image below.



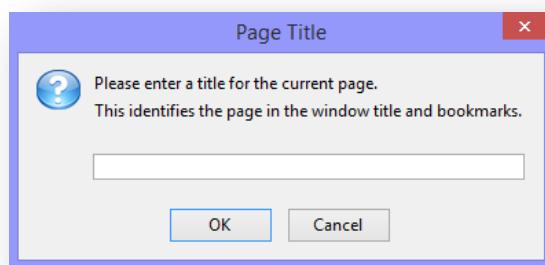


3.2.2 Create, save a new web page to a location on a drive

To create a new page click **File** -> **New**. A dialogue window will open as you can see in the following image. Choose option „A blank document“ and click **Create**.



To save the page choose **File** -> **Save**. If the web page does not have a title, a window will appear where you can enter the page title. Once you enter the title, click **OK**.

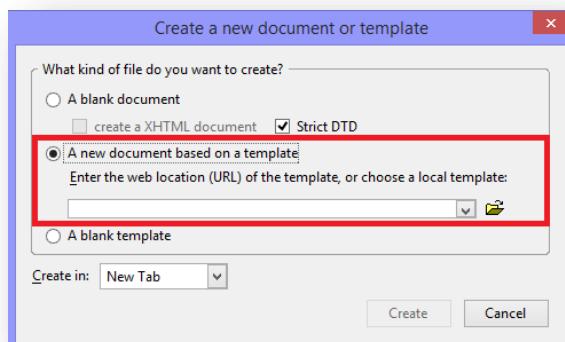


In the next step, a dialogue window will open, where it is necessary to select where you want to save the web page, and then choose HTML files for the format.



3.2.3 Create, save a new web page based on an available template

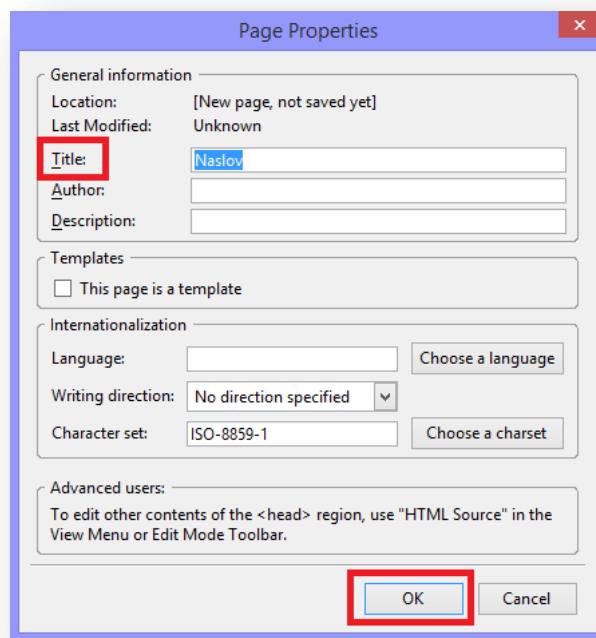
Select **File -> New** and choose in the window dialogue „A new document based on a template“, then select the template and click on **Create**.



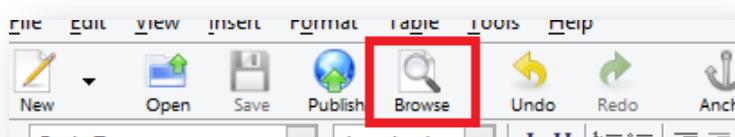
To save a web page the steps are the same as with 3.2.2.

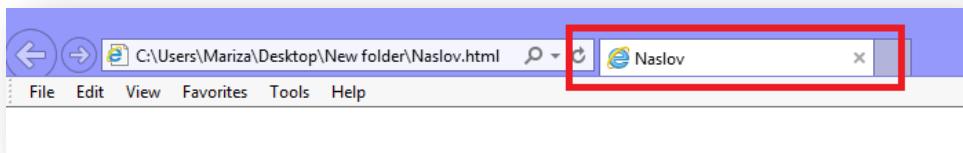
3.2.4 Add, edit a descriptive web page

Choose **Format -> Page Title and Properties**. As shown on the image underneath, a dialogue window will open, where you should enter the title, author and description. Finally click OK.



To view the page click on **Browse**. This step will open a web browser.

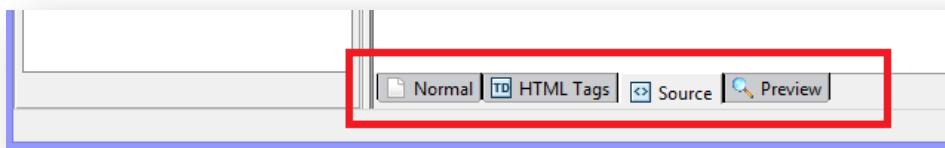




3.2.5 The difference between the source code and design view

Applications at the bottom of the page give us the possibility to change how we view a page.

Clicking on **Source**, we view the page code while clicking on the button **Preview** we can see the web page layout (design view).

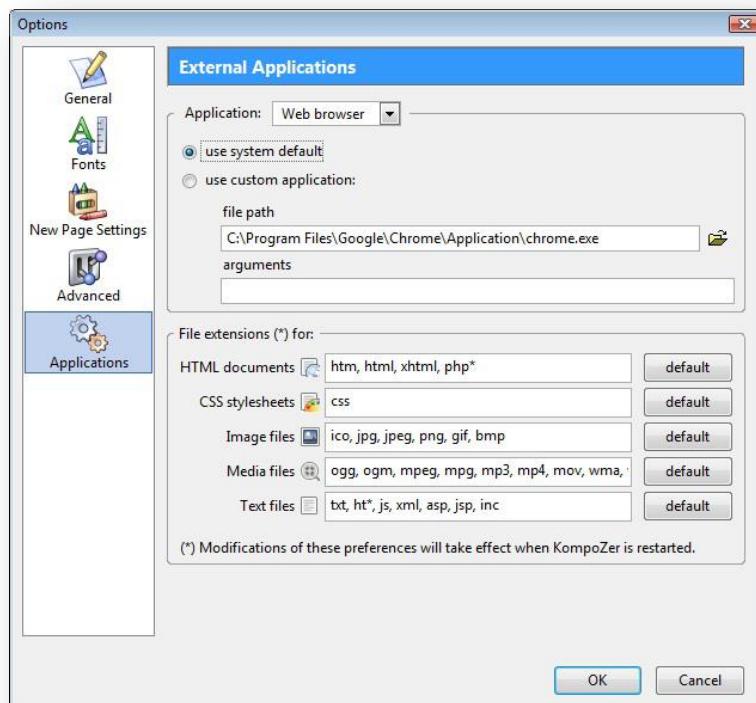


3.3 Enhancing Productivity

3.3.1 Set basic preferences in the application: default preview browser, default document type, coding, fonts

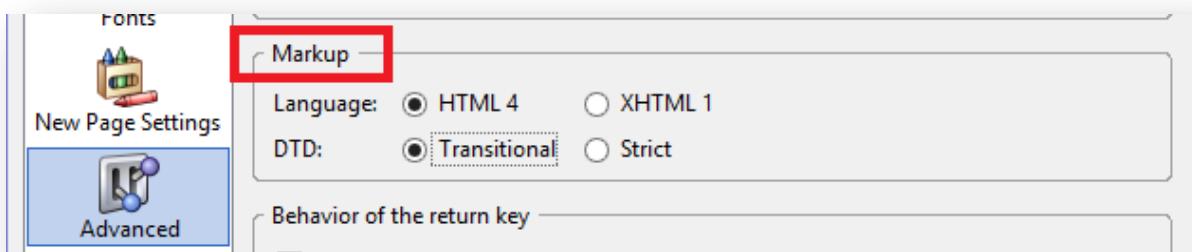
Default Browser

Go to **Tools -> Options -> Applications** and according to the image below set up the desired properties. In this case, we chose Chrome as the default browser.



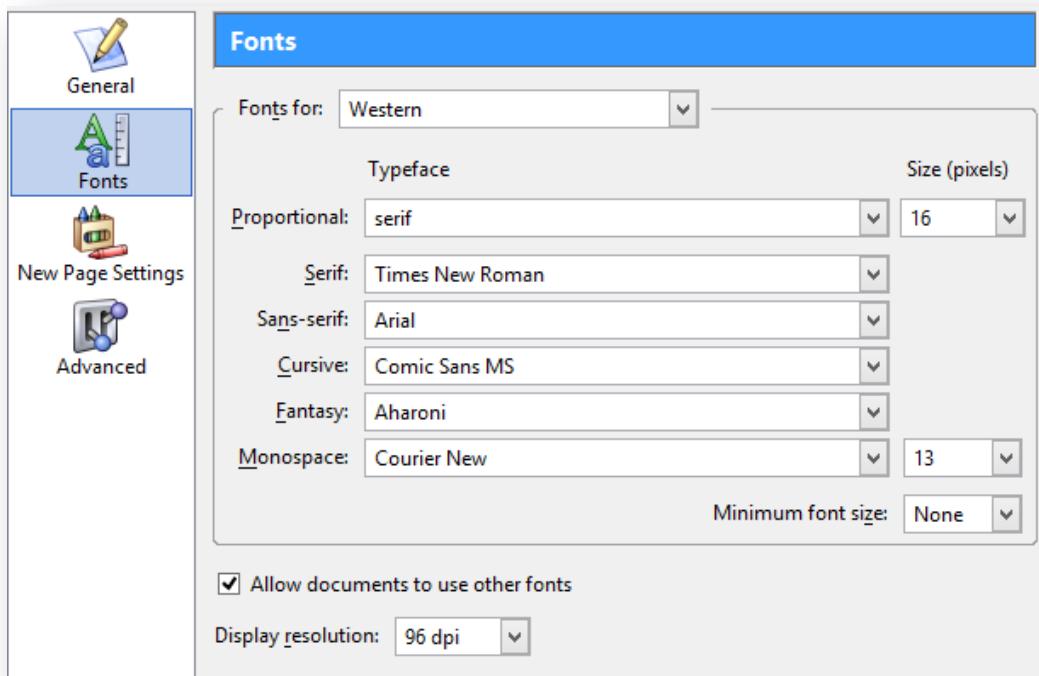
Assigned document type and coding:

Go to **Tools -> Options -> Advanced** and define the settings according to preference/need in the **Markup** section. The HTML4 and the XHTML are almost the same, except for little differences in the code, but not remarkable in the final design. In the he DTD, „Transitional“ mode is for presentation attributes, unlike „strict“ mode where the presentation attributes are excluded.



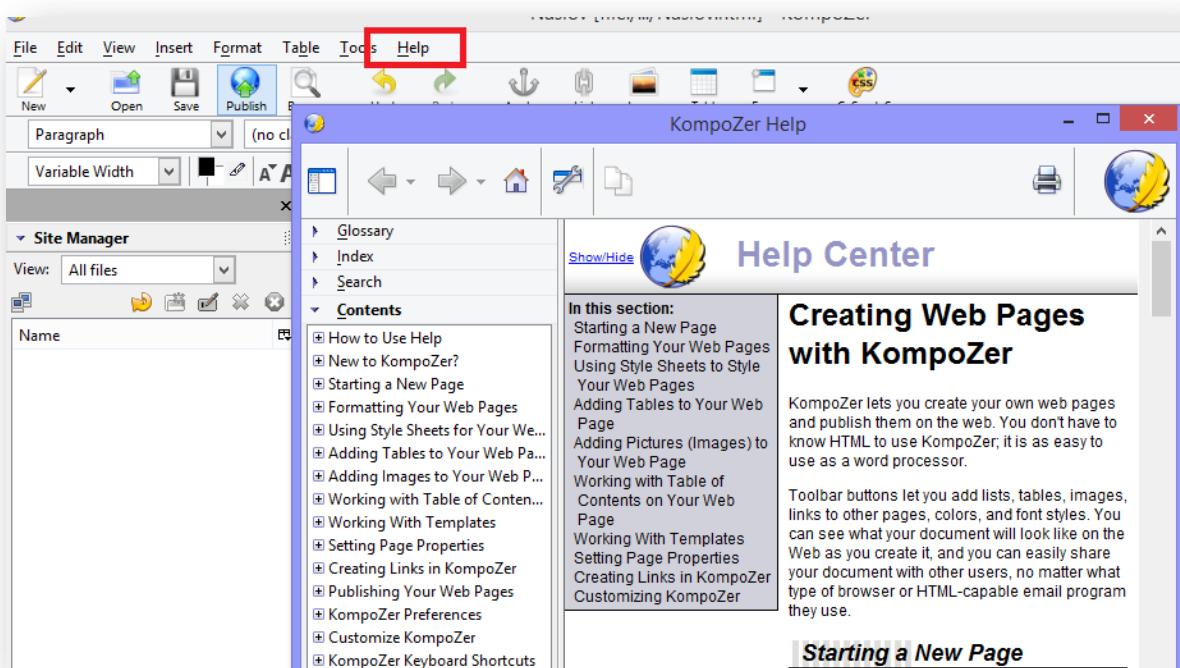
Fonts:

To define fonts, go to **Tools -> Options -> Fonts** and select the desired settings.



3.3.2 Using available Help functions

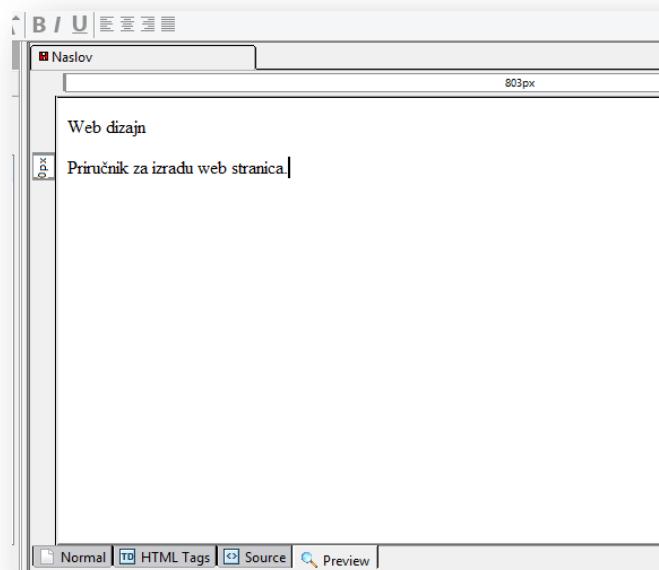
The Help Center is available when you click **Help** in the main menu or click „F1“. After that, a new dialogue window will open where we can search for information according to various criteria.



