Networking
Unit 5

Agenda



Stage 01

Learning about networking and describing options

Stage 02

Learning Present Continuous in Active and Passive Voice

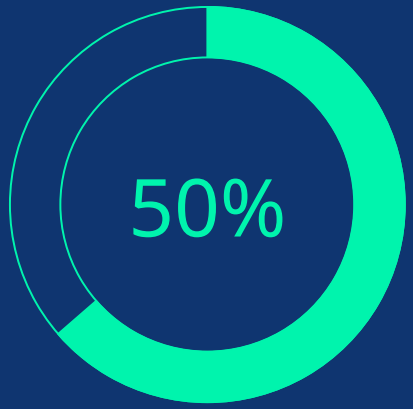
Stage 03

Reading for specific information

Stage 04

Listening for specific information

Revision of learned terms

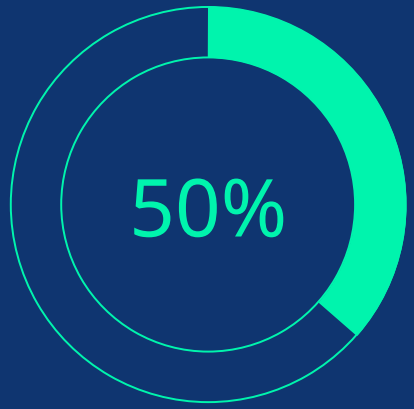


Team 1

01

02

Can you make up sentences?



Team 2

Conduct a survey “Find someone who…”. Fill in the tabl with your groupmates’ answers by asking them to answer the following questions

Name	Who traveled a lot	Who speaks multiple languages	Who has a unique or uncommon skill	Who is passionate about a hobby

Let’s discuss these questions

What are some components of a computer network?

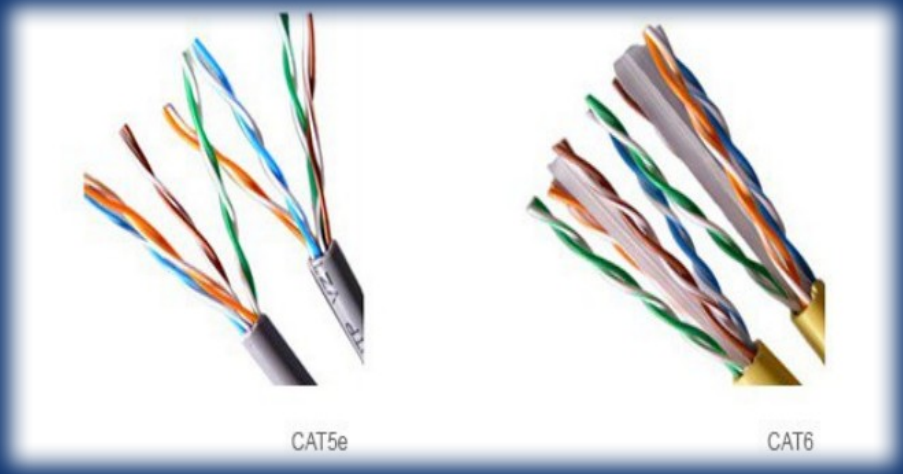
01

How does a computer network help a business?

