

INFORMATION AND COMPUTER LITERACY

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In today's digitalized world, information literacy is a key skill that enables the effective and confident use of technology. In this chapter we will explore all the aspects of information and computer literacy that are indispensable for the contemporary life. We will start with basic steps such as using and customizing your desktop, working with the taskbar and icons, and managing files and folders. We will also learn how to use explorer, lock, and compress files and manage various useful applications. We will continue with the more advanced use of Word and Excel. We will look in detail at creating and formatting text, using cross-references, creating tables, using functions and entering graphs. In addition, we will explore user communication, the use of different internet browsers, and online communication applications such as Microsoft Teams and Zoom.

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1 Information and computer literacy

In today's rapidly changing world, where computer technology has become an indispensable part of everyday life, it is crucial to understand the concepts of information and computer literacy. This chapter is designed to provide you with a comprehensive insight into the world of digital skills that are invaluable in modern society.

The content of the chapter goes beyond technical aspects. By introducing you to the basics of computer systems management, we aim to encourage critical thinking and the development of analytical skills. We will discuss the importance of information, how to search for and evaluate it, and how to use it to make better decisions (Fraillon et al., 2020; Gerick et al., 2017; Hignite et al., 2009; Hoffman & Blake, 2003; Kubiak, 2007; Williams, 2003).

Customizing and using your desktop is the first step on the path to computer literacy. This will increase your productivity and efficiency. You will learn how to properly organize your desktop, use the taskbar, and manage files and folders effectively. You will also explore advanced techniques such as locking files for increased security and compressing files to better optimize disk space.

Working with data is a key skill in the digital world. You will learn not only how to use tools such as Microsoft Word and Excel but also how to create expressive and professionally designed documents. You will delve into creating and editing text and tables, using functions to automate tasks, and inserting graphs to visualize data (*Computer Literacy: Using Microsoft Office*, 2020; HEC, 2012; Mrhar, 2016).

In the online world, you will explore the use of the Internet, acquiring skills for effective browsing, searching for information, and using online services safely. Basic tips for protecting your privacy and recognizing online threats will be an important part of this unit (*Computer Literacy: Using Microsoft Office*, 2020; HEC, 2012; Mrhar, 2016).

A key component of modern communication is the use of email, which includes all aspects of creating and using email accounts, composing messages, replying to and forwarding them, as well as observing appropriate email etiquette. You will also

focus on changing and updating email account settings in Outlook and Gmail, which includes customizing and managing your email account.

You will also learn how to use the Google Sheets web application, a great tool for editing, analyzing, and sharing spreadsheets. You will explore different options for entering, editing, and formatting data, and learn to use functions and formulas to automate calculations. You will also learn about charting capabilities, while highlighting the benefits of real-time collaboration, which facilitates teamwork and group decision-making.

Finally, you will focus on remote communication, which has become indispensable in the modern work environment. You will learn how to use tools such as Microsoft Teams and Zoom, which allow you to organize meetings, video conferences, and collaborate remotely. You will explore their features for teamwork, screen sharing, chatting and project management, and learn how to effectively use these platforms to successfully collaborate virtually and connect with other team members regardless of geographical distance.

Our goal is for you to become a more confident and skilled computer user who understands both the technical aspects and the importance of information and computer literacy in the modern world.

2 Desktop customization and usage

2.1 Taskbar

The taskbar allows you to quickly launch programs, open documents, and perform the most important settings.

On the far left of the taskbar (Figure 1) is the “Start” button, which you will learn more about in the next subsection. The icons displayed are those for quick program launches. These icons are followed by buttons for running programs, and on the far right of the bar you will see the notification icons (Figure 2).