3.4 Text Input and Formatting

3.4.1 Insert, edit, delete text

For manipulating the text select **Preview** at the bottom of the application and then enter the text as if using a regular text editor.

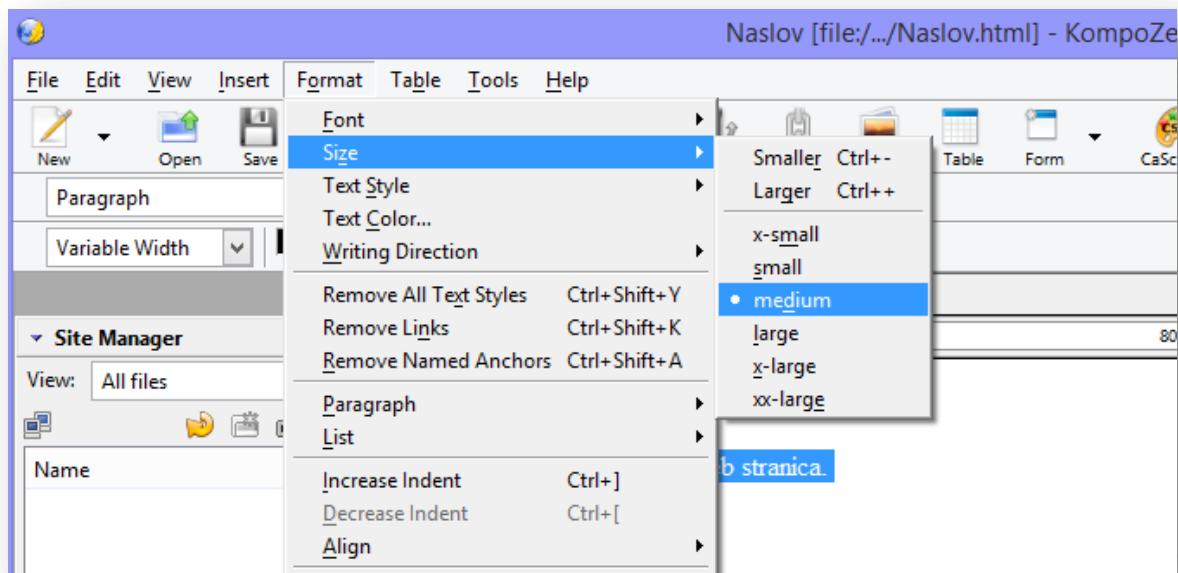


3.4.2 Understand and use relative font size

The font size can be set up in relative accordance with other web page elements which leads to a better legibility. Setting a relative size also gives the user the option to change the text size in a browser.



To set a relative size select the text that you would like to format and then go to **Format -> Size** and select one of the offered sizes.



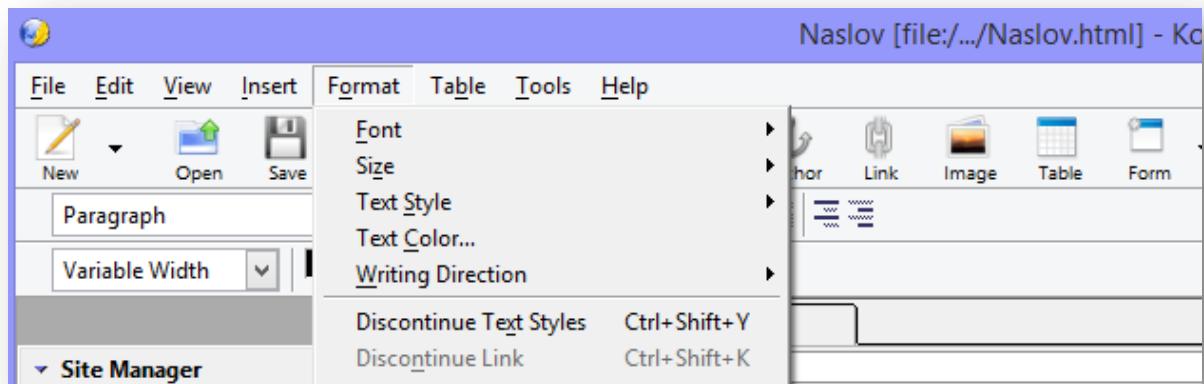
3.4.3 Apply text formatting: bold, italic, font type and color

Form a bold text: mark the desired text and choose **Format -> Text Style -> Bold**

Form an italic text: mark the desired text and choose **Format -> Text Style -> Italic**

Font change: mark the desired text and choose **Format -> Font -> change to the** desired font

Change the color: mark the desired text and choose **Format -> Text Color -> change to the** desired color



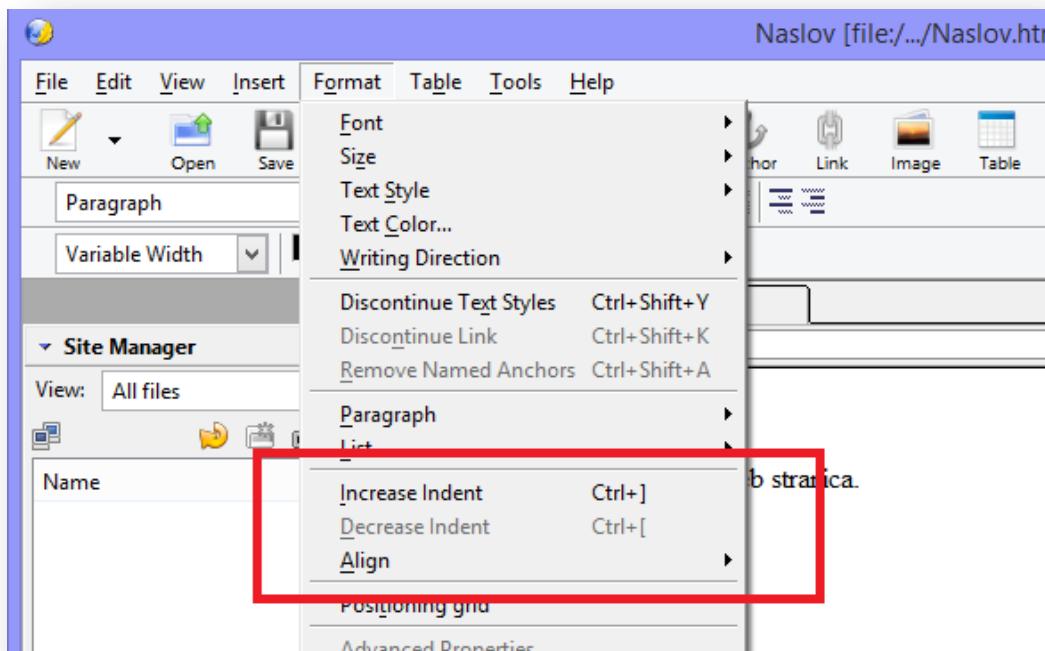
3.5 Forming paragraphs

3.5.1 Set paragraph properties

The paragraph properties are under **Format**:

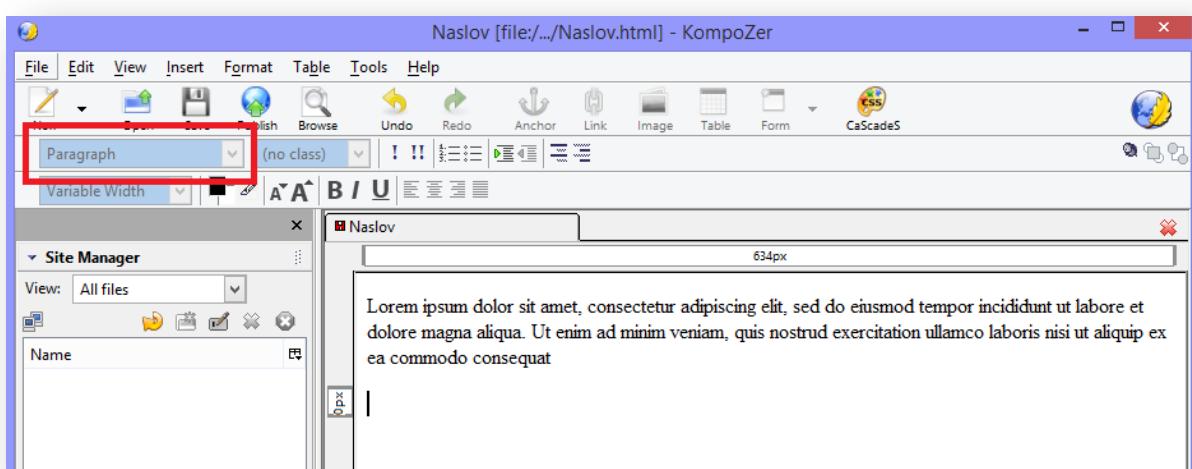
- **Increase/Decrease Indent**
- **Align**

To set up properties select a paragraph and select desired properties.



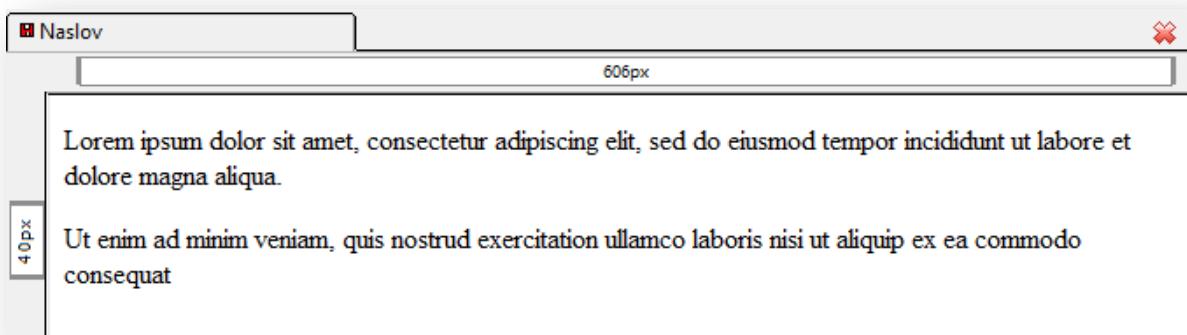
3.5.2 Insert, remove paragraph break, line break

Enter 2 arbitrary sentences, mark them and define as a paragraph.



Place the cursor in front of the second sentence and press **ENTER**. As a result, we have created a break paragraph, or we can say that now two sentences represent two paragraphs.





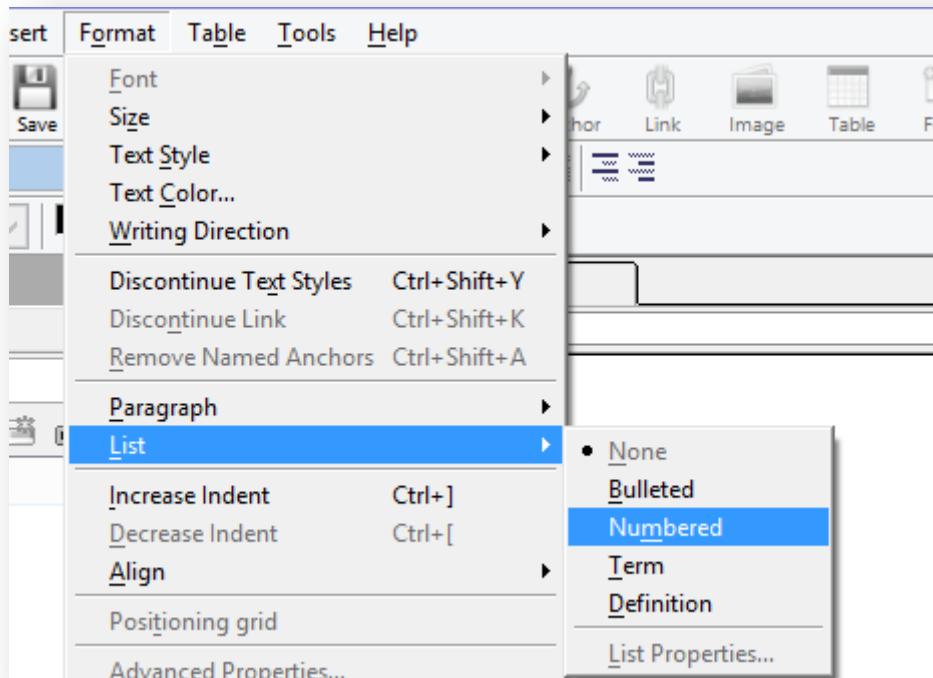
To remove a break, place the cursor in front of the second sentence and press **BACKSPACE** on the keyboard.

To create a sentence break, instead of pressing ENTER press simultaneously **SHIFT + ENTER**. The result is a break within a sentence. To remove a sentence break place the cursor in front of the second sentence and press **BACKSPACE**.

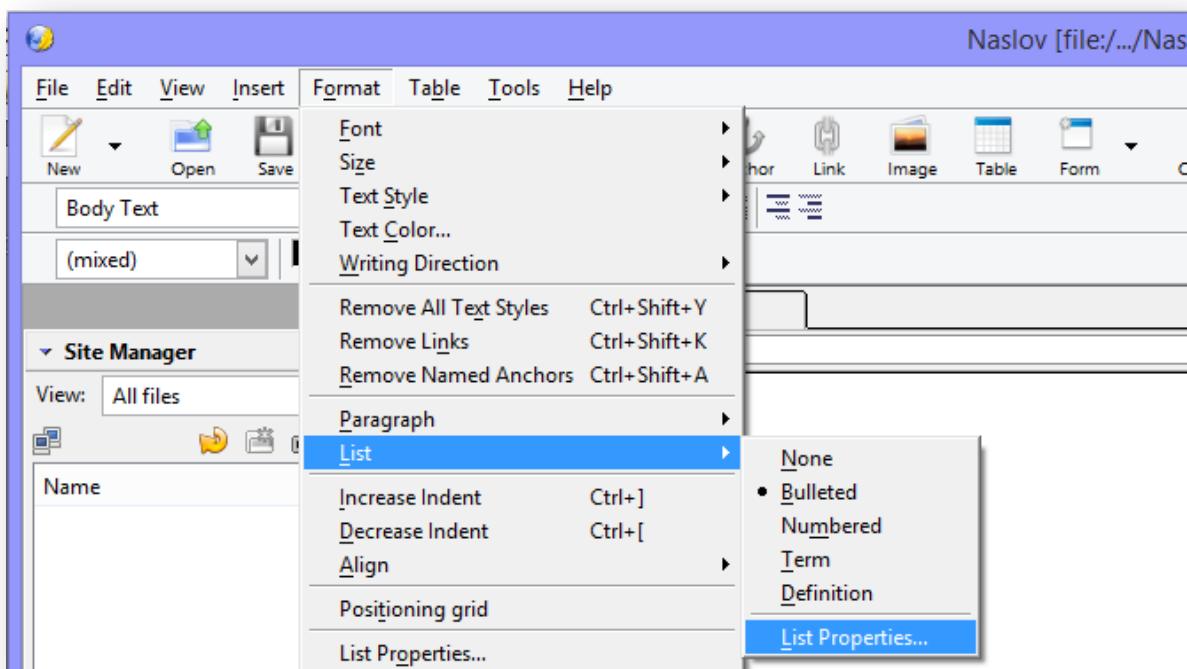
Therefore, the paragraph break creates a new paragraph while the sentence break just jumps into a new row.