02



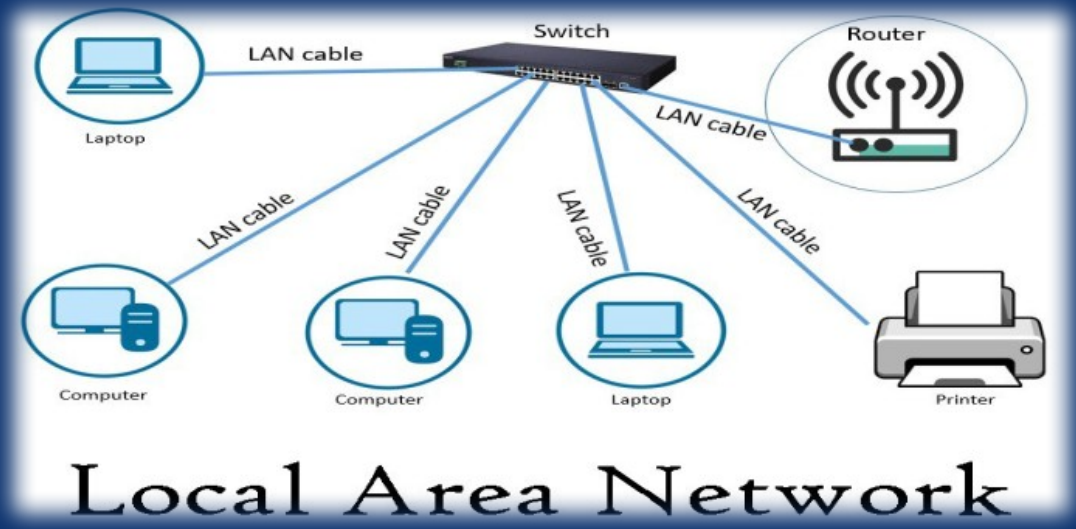
CAT-5 cable



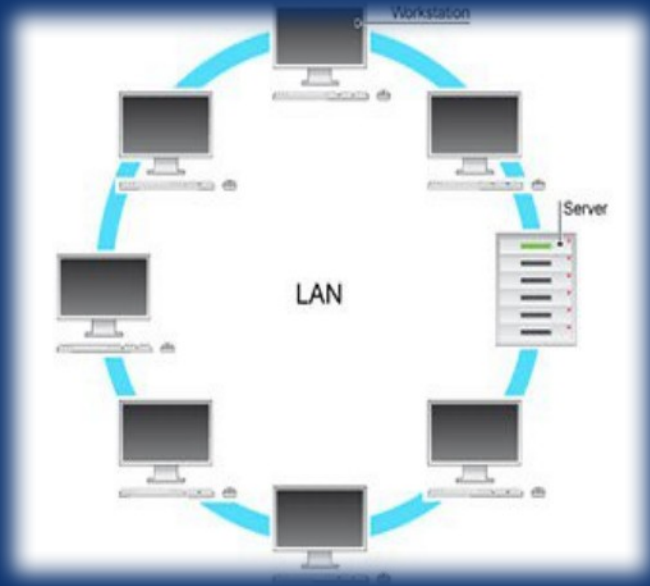


Category 5 cable is a twisted pair cable for computer networks.

LAN



A local area network (LAN) is a collection of devices connected together in one physical location, such as a building, office, or home.



Wlan



A wireless LAN (WLAN) is a wireless computer network that links two or more devices using wireless communication to form a local area network
(LAN)



Router

WHAT IS A ROUTER



A router is a networking device that forwards data packets between computer networks.
Routers perform the traffic directing functions on the Internet.
Data sent through the internet, such as a web page or email, is in the form of data packets.

IP address



IP Address

[ˈī ˈpē ə-ˈdres]