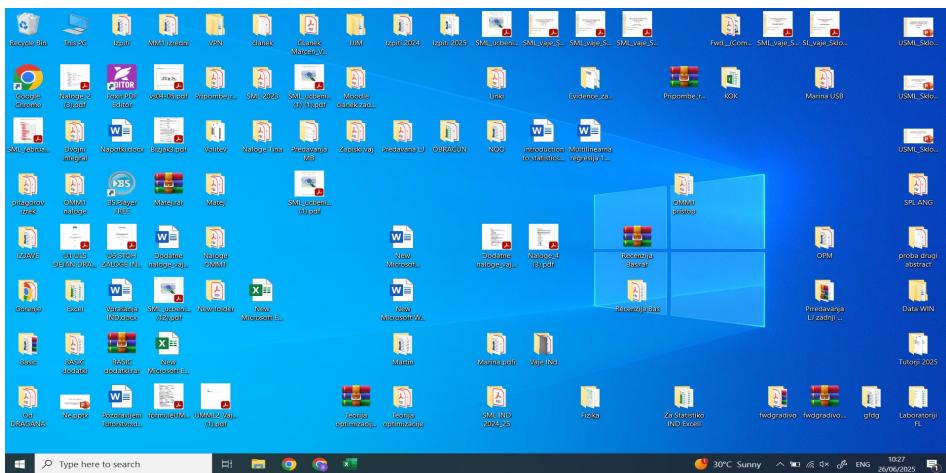


Figure 1: Left side of the taskbar

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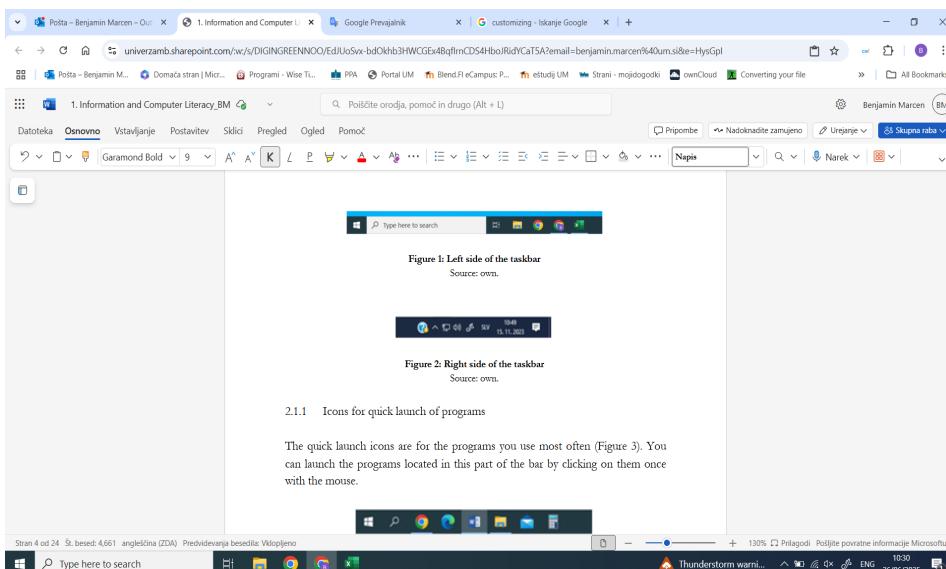


Figure 2: Right side of the taskbar

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2.1.1 Icons for quick launch of programs

The quick launch icons are for the programs you use most often (Figure 3). You can launch the programs located in this part of the bar by clicking on them once with the mouse.



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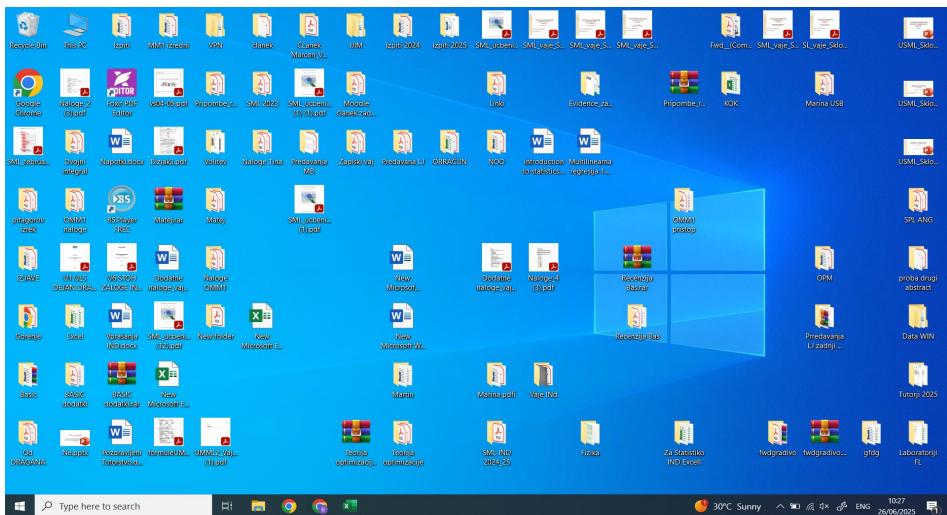


Figure 3: Icons for quick launch of programs

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2.1.2 Launching a program from the Start menu

There are several ways to launch programs from the “Start” menu. If the program you want to launch is listed at the top of the menu among the most frequently used programs, you can simply click on it once with the mouse.

2.1.3 Starting a program from the alphabetical program list

All the programs installed on your computer are listed alphabetically at the bottom of the “Start” menu. If the alphabetical list of programs is not visible, click *All Apps* on the “Start” menu.

The most common way to launch programs is as follows:

- the easiest way to find a program icon is to click the *Start* button and type the first few letters of the program name,
- When the “Start” menu displays installed programs that match your search, you launch the desired program by clicking on its icon.

2.1.4 Adding a program to the Start menu

You can also pin your most frequently used programs to the right part of the start menu:

- click the “Start” button (1),
- find the desired program and click on it with the left mouse button (2),
- hold down the mouse button and drag the program icon to the right part of the menu. If you drag the icon from the area of existing groups, you must enter the name of the new group (3).