3.5.3 Create, modify numbered or graphical (bulleted) list

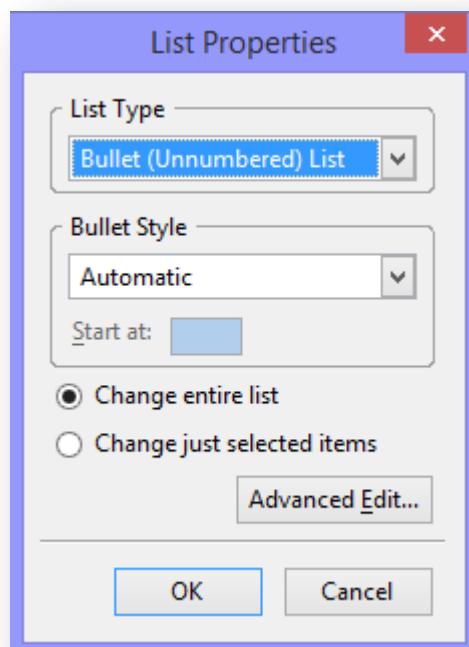
To create a list, mark elements chosen to be part of the list and go on **Format -> List -> Numbered/Bulleted**.



To modify it mark the list and go to **Format -> List -> List properties**.



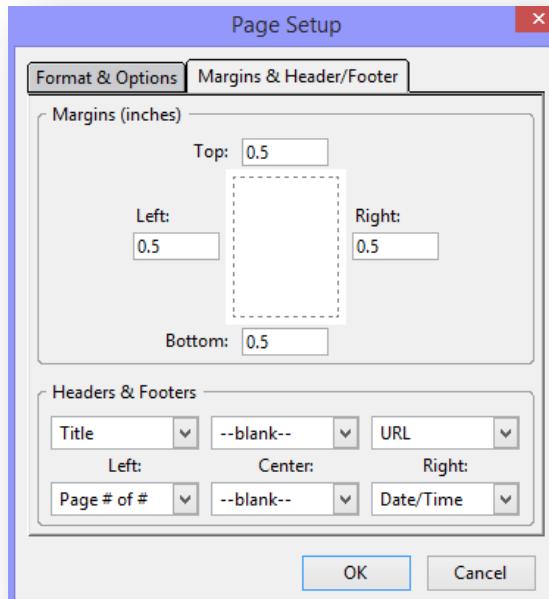
Afterward, we can see a dialogue window where we can arrange the list to our wishes—modify the list type, modify tags, modify an entire list or just parts of it, etc.



3.6 Page Formatting

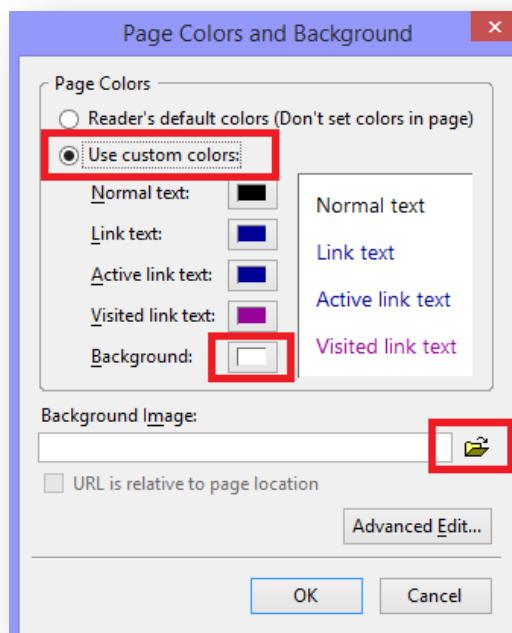
3.6.1 Set page margins: top, bottom, left, right.

To set up margins go to **File -> Page Setup** and select in the open dialogue window **Margins & Header/Footer** section where you can then set up the size of margins.

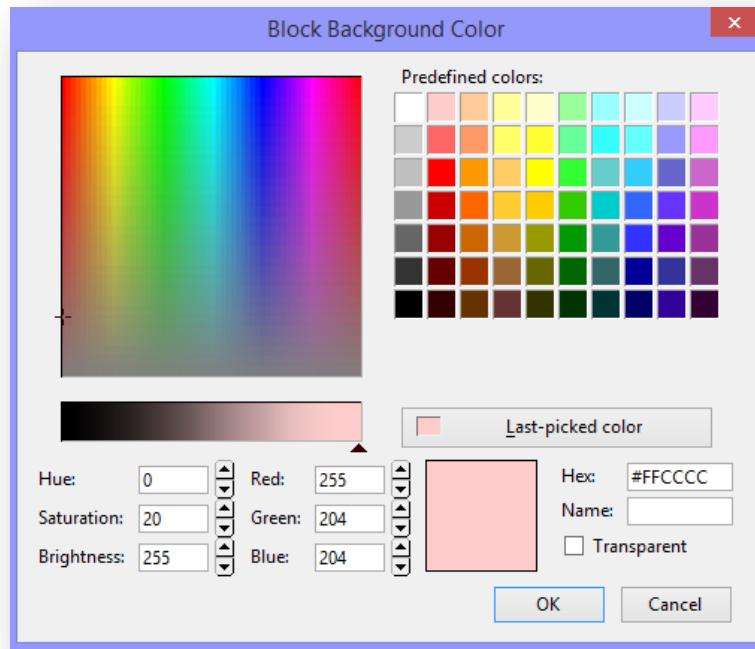


3.6.2 Add, modify, remove a page background color, image

Go to **Format -> Page Colors and Background**. Select in the open dialogue window **Use custom colors** and click on the field next to the word **Background**. If you wish to upload a background picture, click on the map icon. Choose the desired picture and then click **Open**.



If you select the option to define the background color, a window will open, where you can select the color.

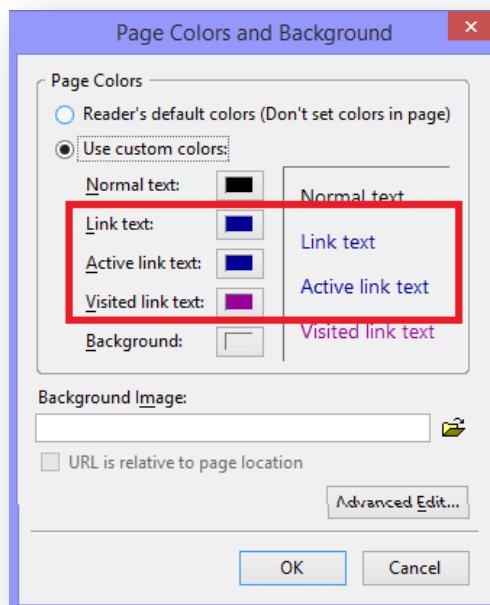


Once you selected the color, click OK.

3.6.3 Change a web page hyperlink color: visited, active, unvisited.

Go to **Format -> Page Colors and Background**.

You can define the desired color by clicking the boxes next to **Link Text**, **Active Link Text**, and **Visited Link Text**.



3.7 Hyperlinks

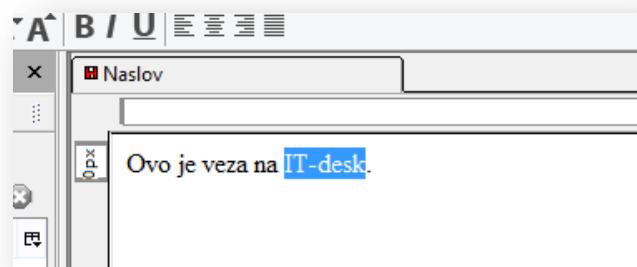
3.7.1 Understand the terms absolut and relative hyperlinks

We use the term hyperlink for a text, image or another element that, by clicking on it, leads us to another location.

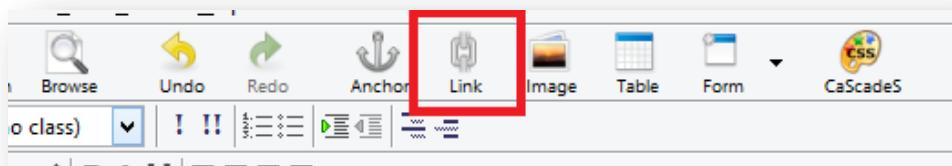
- Absolut hyperlink leads to a location outside the currently visited web page
- Relative hyperlink leads to a page within the web page. For example, a link from one of the pages to the main page

3.7.2 Insert, add, remove a hyperlink: text, image.

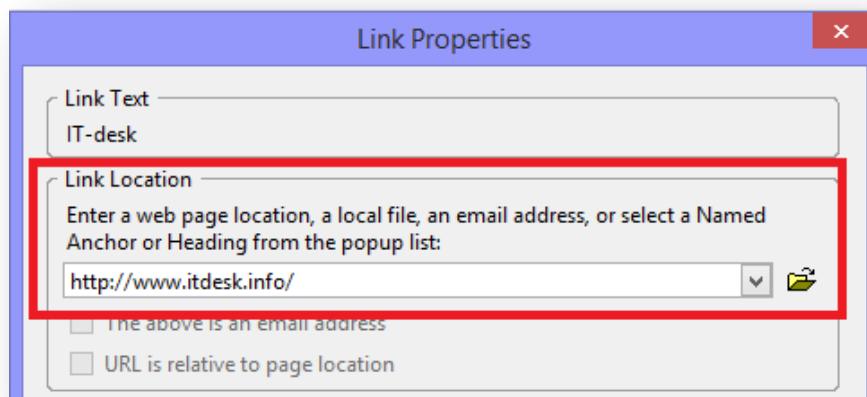
Open the web page in **Preview** mode and select the text intended for a hyperlink.



Then click on the **Link** icon.

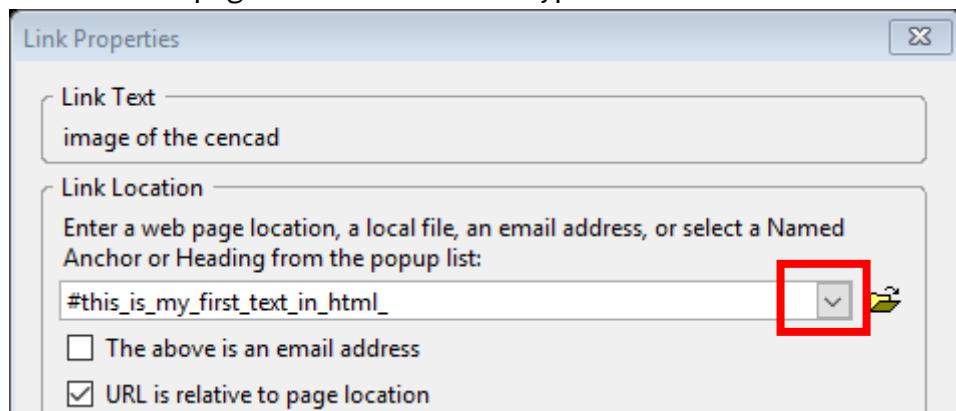


This step will open a dialogue window in which you can enter the second address location.



Steps are the same for a relative link only that by clicking on the map icon, you should be able to find the location.

For the purpose of this operation, the initially marked text will be colored blue and underlined on the web page to show that it is a hyperlink.

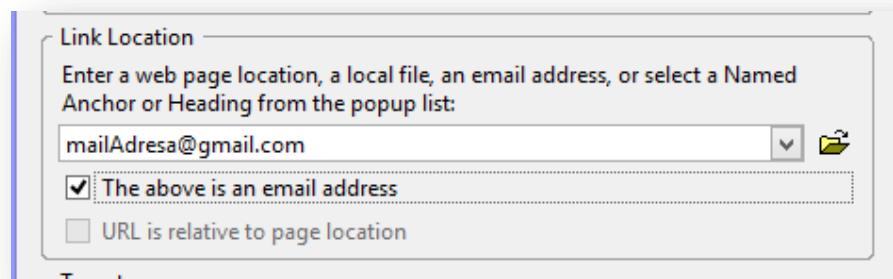


If we chose a picture to become a hyperlink, the procedure is entirely the same however it is necessary first to add the picture to a page. You can do so by going to **Insert -> Image** and select the desired picture.

To remove a hyperlink, mark the hyperlink text and right-click your mouse and select option **Remove links**.

3.7.3 Insert, edit, remove an e-mail hyperlink: text, image.

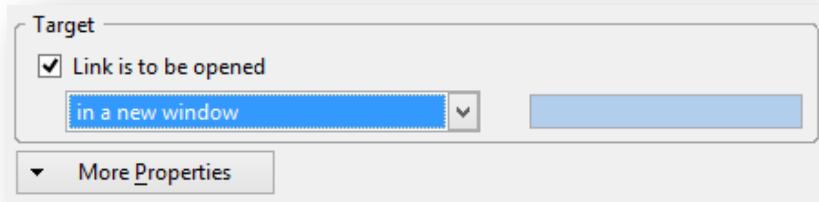
To insert e-mail hyperlink, the steps are the same as for inserting a regular hyperlink with the difference that we enter an e-mail address instead of a web page address and select the box „The above is an email address“



3.7.4 Define hyperlink target: same window, new window

When opening hyperlinks, there are two options: you can open a new page instead of the existing which means that a currently opened page closes, or that a new page opens in a new browser window while the currently opened page remains still open.