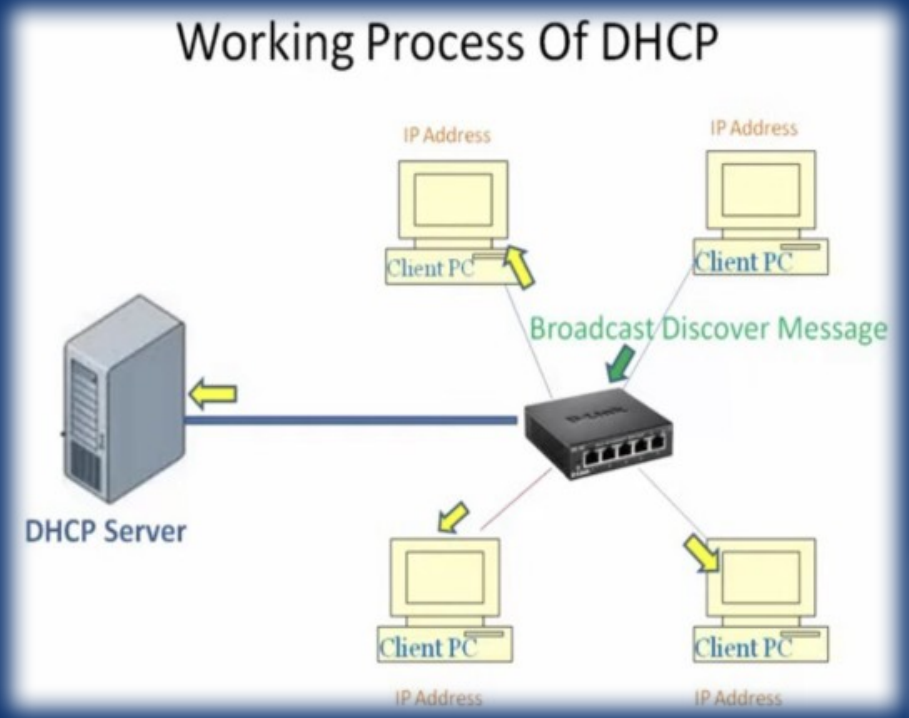
A number used to identify a computer or network of computers.

Investope



What_is_an_IP_Address_How_to_protect_your_IP_Address_onbg_.mp4

DHCP



A Dynamic Host Configuration Protocol (DHCP) is a network server that automatically provides and assigns IP addresses and other network parameters to client devices.



Fill in the blanks with the correct words or phrases from the word bank.

DHCP CAT-5 cable router network
cycle WLAN Internet configuration

1 The router lets a network connect to the Internet.
2 A LAN is a type of network .
3 Businesses communicate on the Internet .
4 We do not use cables for our network. We have a WLAN .
5 Routers need a correct configuration to work properly.
6 Businesses with a LAN use CAT-5 cable to connect computers.
7 It is sometimes necessary to cycle a network to make it work.
8 The DHCP provides different IP addresses for computers.

Choose the best definition for each word

1. router

A. a part of a computer
B. a wireless network
C. a networking device

2. IP address

A. a city-wide network
B. an identification number
C. a networking device

3. LAN

A. a local network
B. a networking device
C. a wireless network

Solutions for Networking

Network Troubleshooting

People often call IT professionals about **network** connection proble
But many problems are easy to fix without help. First, reconnect any
loose **CAT-5** cable connections. Next, investigate **IP address** issues.
This group of numbers allows communication on the **Internet**.
Renewing your **DHCP** fixes most IP problems. Next, check the
router. The router links **LANs** to the Internet. Make sure the
router's **configuration** is correct. **WLANs** have other problems.
Interference often blocks their wireless signals. But there is a
simple solution. Just move the router away from walls and
metals. Finally, **cycle** the network. Turn all equipment off for a
full minute and then restart.



1 What is the main idea of the passage?

A how to set up a network
B correcting network problems
C choosing network equipment
D a comparison of LANs and WLANs

2 What can you infer from the passage?

A A computer is not functioning during a cycle.
B LAN routers do not work well near walls or metals.
C Interference impacts a router's configuration.
D Renewing an IP address fixes DHCP errors.

3 According to the passage, a LAN ___.

A assigns IP addresses
B requires a router
C links CAT-5 cables
D cycles a network

Linko Connect

Linko Connect provides a wide variety of products and services. Are you in need of a network? Linko Connect has many different networking packages.

Get our lowest available price with the bronze package. Link multiple home or office computers together with a LAN. We use enhanced CAT-5 cables to connect your machines.

Don’t like wires and cables? Don’t worry! With our silver package, you’ll get a WLAN. Our wireless networks transmit signals through a central router. Each router’s antenna can transmit a signal from blocks away.

Finally, our gold package includes our best high-speed broadband. You’ll surf the Internet at 50 Mbps!

All packages come with separate or built-in modems.

Read the webpage. Then, mark the following statements as True (T) or False (F).

1. F The bronze package includes a wireless network.
2. T The silver package connects computers through a router.
3. F The gold package is the least expensive option.