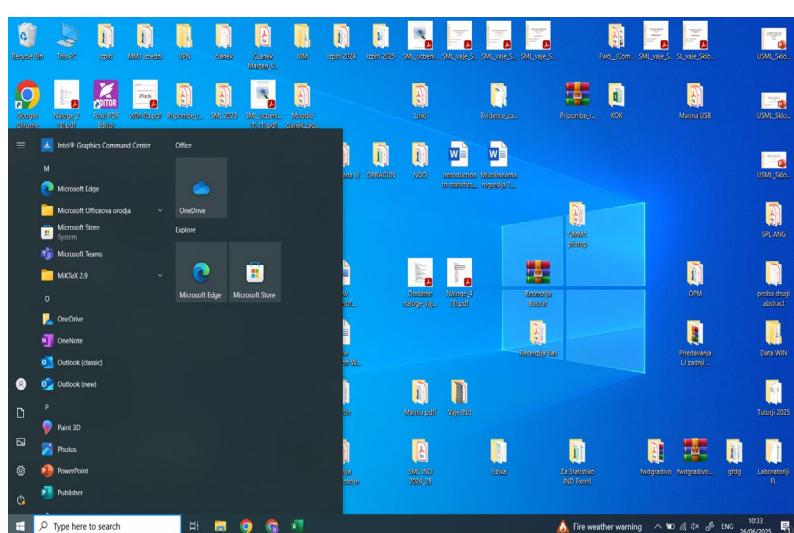


Figure 4: Icons in the Start menu

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2.1.5 Adding a program to Quick Launch

Programs that you use frequently are usually placed at the bottom of your computer screen in the taskbar.

The easiest way to add a program to the taskbar is to open the program. In the taskbar, hover over the icon of the selected program, right-click on it and select the command “Pin this program to the taskbar”.

2.1.6 Opening recently used documents via jump lists

Right-click on the program icon in the taskbar. In the pop-up list, click on the document you want to open.

3 Working with data

Right-click on the program icon in the taskbar. In the pop-up list, click on the document you want to open.

3.1 Explorer

There is an Explorer icon on the taskbar. Clicking on this icon opens a window with all the drives on your computer that you use to manipulate data, such as copying, moving, deleting, and renaming. This program area is divided into two windows. The left window contains shortcuts, and the right window contains the contents of the selected folder. To open the contents of the shortcuts, click on the icon in the left window. You can open drives and folders in the right window by double-clicking on them.

3.2 Search for files and folders using Explorer

You often search for folders with data, images, or old documents that are not in your recent documents. Use File Explorer to do this.

Click the File Explorer button and select a search area in the left pane. You enter your search text in the search field. This displays a new toolbar for more precise searches. After you enter your search term, you see the first results on the right side of the window. Double-clicking the result icon opens the search item.

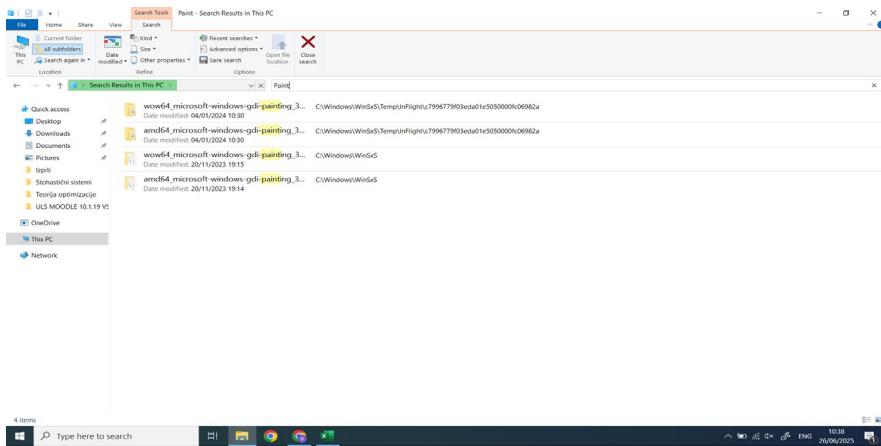


Figure 5: Explorer

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4 Compressing and decompressing files

Files that are compressed take up less space and are easier to transfer to other computers than uncompressed files. In Windows, you can work with compressed files and folders in the same way as you work with uncompressed files. Combining multiple files into a single compressed folder makes it easier to share a whole group of files with others.

4.1 Compressing a file or folder in a WIN10 environment

- Compressing files or folders:
 - find the file or folder you want to compress,
 - press and hold (or right-click) the file or folder, select »Send to«, and then »Compressed folder«,

- a new folder with the same name and the compressed folder will be created in the same location. To change the name, press and hold (or right-click) the folder, select »Rename«, and enter a new name.
- Expanding (extracting) files from a compressed folder:
 - Find the compressed folder from which you want to extract files or folders,
 - do one of the following:
 - To extract a single file or folder, open the compressed folder, then drag the file or folder from the compressed folder to a new location,
 - To extract the entire contents of the compressed folder, press and hold (or right-click) the folder, select Extract all, and follow the instructions.

Notes:

- If you want to add files or folders to an already created compressed folder, simply drag them into it,
- When compressing encrypted files, the files may be decrypted when decompressed, which could expose personal or sensitive information. Therefore, it is best to avoid compressing encrypted files,
- Some file types, such as JPEG images, are already highly compressed. Storing them in a compressed folder will not significantly reduce the overall size of the folder.

4.2 How to compress files using WinZip and WinRAR

Files can be compressed into various formats such as: .ZIP, .RAR, .TAR.GZ and others. The formats commonly used for uploading to the server are: .ZIP, .TAR.GZ or .BZ2. Compressing files can be done with various programs such as: WinZip, WinRAR, or 7-Zip. Below are instructions on how to compress files with the aforementioned programs:

- WINZIP:
 - Select the desired files, right-click on them and select »WinZip -> Add to Zip file«.