The instructions for the beginning are the same as for inserting links, and the option to open in a new or the same window will be defined by marking in **Target** section "link is to be opened" and then select from the drop-down menu the desired option.

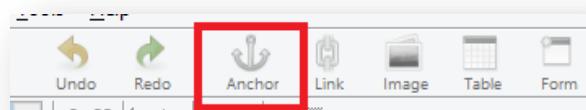


3.7.5 Set an anchor, insert a link to an anchor

Anchor is a hyperlink that shifts the focus from one part of the text within the page onto another text within the page. Usually, we use them on websites that are quite long so that a user does not have to scroll the bar too many times. The image below shows one form of anchor link implementation. When clicking on any of the links the focus moves to a desired section.

Web design encompasses many different skills and disciplines in the production and maintenance of websites. The different areas of web design include web graphic design; interface design; authoring, including standardised code and proprietary software; user experience design; and search engine optimization. Often many individuals will work in teams covering different aspects of the design process, although some designers will cover them all.^[1] The term web design is normally used to describe the design process relating to the front-end (client side) design of a website including writing mark up. Web design partially overlaps web engineering in the broader scope of web development. Web designers are expected to have an awareness of usability and if their role involves creating mark up then they are also expected to be up to date with web accessibility guidelines.

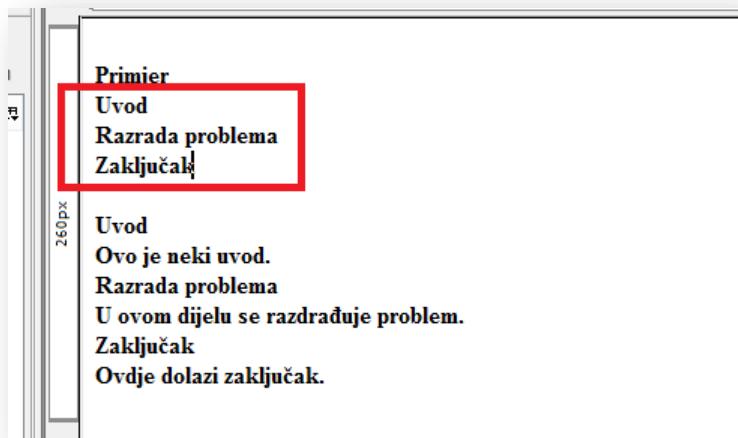
To create an anchor link, it is necessary to mark a subtitle in the text and click the **Anchor** icon.



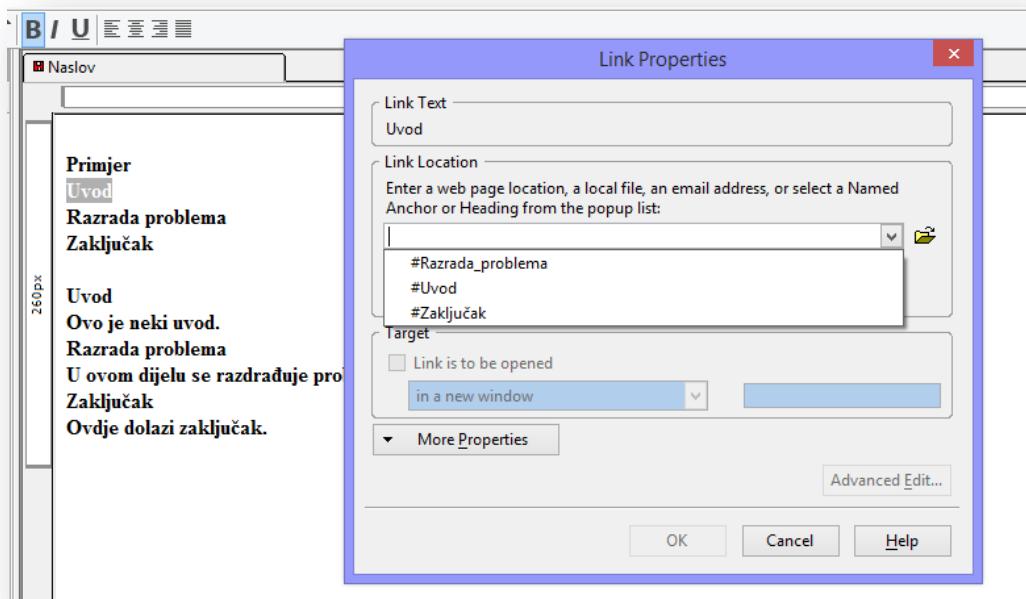
We need to define the anchor link name in the open dialog box. This is the name that will be visible to users.

After repeating the procedure for all desired anchor links we need to create a table of contents that will be visible to the user (as in the example above with Wikipedia).

At the beginning of the page list all sections that you have defined as anchor links.



Select the first in the line (in this case Uvod (Introduction)) and click on the **Link** icon. The locations list shows all locations that were defined earlier for an anchor.

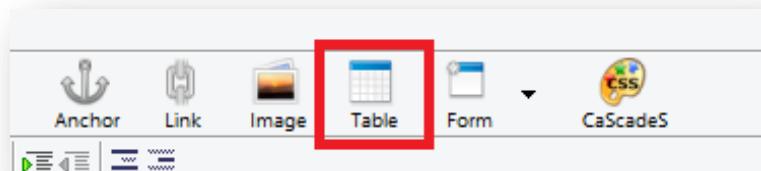


Select the desired location, click OK, and repeat the process for the rest. This procedure we do not use much in praxis with short texts; we recommend it solely for websites with large content.

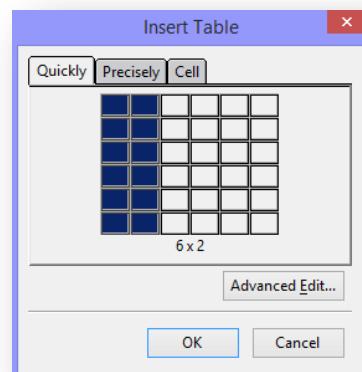
3.8 Tables

3.8.1 Insert, delete a table

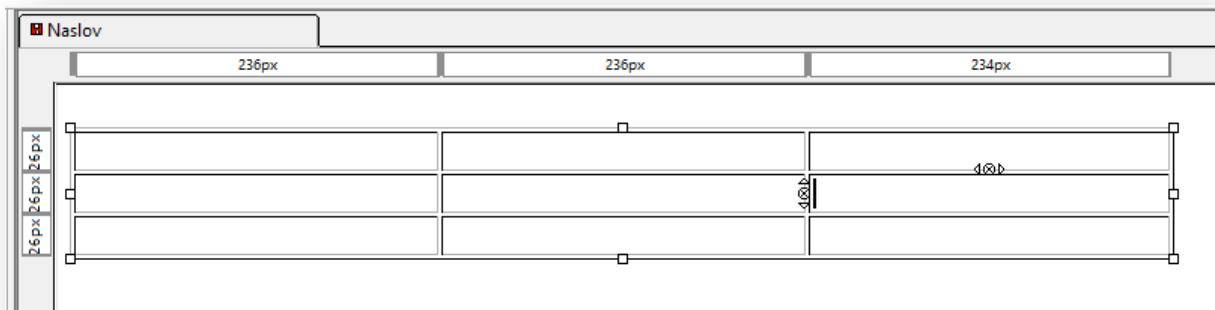
To insert a table click on the **Table** icon in the main menu bar.



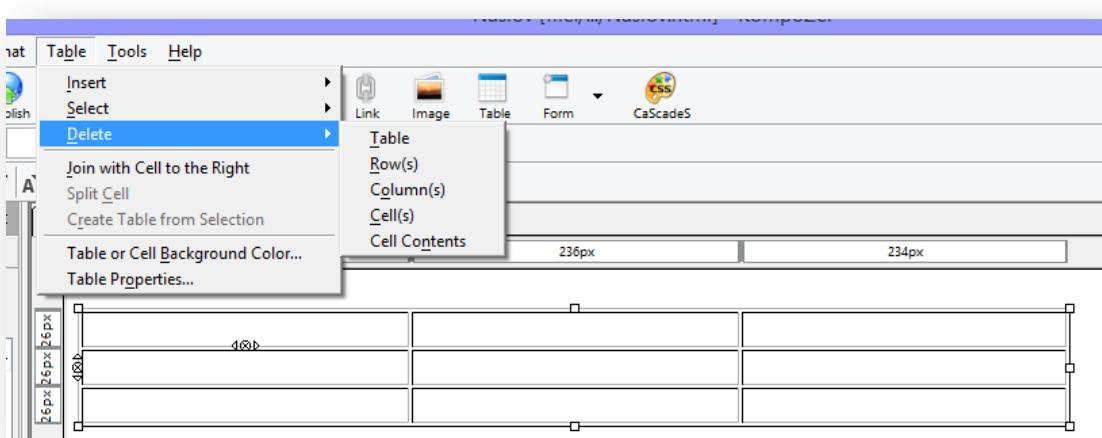
As a result, a dialog box will open where we can then select desired properties.



After selecting the properties within the workspace, we can see a plotted table where you can enter desired values.



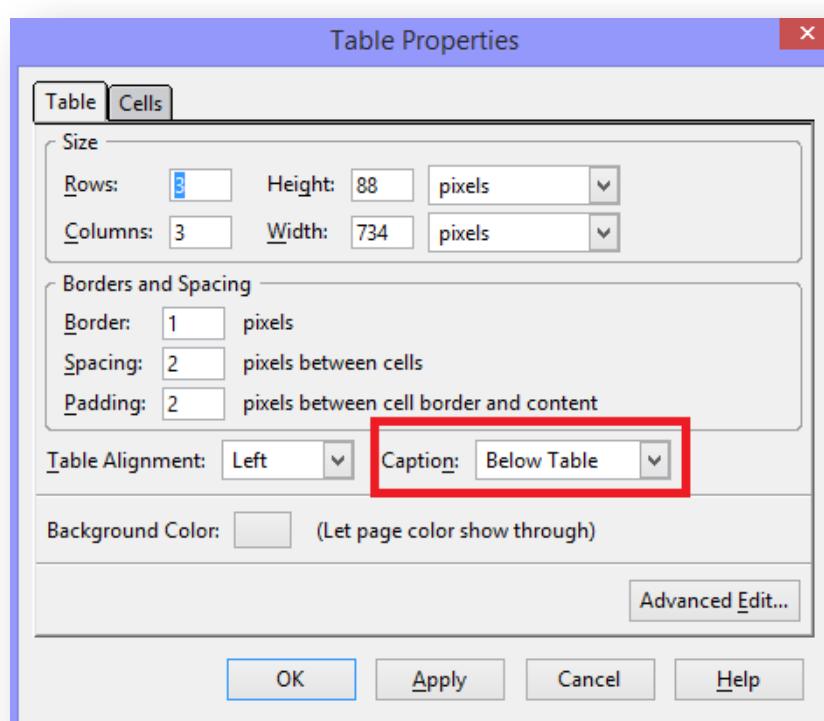
To delete the table position the cursor within the table and go to **Table -> Delete**, and then choose **Table**. As seen in the image it is only possible to delete certain parts of the table, such as columns and rows.



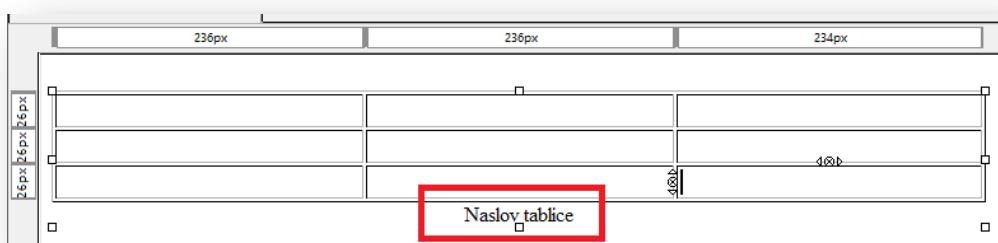
3.8.2 Insert, edit a table caption

Click anywhere within the table and go to **Table -> Table properties**.

In the dialog box, determine where you want to insert the title.

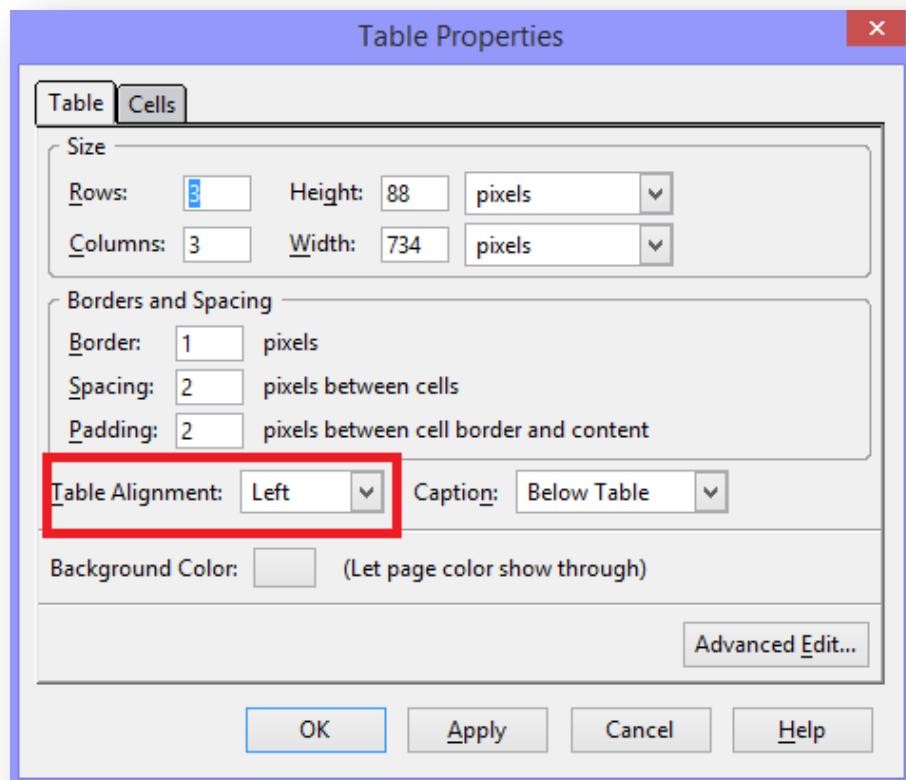


In accordance with the selection in the workspace a place will be created to enter a title.