Grammar Focus: Present Continuous in Active and Passive Voice

The present continuous tense is used to talk about actions that are happening now or around the current time. In the active voice, the subject performs the action. For example, "I am eating lunch" - "I" is the subject and is performing the action of eating.

S + am/is/are + V +ing

In th

Examples:

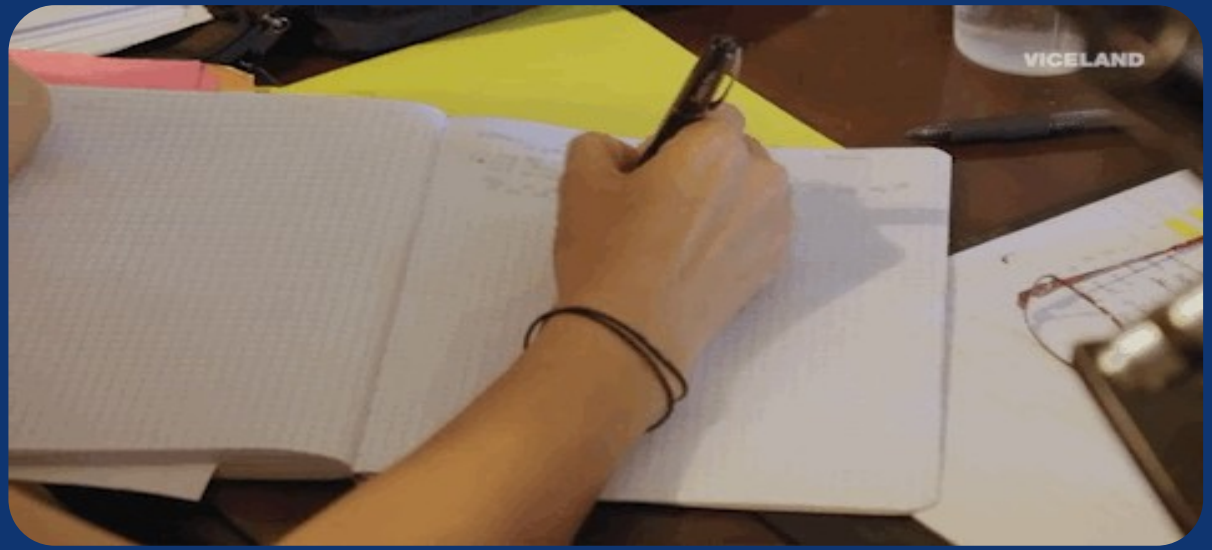
In the active voice:
Active: *"The programmer is writing the code.“*
Explanation: This sentence describes the programmer’s action in writing the code.

In the passive voice:
Passive: *"The code is being written by the programmer."*
Explanation: In this sentence, the code is receiving the action of being written by the programmer.

Write these sentences in passive voice

The IT team is updating the software. The programmer is writing code for the new feature. The software developer is testing the application for bugs. The programmer is debugging the software. The team is developing a new mobile application.

Make up the sentences in the Present Continuous in passive voice and give your work to your peer to rewrite those sentences in active voice.



Listen to an IT professional talking with a customer about setting up a network



Listen to the customer calling the help line about the operating system. Choose the correct answers.

1. What does the woman want to buy?

A. a LAN

B. a WLAN

C. a router

D. a CAT-5 cable

2. Why does the woman choose a wireless network?

A. She does not have CAT-5 cables.

B. Her computers are not close to each other.

C. She does not like her present network.

D. Her router doesn't support a LAN.



Listen again and complete the conversation

IT Professional: Hi. Can I help you find something?
Customer: Oh, please. I need a 1) _____.
IT Professional: Well, there are a few types. What kind of 2) _____ do you have?
Customer: I don't have one yet, but it's for the computers in my home.
IT Professional: Do you want a LAN or a WLAN? Some routers don't 3) _____ both types.
Customer: What's the difference?
IT Professional: A WLAN 4) _____ wirelessly. A LAN connects computers with CAT-5 cables.
Customer: My computers are far 5) _____. I'd need a WLAN.