- In the "File name" window, you can change the name of the .ZIP file, and in the "Target" field, specify the location where the file will be saved.
- Click the "Add" button and wait for the compression process to be completed.
- WINRAR (Figure 6):
 - Select the desired files, right-click on them and select »Add to archive ...«.
 - Select the desired archive format, for example .ZIP or .RAR, click the "OK" button and wait for the compression process to be completed.

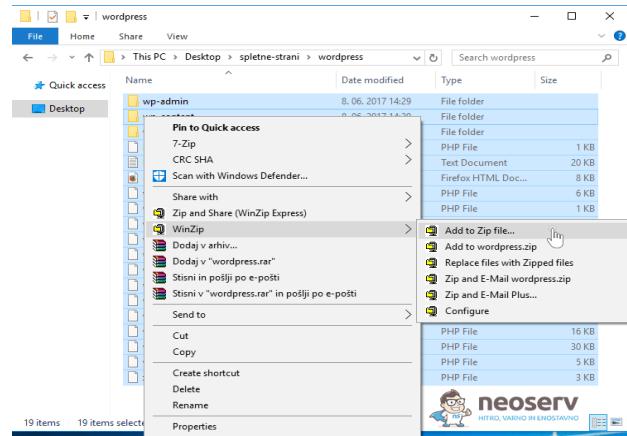


Figure 6: WINRAR

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5 Text editing

In this section, we focus on Microsoft Word, which is part of a family of word processing programs. This program allows you to create, edit, format, and print text. Newer versions of Word also allow you to display graphs, insert images, create tables, perform calculations, create books, and even correct grammatical errors.

5.1 Quick page numbering

Open the "Insert" menu and click the "Page Number" button. Select the placement of numbers at the top, bottom, or along the edges of the page from the list (Figure 7).

In the additional menu, select one of the existing templates. To exit the document footer, double-click on the document surface or select the "Close Header and Footer" button in the right part of the contextual menu.

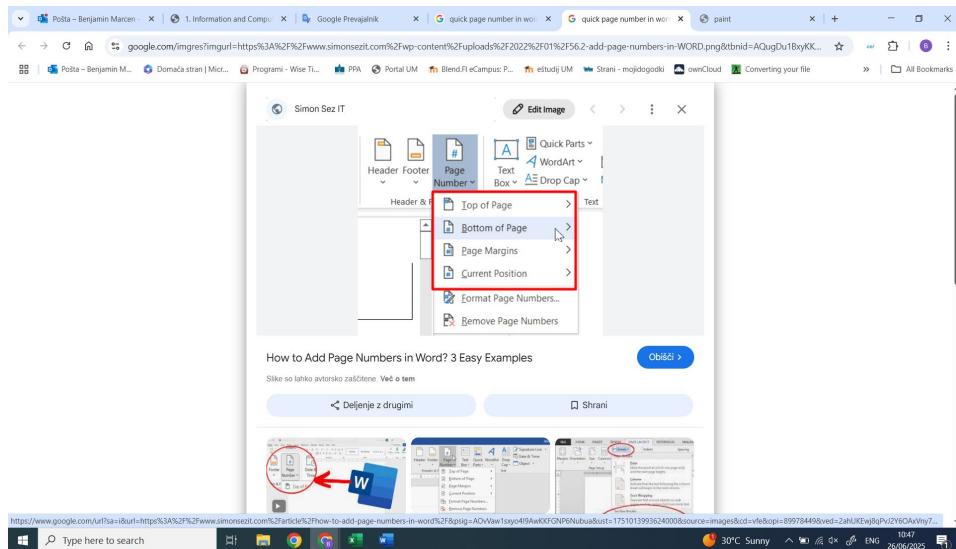


Figure 7: Page numbering

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5.2 Applying Styles

You can format text directly by specifying character properties, paragraphs, etc. However, a much more elegant solution is to use styles. Styles make formatting easier because you don't have to manually change the text properties each time you format it with a style. This happens automatically.

Select the text you want to format in style. In the "Basic" menu, in the "Styles" area, select the appropriate style (Figure 8). The text will then be automatically formatted according to the characteristics of the selected style.

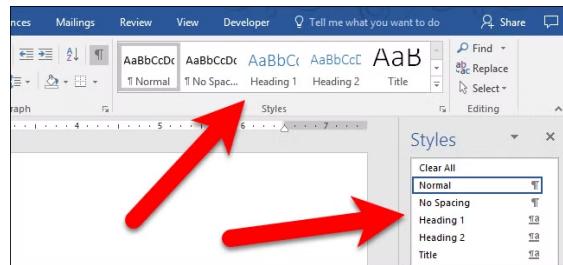


Figure 8: Applying Styles

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5.3 Paragraph marking and numbering

Paragraph numbering and marking are accessible via the "Marks" and "Numbering" commands in the "Basic" menu and allow you to insert numerical and other markings before paragraphs, which is often used in enumeration.