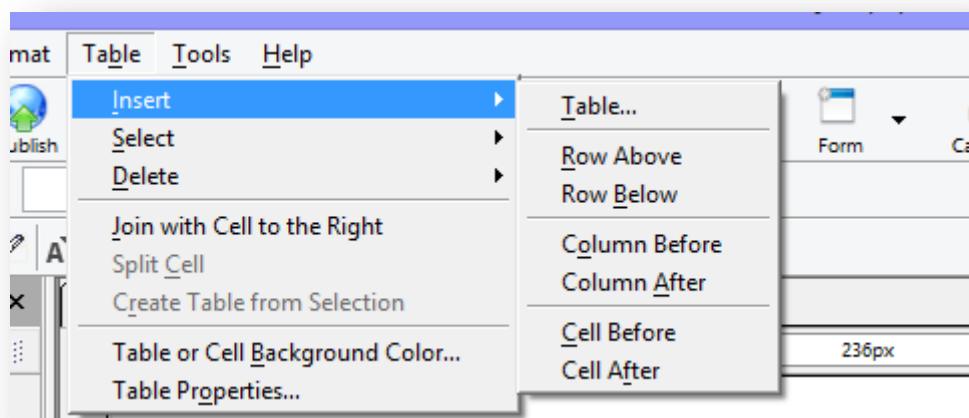
3.8.3 Align a table: left, center, right

Click anywhere within the table and go to **Table -> Table properties** and under **Table Alignment** select the desired alignment.



Insert, delete columns and rows

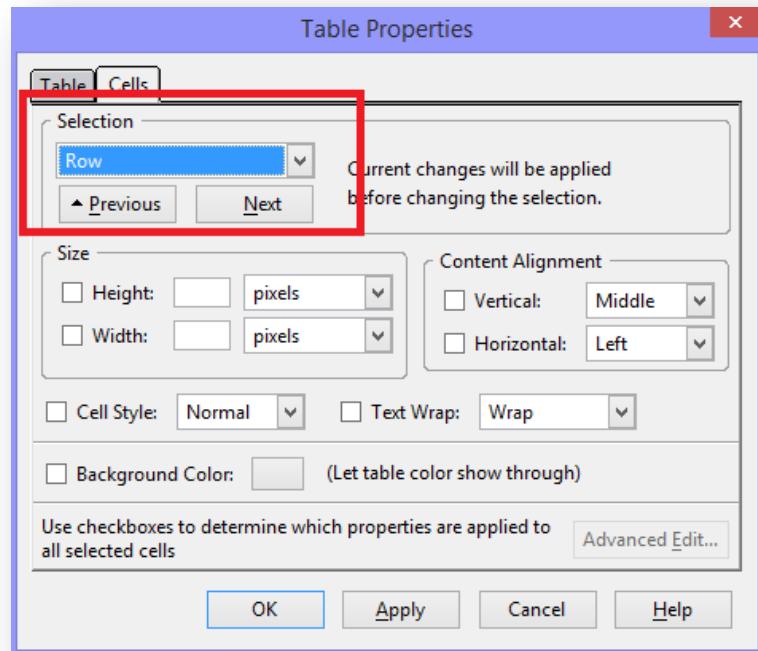
To insert column lines go to **Table -> Insert**, and then select the desired operation.



To delete select the desired row/column you want to delete go to **Table -> Delete**, and select the desired option.

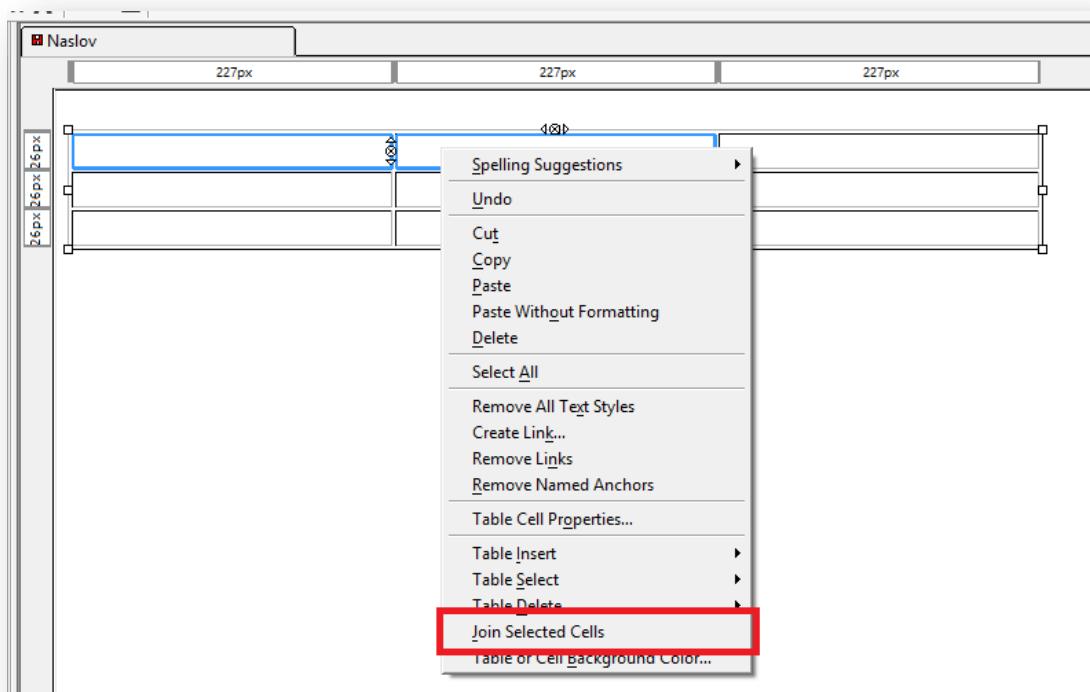
3.8.4 Modify column width, row height.

Go to **Format -> Table cell properties**. Open **Cells** window and then select the **Selection** part **Row** and define desired settings.



3.8.5 Merge, split cells

To merge cells select the cells you want to merge and right-click the mouse and select from the menu "Join Selected Cells".

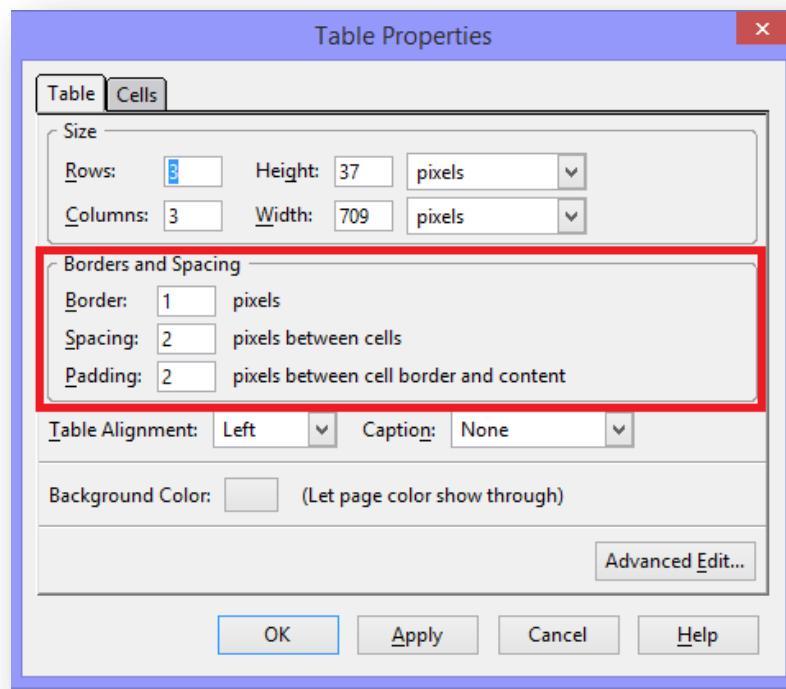


To separate cells select the desired cell and right click the mouse and select **Split cell**.

3.8.6 Modify table border width, cell padding, cell spacing

Click anywhere within the table and go to **Table -> Table properties**.

To create table borders position the cursor within the **Table** window and define the settings in the **Borders and Spacing** section.



To define cell properties open **Cells** window in the same dialog box.

- **Border** -> define the thickness of the border line
- **Cell Spacing** -> define the space between the cells in the spreadsheet
- **Cell Padding** -> defines the distance between cell content and cell borders

3.8.7 Add, remove a table background, graphic, image

Change the color of individual cells: select the desired cell and go to **Table -> Table or Cell Background Color** and choose the desired color.

Change the table color: go to **Table -> Table or Cell Background Color** and choose the color. You could apply the color to the selected cells or the complete table.

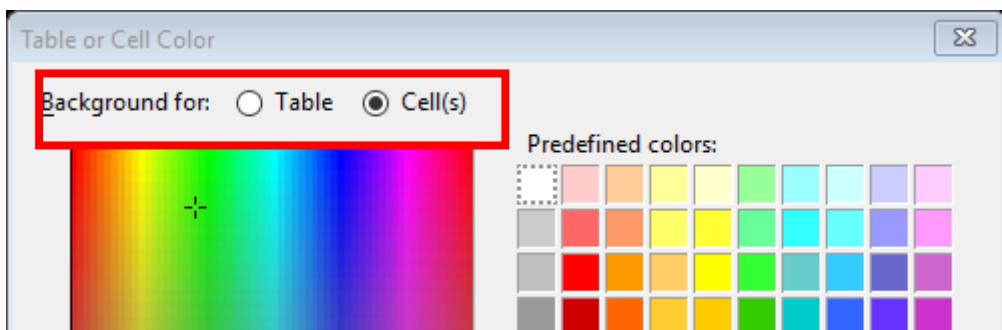
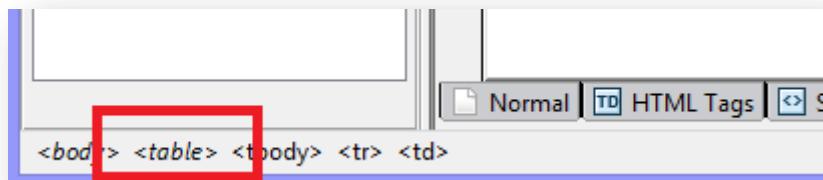
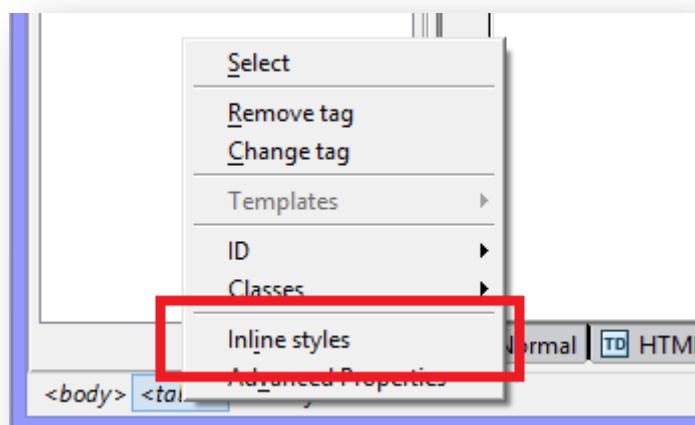


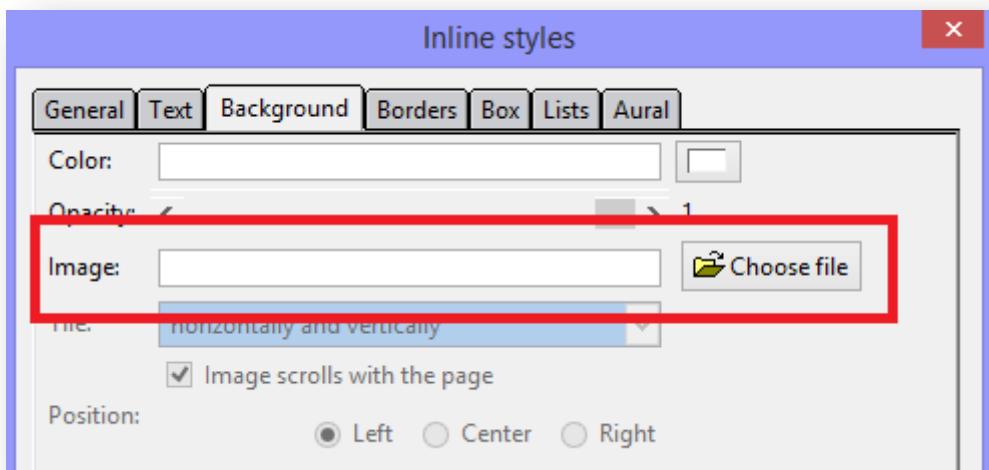
Image inside the cell/ table: click anywhere within the table and then select <table> tag at the bottom of the page.



After you right-click the mouse, a menu will open where we need to select *Inline styles*.



In the open dialog box select the image.