1. router 2. network 3. support 4. connects computers 5. apart

Watch a video and complete the blanks

Special Agent Nickolaos Contaxakis gives his advice on what _____**1)** you should buy with your next computer purchase. The ones that should be _____**2)** a necessity he calls necessaries. For example, _____**3)** is necessary if someone wants to print. Certain _____**4)** like those that attach the printer to the computer are also necessary. The keyboard and _____**5)** are also considered very vital components. Mice also come in different sizes for different purposes. The ones _____**6)** for gaming, for example, are larger and faster.



About video.mp4

used,
accessories,
mouse,
cables,
paper,
considered

Offering a solution

1. You can never find your saved documents
2. You want to move files into a folder, but you don’t know how
3. You want to look at a certain window, but still have the others easily available
4. You want to make a window fill the entire screen.
5. You want to create a shortcut, but don’t know how

USE LANGUAGE SUCH AS:

Can I help you find something?

Do you want a LAN or a WLAN?

A WLAN connects computers wirelessly.

Student A: You are a computer store employee. Your customer needs a router. Ask Student B:

- the equipment he or she needs
- type of network she uses

Student B: You are a customer. Answer Student A's questions to choose a router and network.

9 **Using the conversation from Task 8, fill in the network description sheet.**

New Network Description

Location of network: _____

_____

Type of network: _____

_____

Components needed: _____

_____

_____

_____

Home assignment

Answer the questions in written form:

1.If you feel there is a lack of security for data, which is because of?

2.If you think that the network is not performing well, what is the reason for the poor performance of the network according to your view?

3.What suggestions will you give to improve the performance of the network, if you are one of the network design engineers?

Do you have any quest



IF NOT, then



The User Interface

Unit 6

Agenda

1. analyze a problem with the user interface;
2. read for specific information;
3. experiment with different design ideas.

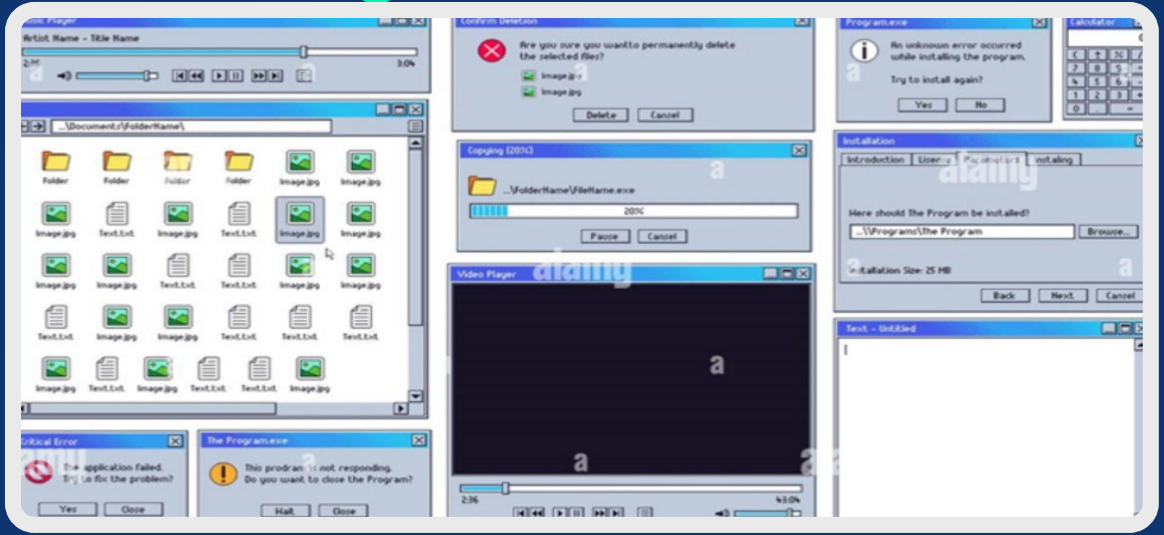
Food for thought

1. What is a User Interface?

2. How does a User Interface make computing easy?

Analyze a problem of this User Interface (UI)

What is wrong with this user interface?