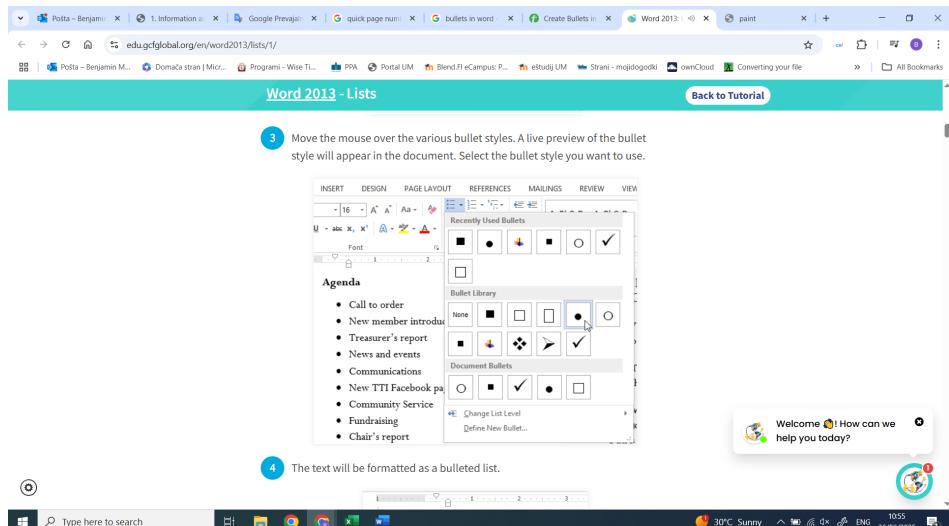


Figure 9: Paragraph marking

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First, you write the paragraphs that you want to add numbers or symbols to. Then mark these paragraphs. So, if you want to number paragraphs, you click on a button similar to the one you click to put symbols in front of them.

Additional marking and numbering options are displayed by clicking on the arrow next to the selected button (Figure 9).

5.4 Tables

You can edit and arrange numerical and other data in Word in tables that consist of columns and rows. This way of displaying data provides better clarity. You can also perform simple calculations on tables.

5.4.1 Inserting tables manually

To manually insert a table and create a larger number of cells, follow these steps; first click on the "Table" button, then on the "Insert Table" command. In the opened dialog box, specify the desired number of columns and rows and press Enter to confirm your selection (Figure 10).

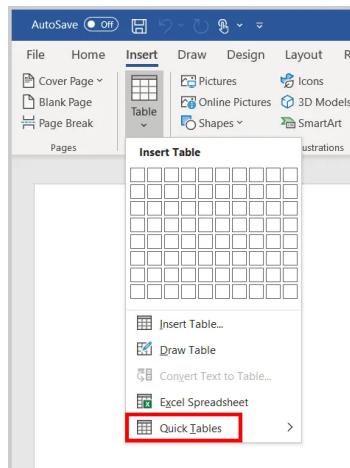


Figure 10: Inserting tables

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5.4.2 Calculation in tables

Word allows you to perform simple calculation operations on tables. The most common ones are column summation and row summation. *Calculating the sum of numbers in a column:*

- Place yourself in the cell in which you want to display the sum of the values of all cells above it. Open the Layout contextual tab.
- Click the Formula button to open a dialog box.
- If the cell in which you want to display the sum is at the bottom of the table, Word suggests that you enter the sum formula = SUM(ABOVE) in it.
- Click the OK button or press Enter. The sum appears in the cell.

5.4.3 Updating values in formulas

In smaller companies, Word is often used to write contracts that contain information such as service prices, payment methods, taxes, and the like. For this purpose, they prepare a general contract, in which they then simply change individual values written in table cells. To avoid re-entering the same equations, you can simply refresh the results when the values change.

The process of refreshing values in the entire document looks like this: enter new values in the table cells, highlight the entire document, and press the F9 key, which refreshes the values of all fields in the document.

5.4.4 Using the Google Sheets app

Google Sheets (Figure 11) is a web-based spreadsheet editing and sharing application that lets you create, edit, and work with spreadsheets in real time. It's designed for easy sharing and collaboration between users, and it also features automatic cloud storage, so you can access your spreadsheets anytime, anywhere online. With built-in calculation functions, graphing tools, and the ability to import data, Google Sheets is a powerful tool for managing and analyzing data.

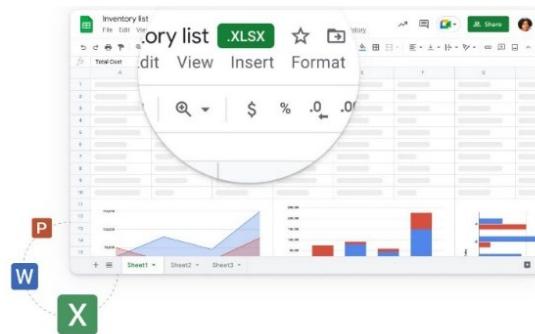


Figure 11: Google Sheets app

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6 Updating device drivers in Windows 10

In this section, you'll focus on the importance of device drivers on Windows computers. You'll explore in more detail the process of installing, disabling, removing, and updating device drivers, and how to take steps to fix various issues, such as Windows startup problems and driver-related problems, such as no sound or no network connection.