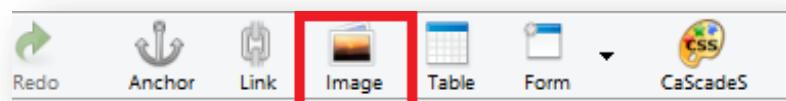


4.USING OBJECTS

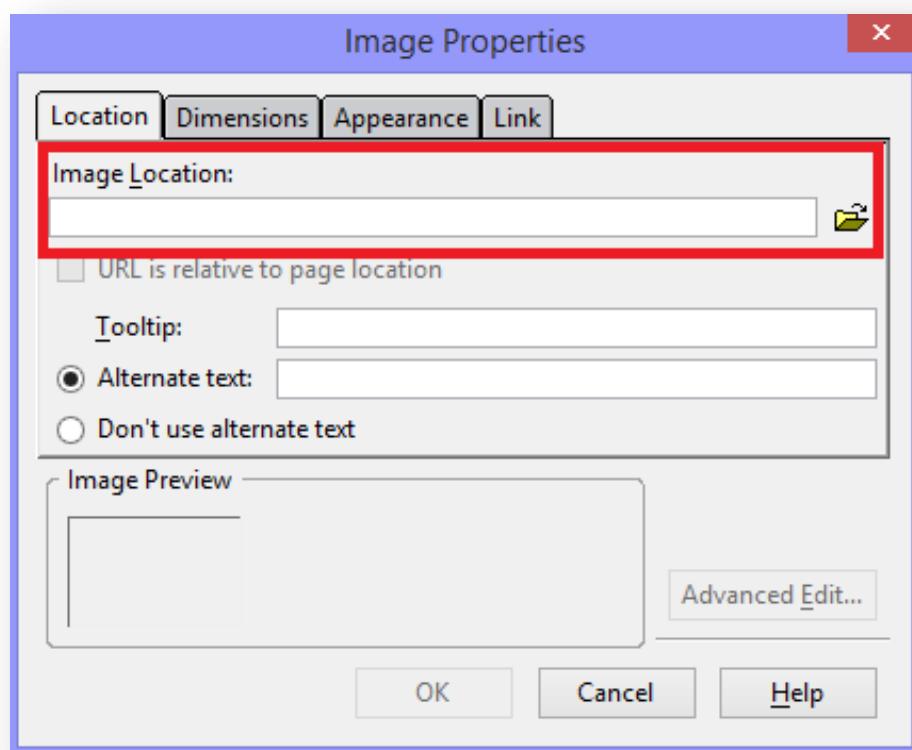
4.1. Graphical Objects

4.1.1. Add, remove an image on a web page

Position the cursor on the page where we want to insert an image and click on the **Image** icon



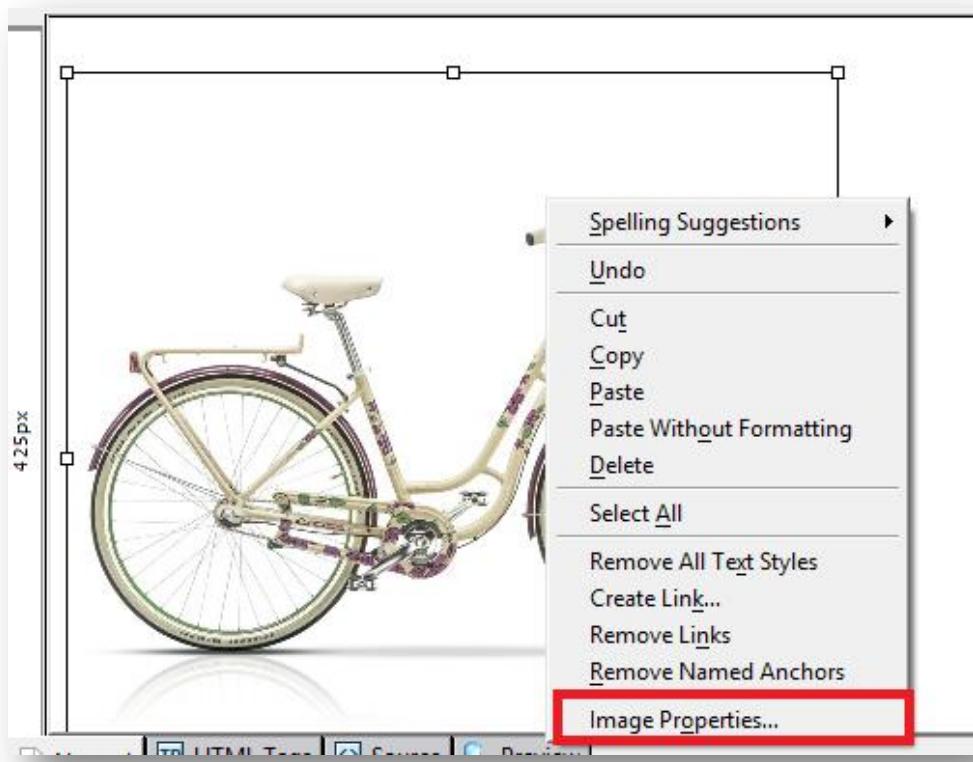
Afterward, find the desired image in the open dialog box.



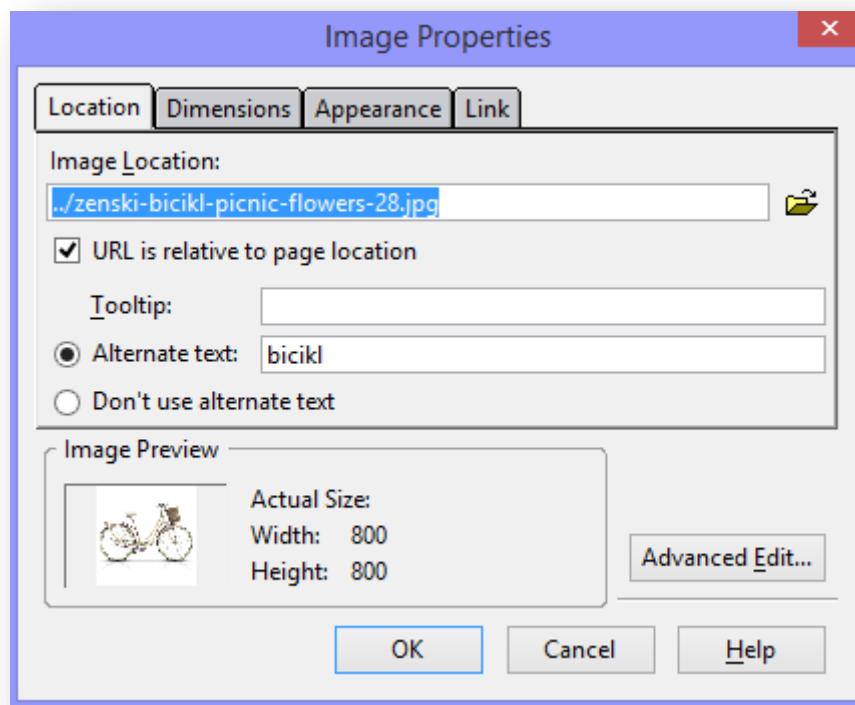
To delete an image, it is enough to mark it and click on **BACKSPACE** on your keyboard.

4.1.2. Set, modify attributes of an image on a web page: size, border, alignment, alternative text

Select the image on the page, right-click your mouse and select **Image properties**.



A dialog box will appear where you can define desired properties.

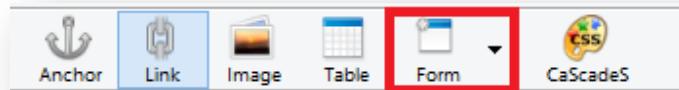


In the **Location** window, we can modify the *alternative text*. It is a text that is displayed when the mouse hovers over the image. In the **Dimension** window, we can change the image size. In the **Appearance** window, it is possible to define the type for border and alignment. In **Link** window, you could convert into a hyperlink, just as any other hyperlink.

4.2. Forms

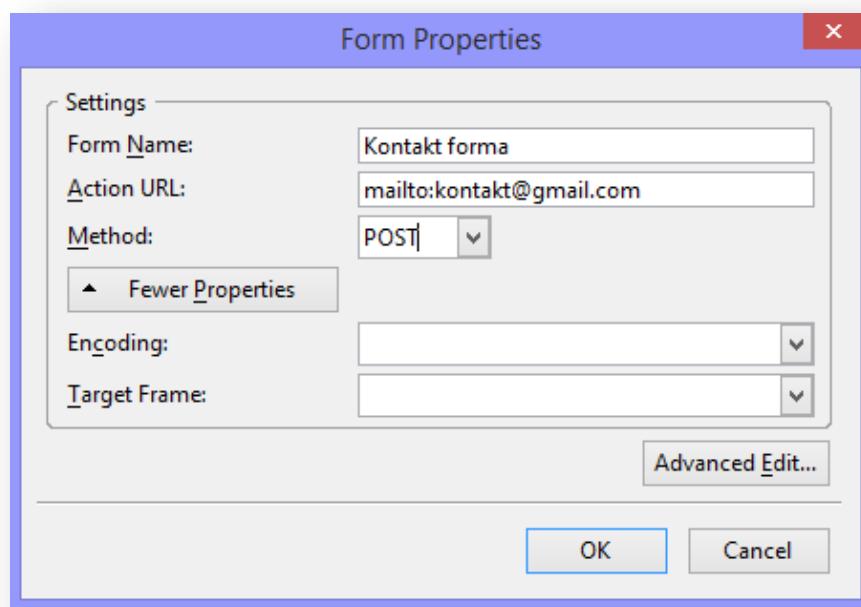
4.2.1 Add a form to a web page

Position the cursor within the site where we want to add a contact form and click on the **Form** icon.



Afterward, a dialog box will appear where we need to enter certain properties:

- Form name
- In Action URL enter the email address you wish to use to send answers to customers questions if needed. Before entering the address write mailto:
- In the Method field select POST



Within the page, a blue plotted field appears that shows where the form begins and ends.

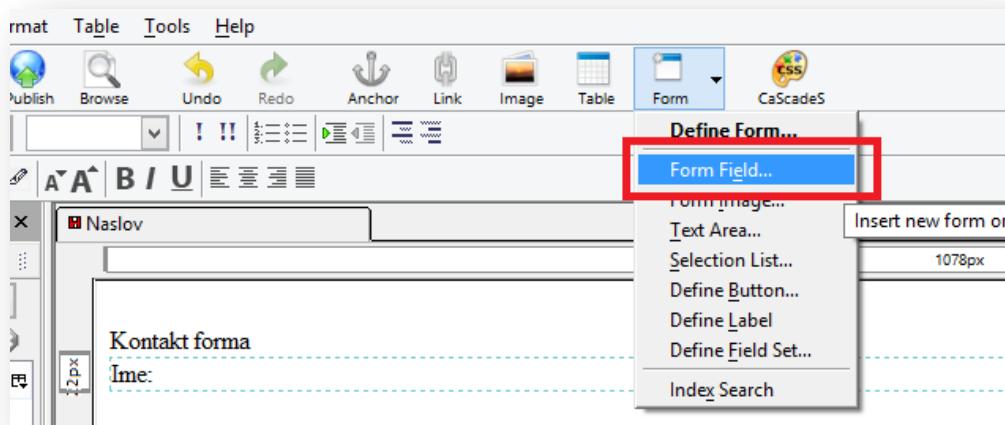


4.2.2. Add, remove single line, multi-line text fields

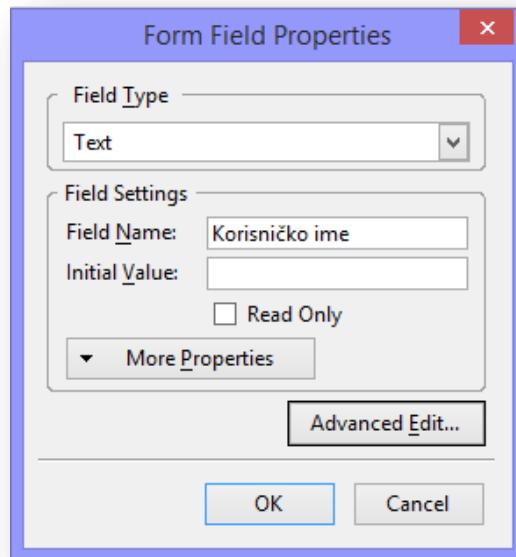
Add one line:



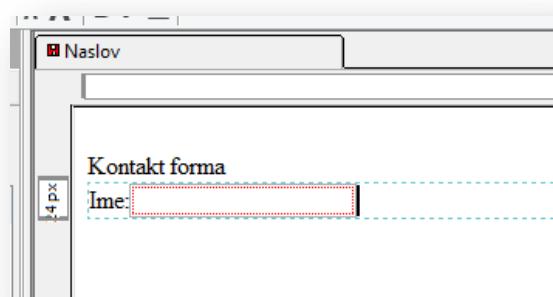
Within the blue plotted field enter, for example, Name and then select **Form Field** under **Form**.



In the open dialog box select a field type and define a field name.

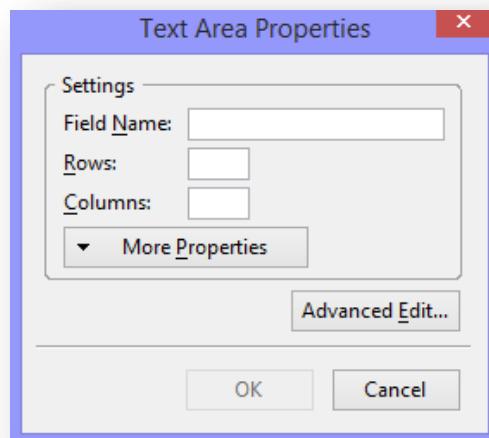


The result should look like the image below.



Add more lines:

The steps are the same except you need to select **Form -> Text Area**. In the dialog box that will appear after, we can define desired properties.

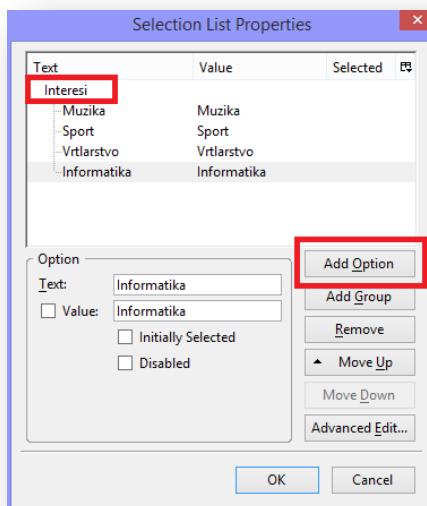


Depending on the entered properties, the result should roughly look like the following:

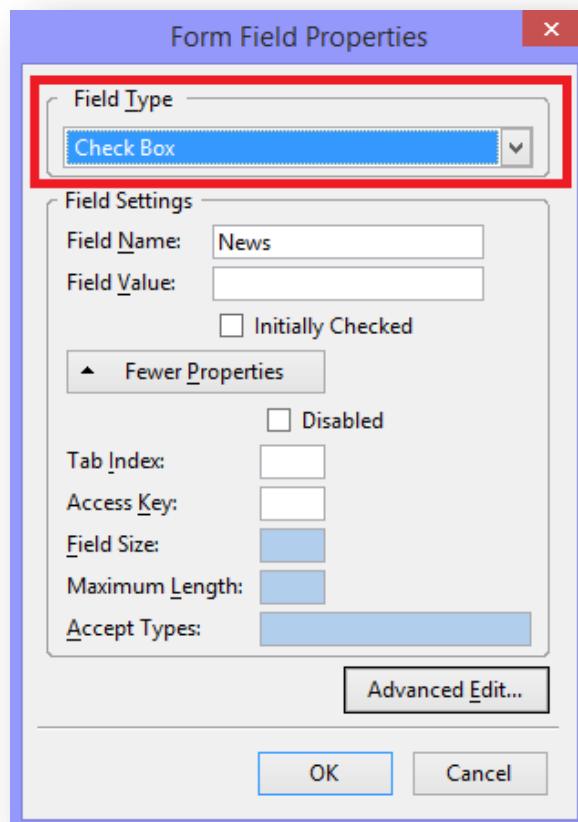


4.2.3. Add, remove form fields: drop-down, check box, radio button.

Drop -down : click on **Form** -> **Form field** -> **Selection list**. In the dialog box that will open after define the list name (in this case the Interests), and add the elements by clicking on the button.



Checkbox: click on **Form** -> **Form field** -> and in the field Field type select Checkbox and define the settings to your liking. If it is necessary to add more checkboxes, repeat the process for each checkbox.

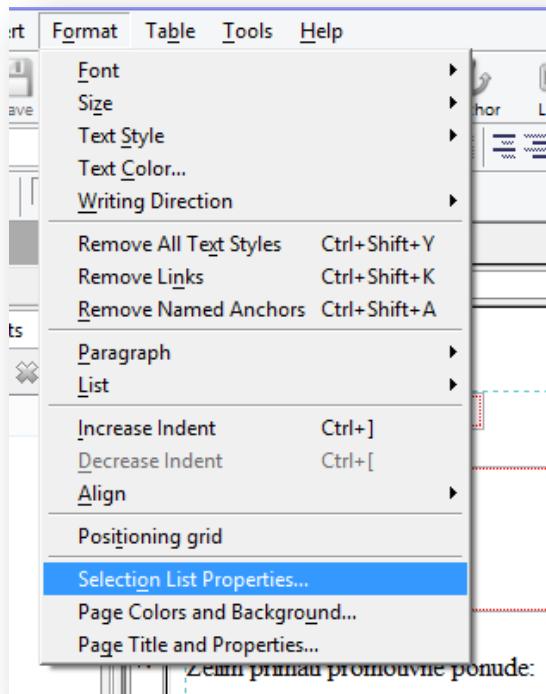


Radio button : select **Form -> Form field -> Radio button**. Define properties and click OK. If you need to add more radio buttons repeat the process for each. The characteristic of a radio button, unlike the checkbox, is that we can only highlight one at a time.
The image below shows, for example, a contact form:

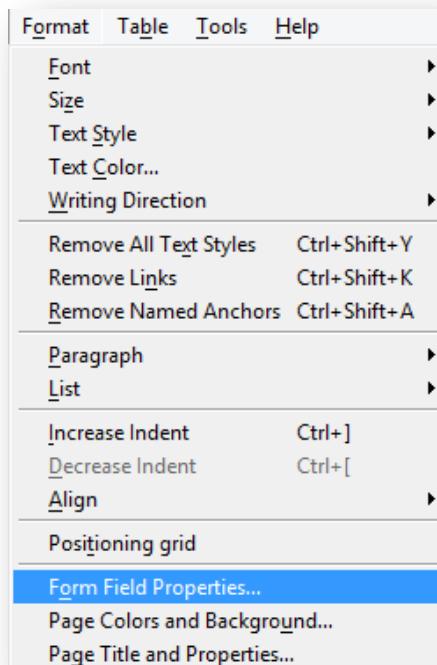
Kontakt forma
Ime:
Komentar:
Želim primati promotivne ponude:
Spol:
 Muško
 Žensko
Interesi: Muzika

4.2.4. Set, modify form field properties: text field, drop-down, check box, radio button.

To change the settings of drop-down element highlight it and select **Format -> Selection List Properties**.



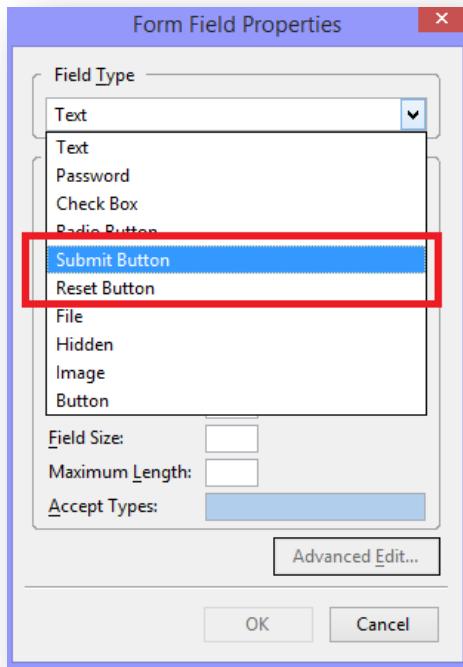
To change text fields settings, checkbox and radio button select the desired element and go to **Format -> Form Field Properties**.



In both cases, the same form will open as when adding fields where we then could make the modification.

4.2.6.Add, remove, submit, reset buttons.

Go to Form -> Form Field and select under the Field type the submit or reset button.



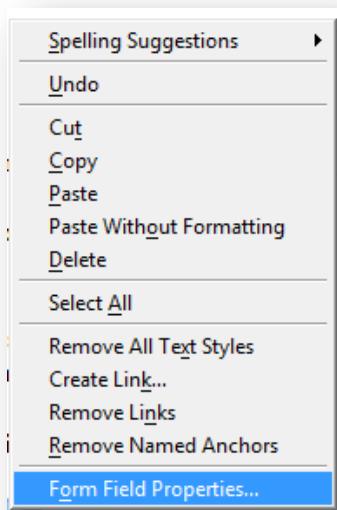
Once we click on a Submit button, it's task is to forward entered information.

Reset button cancels everything entered into elements in the form.

To remove the mentioned fields, we only need to mark them and click DELETE.

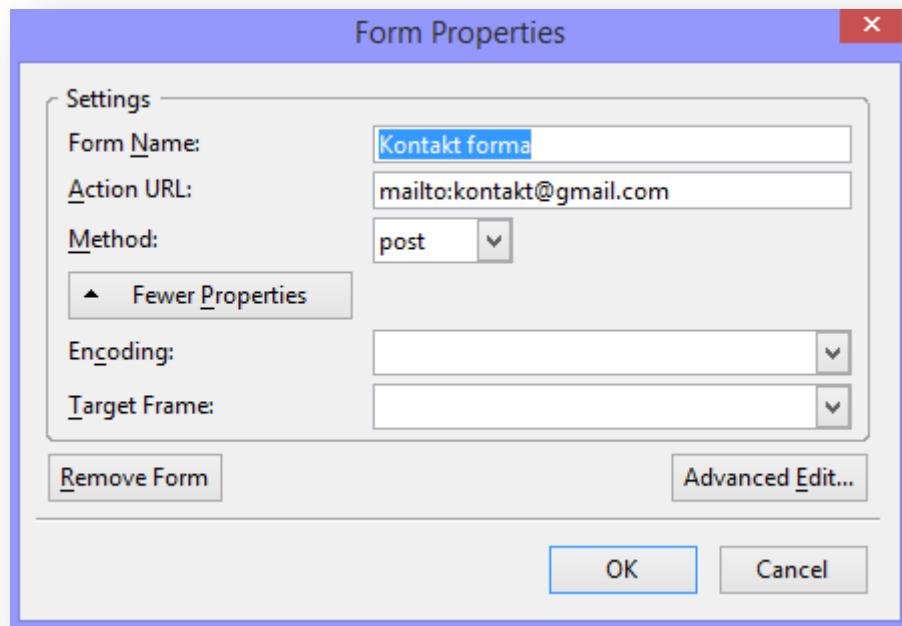
4.2.7. Set, modify form action to send form output by email.

Select the desired button, right-click the mouse and select **Form Field Properties**.



4.2.7 Set, modify form action to send form output by email

These settings are defined in the first step of creating forms (form name, address...). If you wish to modify them, click anywhere within the form, and right-click the mouse and select **Form Properties**.



5. STYLES

5.1 CSS Concepts

5.1.1 Understand the term **Cascading Style Sheets (CSS)**, their use and benefits.

We use CSS to edit the HTML document's style. It is possible to define elements layout through HTML itself, but the recommendation is to separate the elements definition from the layout definition.

- 5.1.2** The main advantage of CSS is that it can define the style for all elements in one spot, for example, it is possible to define in one spot the background color for all website pages, while with HTML we need to define it for each site separately. Other advantages of using CSS are faster uploading, easier editing, faster development and greater control over the layout. **Recognize the main approaches to applying styles: inline, internal, external.**

External approach: in this approach CSS definitions are located outside the HTML document. This approach makes it possible to separate completely the page content from the layout itself. CSS files are files that contain only CSS definitions and have the extension " CSS ", for example mySite.css.

To apply styles listed in a CSS file to an HTML document it is necessary to link them, and we do this by including a CSS file in the `<head>` section of an HTML document.

```
<head>
  <title> Web design </title>
  <link rel="stylesheet" type="text/css" href="myStyle.css"/>
</head>
```

It is necessary to repeat the procedure for each page within a web page.

Internal approach: in this case the CSS definitions are not within another file, but are within the HTML file. This way, we only define the specific page style with added CSS definition. We may use this for example when we only want to specify a particular style for only one page. So, all other websites would include external CSS file, in a given page CSS would be defined within.

To define an internal style , style rules must be added in `<head>` section within the `<style>` tag .

The above example will define, that for the web page to which body this definition is added, it will have a red background color.

Inline: in this approach we define the style attribute within the element tags to which we want to apply a specific style.

`<p style = "color: red ; "> This is a paragraph . < / p >`

In this case, only the color of this paragraph would be red.

We do not recommended this approach since it loses the above-mentioned benefits.



5.1.3 Understand the structure of a CSS rule: selector and declaration (property, value).

- Selector: this is the HTML element that we need to apply to a style
- Declaration: is the style that we want to apply to a certain element.

Each declaration consists of 2 parts:

- Property: we use this attribute to add value (e.g., , background color)
- Value: the value that we assign to an attribute.

Any declaration must be located within curly brackets and must end with „;“.

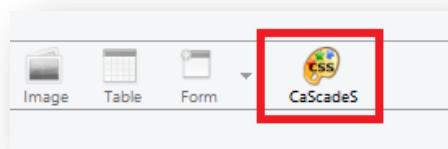
Therefore, the rule that defines that the background color of an HTML document body should be green would look like this:

```
body {background - color: green ; }
```

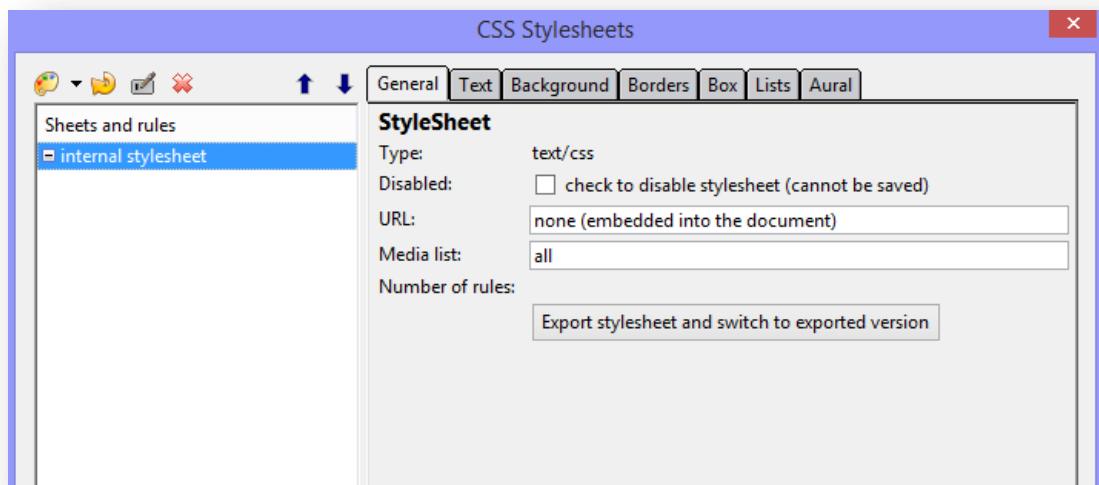
5.2 Using CSS

5.2.1 Create, save a new CSS file.

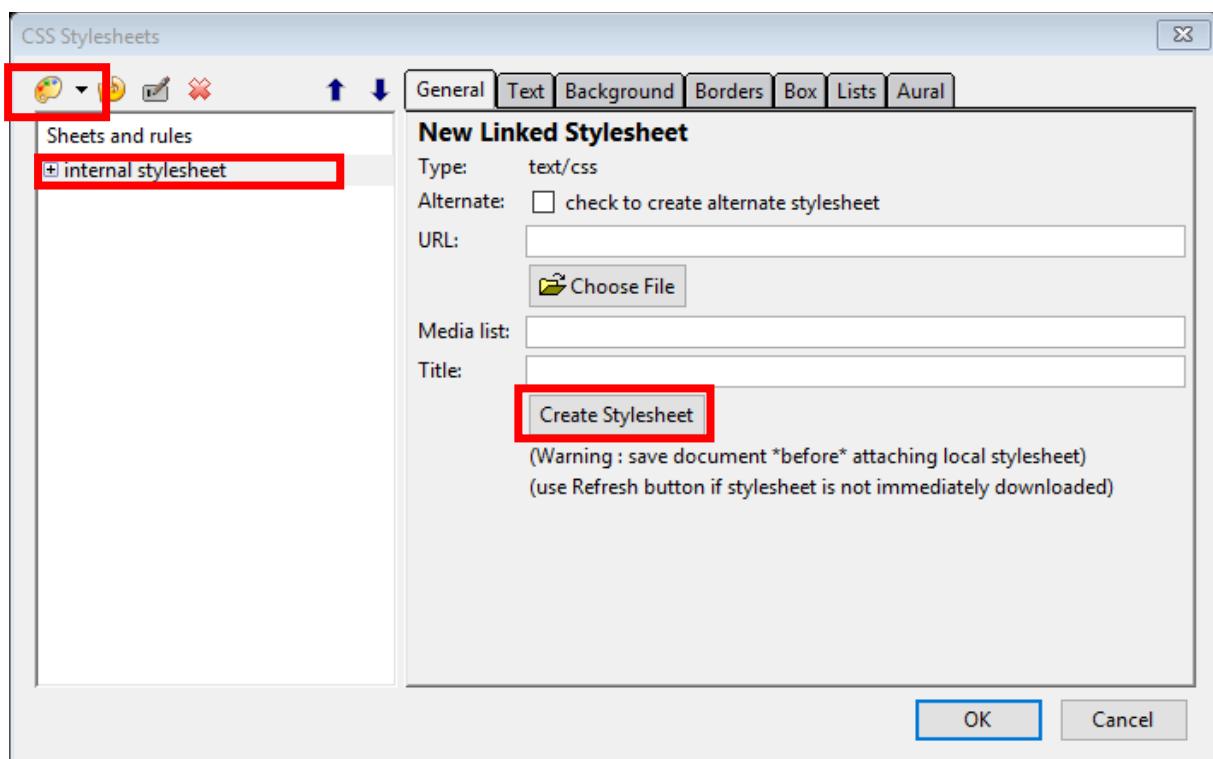
Click on the **CSS** icon on the toolbar