The Device Manager in Windows (Figure 12) allows you to perform actions such as: rolling back a driver, reinstalling a driver, updating a driver, etc.:

- press the Windows + R key combination, type "devmgmt.msc" and click "OK",
- this will open the Device Manager and display a list of all installed drivers,
- now find the desired driver and right-click on it,
- you will see several options:
 - "Update software drivers".
 - "Disable device".
 - "Uninstall device drivers".
 - "Scan for hardware changes".
 - "Properties".

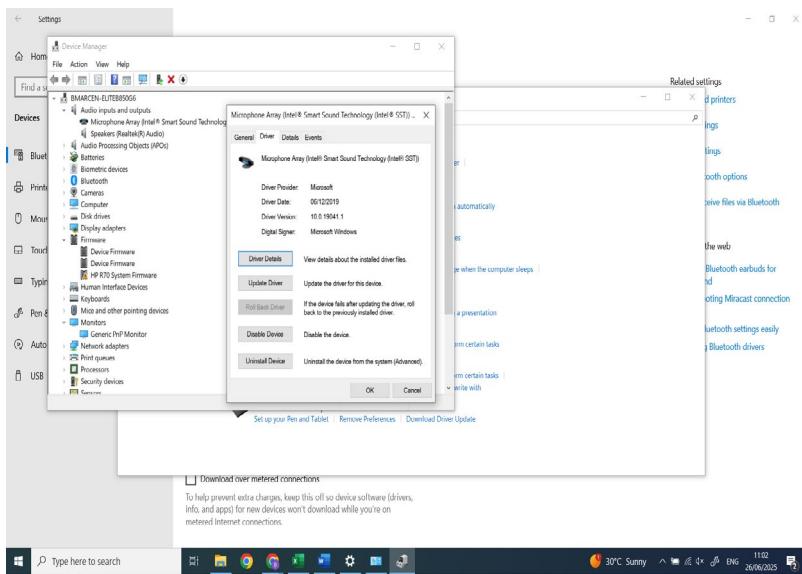


Figure 12: Device Manager

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To update a device driver (Figure 13), right-click on the problematic driver (for example: "View Driver") and select "Update Driver". A wizard will open and give you two options:

- to search the web automatically,
- to browse/search your computer for driver software.

Select and click the desired option to continue. If you select "Search the Web Automatically", Windows will check if the latest driver software is available. If it finds one, it will download and install it. After that, restart Windows for the changes to take effect.

If the drivers are not found, we recommend that you do it yourself. Visit the device manufacturer's website (for graphics drivers, such as AMD, Intel, NVidia) and download the latest driver available. Select the driver you downloaded from the manufacturer's website and follow the on-screen instructions.



Figure 13: Updating drivers

Source: own.

6.1 Reinstalling the device driver

Open Device Manager. Right-click on the problematic driver and select "Uninstall Device". Now restart Windows to completely remove the driver from the device. The next time you start Windows, it will automatically install the driver software. Alternatively, you can visit the device manufacturer's website and download the latest driver version available.

6.2 Driver Rollback, Disable/Enable Drivers

This option is available if you recently upgraded your driver software and are experiencing problems. If the problem started after a Windows update or a recent driver update, you can perform the Roll Back option. This will roll back the current driver to the previous version.

Open Device Manager. Right-click on the problematic driver selection properties. A new pop-up window will open here. Move to the "Driver" tab. Here you will see several options. Select "Update Driver": this will launch the Hardware Update Wizard. Select "Roll Back Driver": this will remove the last updated driver and revert your configuration to the previous version. If you find that the device is failing after updating the driver, you may need to roll back the driver. "Disable (or Enable) Driver": this will disable the driver until you enable it again. "Uninstall Driver": this will completely remove the driver files and registry settings for the selected hardware.

7 Internet use

The Internet is a global network that connects many computer networks, creating a vast worldwide network. Users can send and receive information, watch videos, listen to radio stations from around the world, order products, send e-mails, copy programs, and perform many other activities there:

- **Email:** if we want to communicate with another computer or user in the vast Internet community, we need to know their address. Email addresses consist of two parts: the user's name and the domain name. The two parts of the address are separated by the @ sign, for example: janez@kranjskinet.si.
- **Web URLs:** to connect to other computers on the World Wide Web, you use URLs (Uniform Resource Locators), which are made up of three parts.
 - **Protocol:** the beginning of the address specifies the protocol that defines how data is transferred from the server. The http:// protocol connects us to other websites and is the most commonly used.
 - **Server address:** follows the domain name, usually written in words (e.g. www.google.com). Web server names often start with the prefix www.
 - **Data path:** Since there are many web pages on the servers, we need to use the full path to access each page. For example, if we want to view the document headings.htm, stored in the directory "data", the last part of the address will look like this: /data/headings.htm. The full URL of our fictional document would therefore be something like this: http://digingreen.com/data/headings.htm

7.1 Some basic tips for safe internet browsing

You can recognize a secure connection on the website by the padlock symbol. You can obtain additional information about security by clicking on the website icon (Figure 14).

Be aware that malicious actors sometimes copy a company's entire website and place it at a different address that only varies slightly from the original (e.g., instead of www.google.si, they use www.goooogle.si). Only choose larger companies for online

purchases, as security standards in large corporations are often subject to strict controls.