It will open a dialog box where we then need to do the following steps



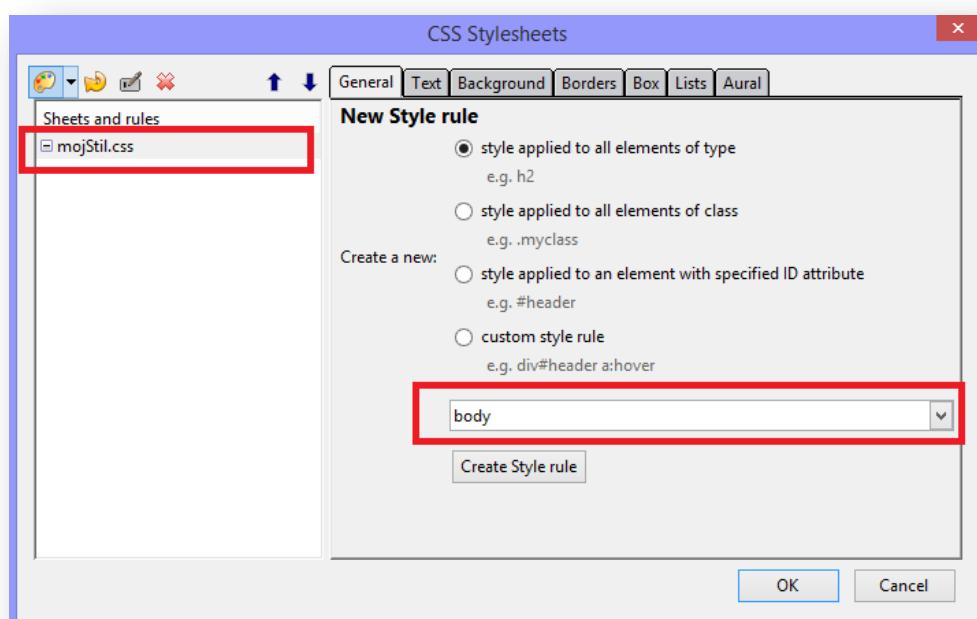
- Click on " internal stylesheet " in **Sheets and Rules** section
- Then click on palette in upper left corner and select **Linked stylesheet**
- Click on **Create stylesheet**



- Click again on "internal stylesheet" in **Sheets and rules** section
- Click on **Export stylesheet** and switch to exported version.
- Give the file a name and select **.css** extension
- Click on **Save**.

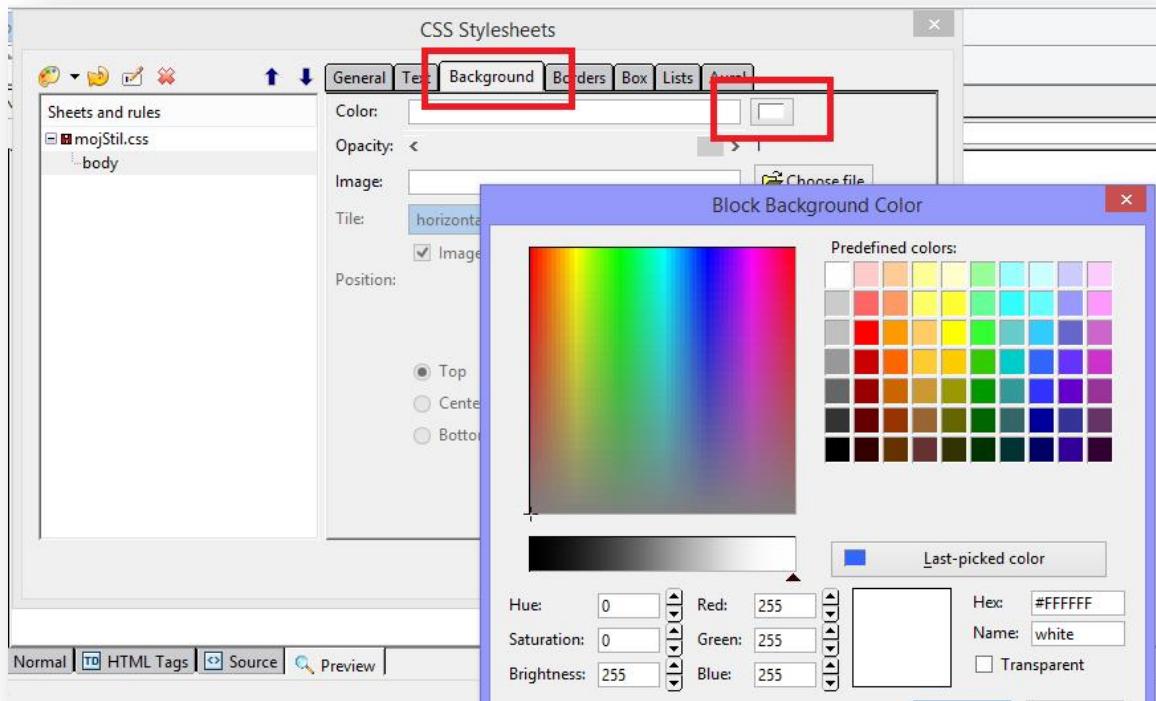
5.2.2 Create, modify CSS rules: color, background, font.

Click on CSS icon in the toolbar and then select a file. To demonstrate functionality we selected the body element.

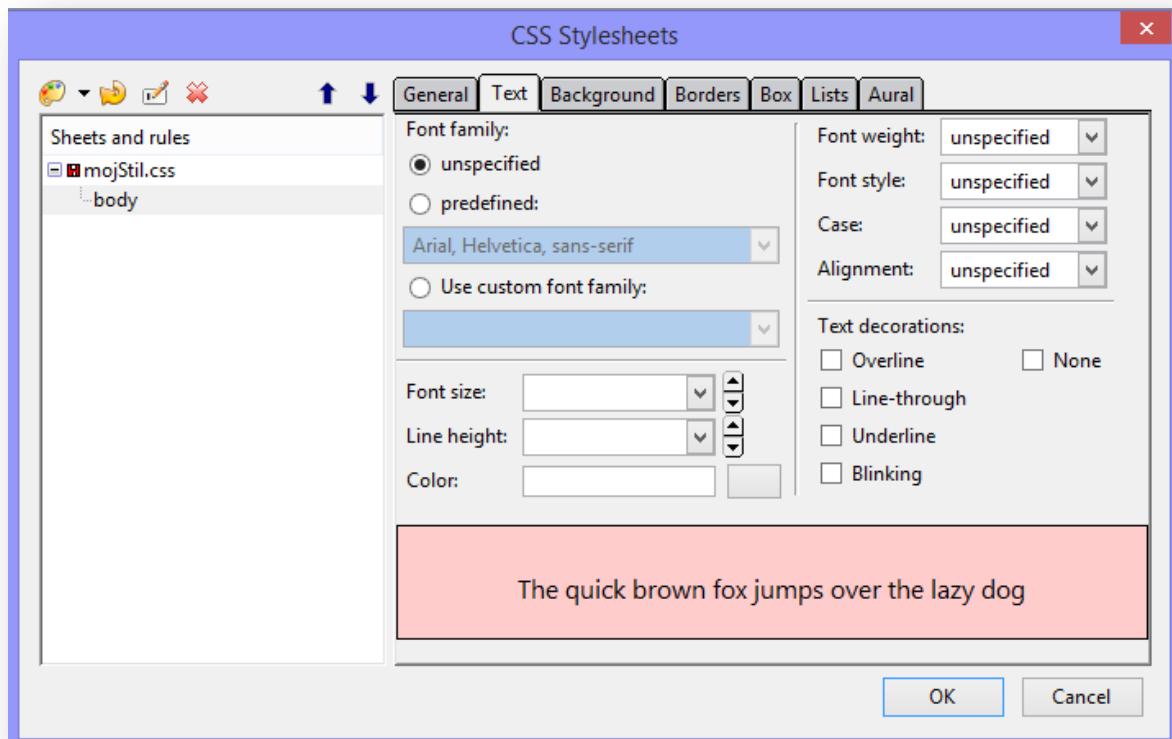


To define settings click on Create Style Rule.

To select the background color click on **Background** and then on the box next to **Color**, which will open a color menu.



To define the font click on **Text** window where you can then select desired settings.



Once you have defined all settings, click on **OK**.



5.2.3 Attach an external CCS to a web page

To apply the defined styles to an HTML document, it is necessary to define a <head> element to the CSS file containing styles definitions.

```
<head>
  <title></title>
  <link rel="stylesheet" href="mojStil.css" type="text/css">
</head>
```



6. PREPARE UPLOAD

6.1. Check

6.1.1. Identify and fix broken links in a website

An important step to do once we finish the website is to check all the hyperlinks on the page so that, for example, it would not happen that we click on a hyperlink that leads to nowhere, or perhaps leads to the wrong spot.

6.1.2 Recognize a correct use of content on a web page: including a last updated date, details of software required to open, view files, ensuring compatibility of content with other browsers

The next important step before publishing the website, is to check if we have included all important information such as information when the page has been updated last (users have more trust in websites that are regularly updated).

Specify what is required for all web page elements that might, for example, require some additional software to use/open them (for example for pdf documents note that it is necessary to have Adobe Reader).

It is certainly important to check how the page looks like in different browsers to ensure that the appearance is everywhere the same. If for any reason you are not able to adapt the website to a particular browser point out on the website that it is recommended to use perhaps a different browser to make the user experience complete. We have previously mentioned that still not all browsers support all available options, so it can happen that, for example, we can't display some format in some web browsers.

6.1.3 Spell check and make necessary changes

Another thing that is certainly important is to check for spelling errors since they can negatively affect the user. KompoZer has a built in option for spell check that we can run by going on Edit -> Check Spelling and simply continue using it like any other spell checker.

6.2 Publishing

6.2.1. Understand the process of uploading, downloading a website to and from a web server

Once we create a web page it should be stored in a spot where it is available to general public. That is, it is necessary to publish it on the Internet.

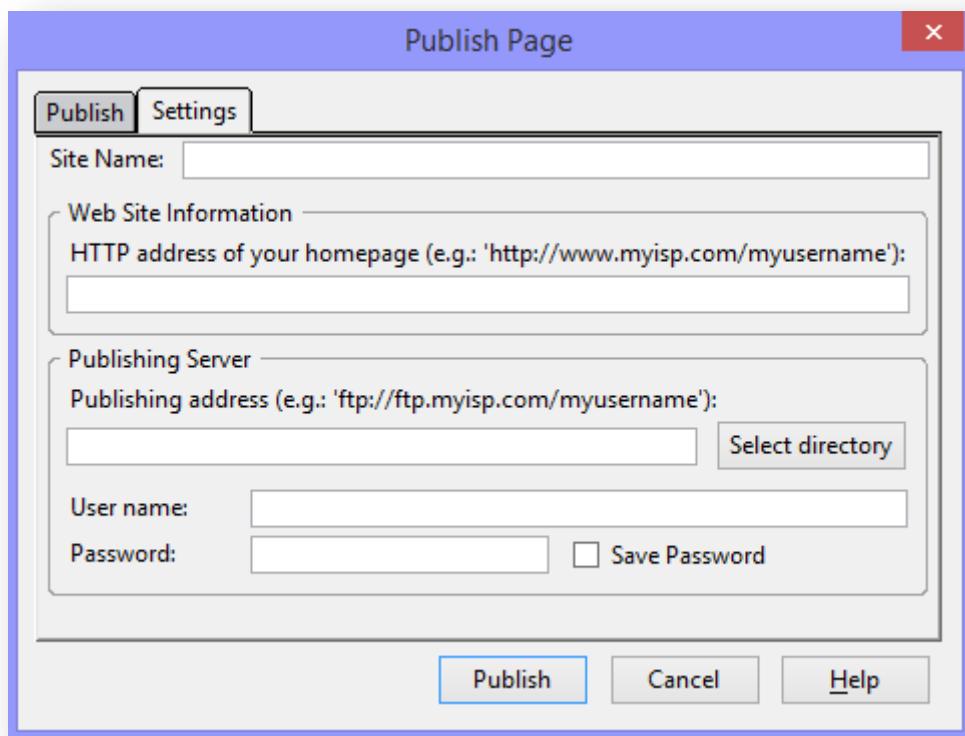
The process of uploading a web page on the server is based on the transfer of files on the Web hosting server. In the introduction we talk about choosing a domain name and a web host. Once we upload a web page to the server, it connects to a URL and becomes visible on the Internet.



When users want to access your site, they first need to enter the URL. Once they click on ENTER, a copy of your page is downloaded from the server to their computer and they can view the page.

6.2.2 Upload, download a website to and from a server

Once you reserve a hosting space, you can upload the web page to a web server. Go to **File -> Publish**, and then enter the required information in the dialogue box. The requested information you will receive after registering a domain and reserving a web space.



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