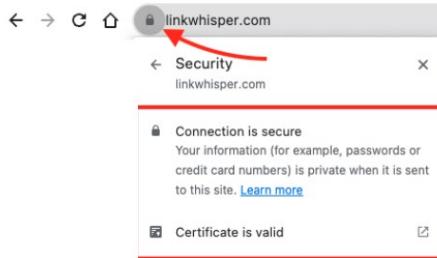


Figure 14: Website identification

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Give priority to cash delivery options if possible. Never reveal your credit card "PIN code", as it is unnecessary for online purchases, despite possible persuasions to the contrary.

For e-commerce, choose only providers that operate via digital signatures, often with a smart card with a public key. When logging into online services from other computers, disable saving passwords in login forms.

7.2 Using email

E-mail is the exchange of computer messages or electronic letters that can be sent to all users connected to the Internet. The distance between users is not important, since electronic messages, with the appropriate connection, are transmitted around the world in a few seconds.

Emails are not limited to a simple string of letters and numbers; they also allow for complex formatting and the attachment of additional data, such as images or other files, which are then sent to the recipient along with the message.

An email address consists of the user's name and the computer address, separated by the @ sign. An example of an address is, for example, afna.gunca@siol.net.

In this chapter, you will focus primarily on the basics of using the Gmail web application (Figure 15), which is the most popular email program among users. Gmail will also be one of the topics you will learn about in more detail.

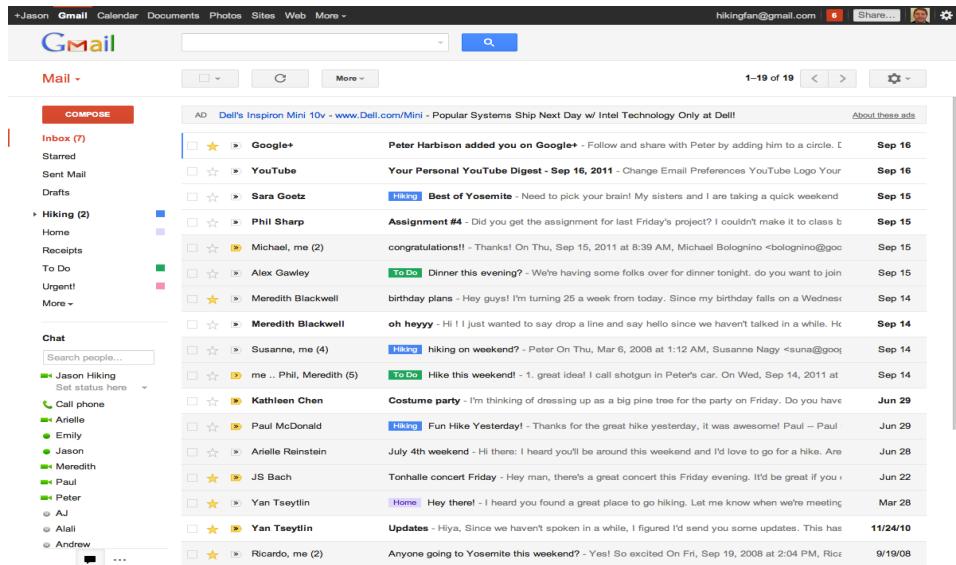


Figure 15: Gmail

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7.2.1 Sending messages

When writing any email message, you need to enter some basic information, including the subject of the message and the recipient's address. All email programs include the following fields:

- **To:** in this field, enter the email address of the recipient, i.e. the person to whom you want to send the letter.
- **Subject:** use this field to write the subject of the letter, which is optional.
- **Cc:** In the "Cc" field, enter the email addresses of other people who will receive a copy of the same letter. For example, if you enter pika.nogavicka@net.si, the letter will also be sent to this address, and the recipient will see a list of all the people who received a copy of the message.

- **Administrator (Bcc):** In the "Bcc" line, you write the address of the recipient who will receive a copy of the message, but this option is different from the previous one. None of the other recipients will know who else received the same letter, as these addresses are hidden.

7.2.2 Viruses and malicious codes

We have mentioned that e-mail is a common source of infection with viruses and other malicious codes. Therefore, it is always advisable to be careful.

Another common problem when using e-mail is so-called spam, which is unwanted mail of various forms. These are often annoying advertisements, and in some cases also harmful and malicious letters. When you receive such mail, there is one rule - mark it and click on the "Spam" button. From now on, all mail from this address will automatically be moved to the "Spam" inbox/folder. The most important thing is not to open spam attachments, as the data in them is often infected with viruses.

Customizing settings: Users often want to customize basic program settings. In the Gmail web client, this is done through the "Account Settings" command (Figure 16), which can be accessed by clicking the "Settings" button.

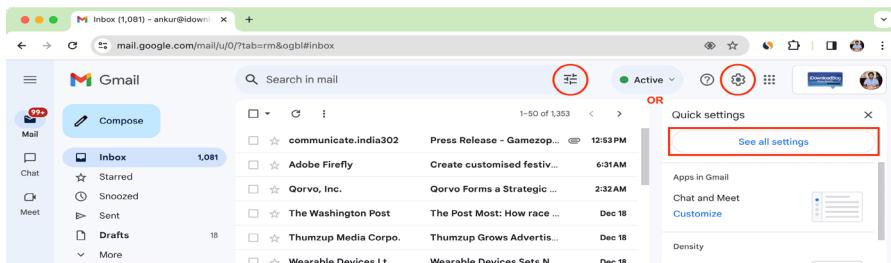


Figure 16: Gmail settings

Source: own.

A new web page appears where you can change and check hundreds of pieces of information (Figure 17).

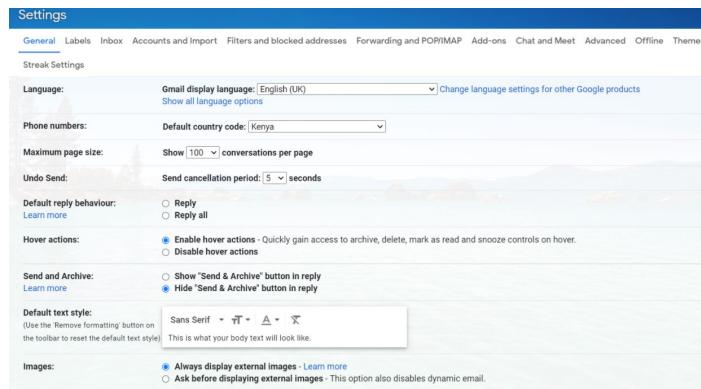


Figure 17: Additional Gmail settings

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7.2.3 Change or update email account settings in Outlook for Windows

Sometimes you need to change your email account settings. You can do this if you have a new password, if your email provider has asked you to change your settings, or if you are having problems sending and receiving email. You can make changes through the Windows Control Panel or from within Outlook.

Update or change your email settings in Outlook for Windows:

- Open Outlook and select "File".
- In the "Account Information" section, select the account you want to change from the drop-down list (Figure 18).
- Select "Account Settings" (Figure 19).
- Select the type of information you want to change:
 - account settings to add or remove accounts and change server settings,
 - account name and sync settings to update your account's friendly name and set the email sync period,
 - server settings to change your login information, including your password, server name, port, and authentication settings,
 - change profile to switch to a new profile,

- Manage profiles to add or remove profiles and change profile settings.
- The most common settings you will change are the server settings.
- Select either "Incoming Mail" or "Outgoing Mail" to change various server settings and update your email password as needed.

When you are finished updating your settings, select Next > Done.

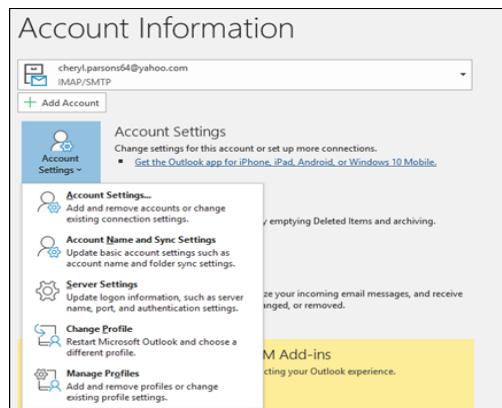


Figure 18: Account information

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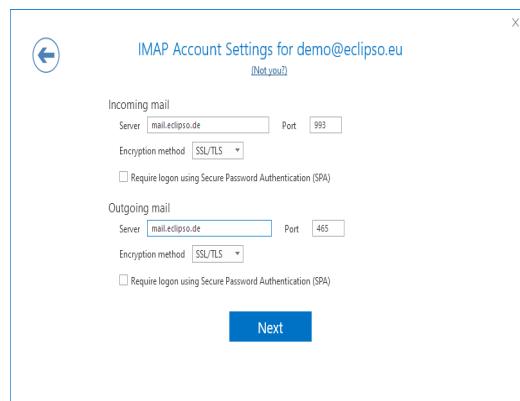


Figure 19: IMAP account settings

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8 Working with Microsoft Teams and Zoom

An overview of the basic and advanced features provided by MS Teams and Zoom. Microsoft Teams and Zoom are popular tools for online collaboration and virtual meetings. The following lists their basic features and instructions for use:

- Microsoft Teams (Figure 20):
 - Meetings and video conferencing: MS Teams allows you to create meetings where colleagues can meet in a virtual environment.
 - Messaging and Chatting: There is a built-in instant messaging system, group chat, and the ability to share files and screens.
 - Teamwork: Allows teams to collaborate on projects using shared folders, documents, and tasks.
 - Integration with other tools: Connection to other Microsoft tools such as: Word, Excel, and OneNote, enables seamless collaboration.
- Zoom (Figure 21):
 - Video Conferencing: Zoom offers easy creation and participation in video conferences, suitable for small meetings and larger events.
 - Screen Sharing: Allows for easy screen sharing, which is useful for presentations, training, or project collaboration.
 - Virtual Rooms: The ability to create virtual rooms for smaller groups where more personal collaboration can take place.
 - Zoom Webinars: Suitable for organizing online seminars and lectures with many participants.

Both tools also offer whiteboarding capabilities, meeting recording, scheduling integration, and other advanced features that enable effective virtual collaboration and communication. The choice depends on the needs and preferences of the individual or organization.



Figure 20: MS Teams

Source: own.



Figure 21: App Zoom

Source: own.

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