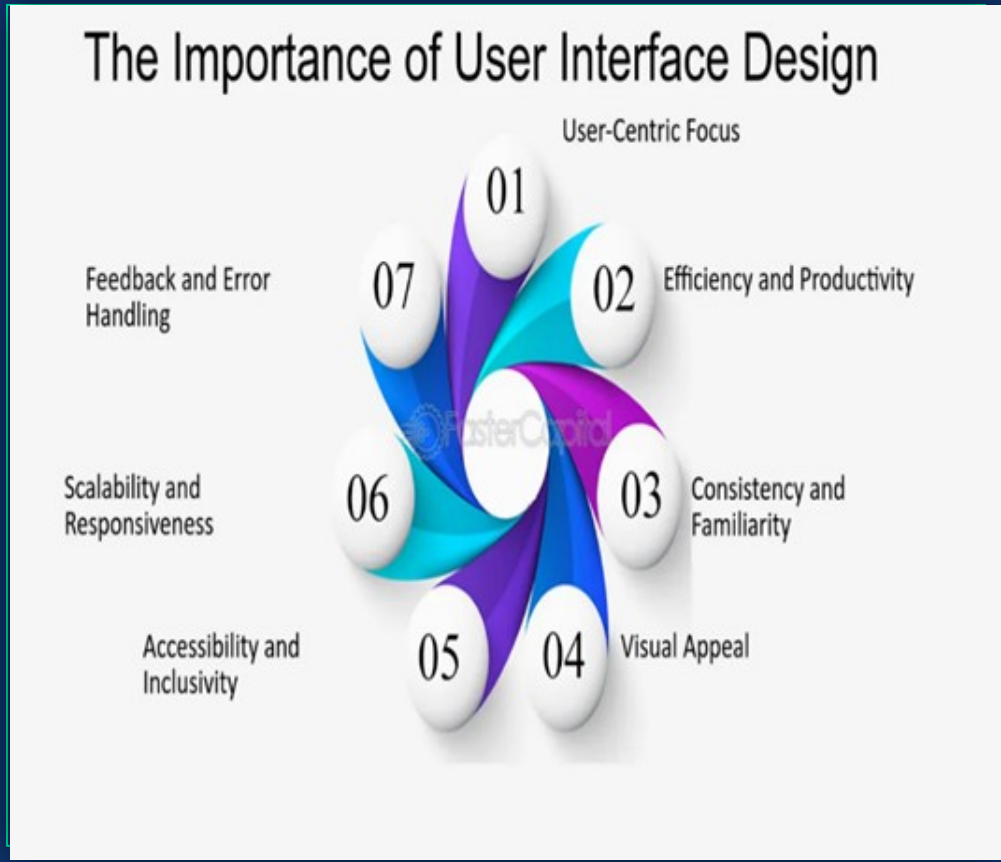


Old user interface. Old computer music and video player UI, text editor, and critical system error alert notification window vector illustration set.

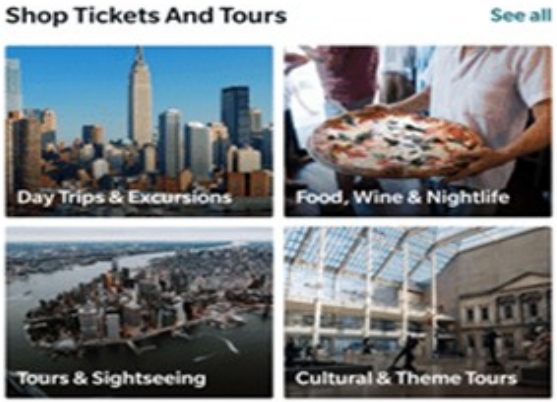
Designing the User Interface

Follow eight basic guidelines:

1. Design a transparent interface;
2. Create an interface that is easy to learn and use;
3. Enhance user productivity;
4. Make it easy for users to obtain help or correct errors;
5. Minimize input data problems;
6. Provide feedback to users;
7. Create an attractive layout and design;
8. Use familiar terms and images.



a App – User Interface



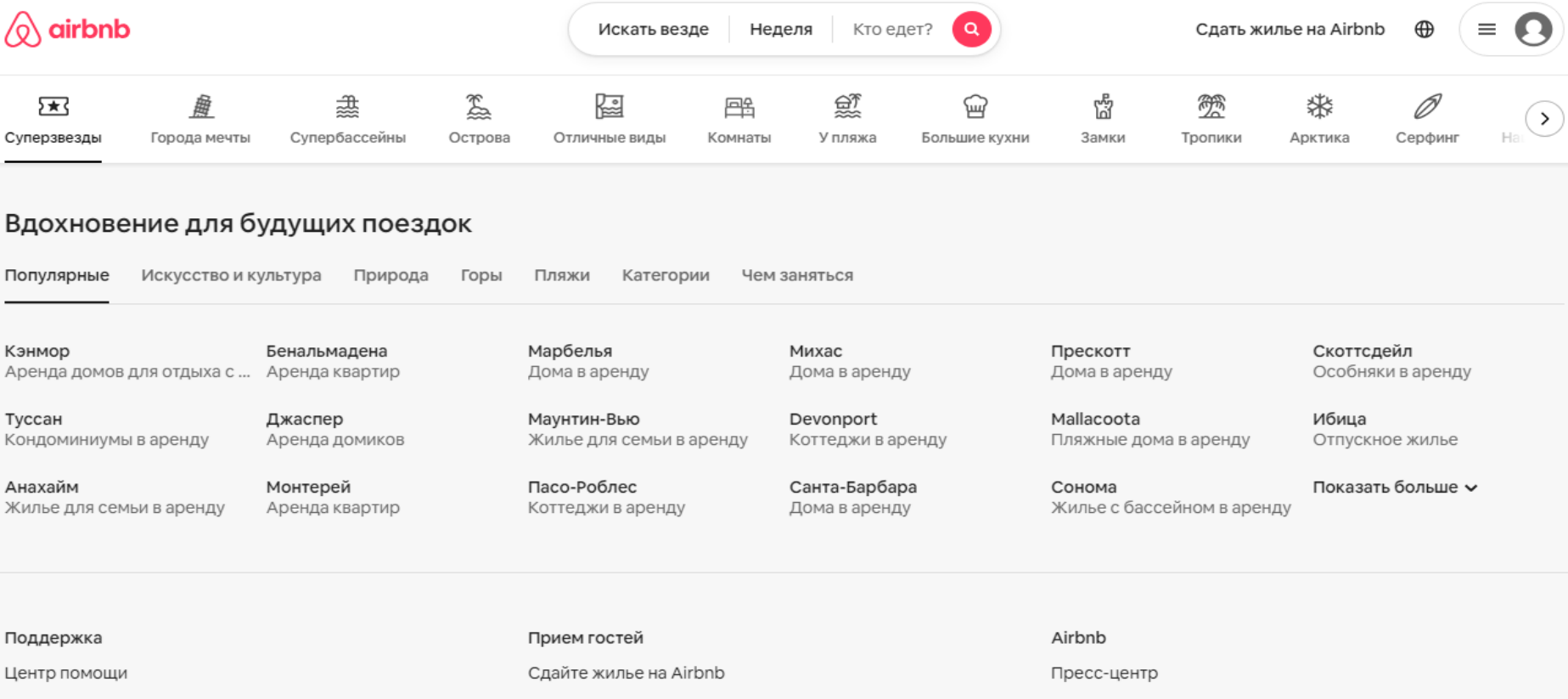
c Problems Report

Item cod	Problem description (user's perspective)
PSC2	I would like to use the accelerometer to be able to rotate the application and view the evaluations and larger images.

b Technique items

Physical Characteristics	
Item	**Description**
PSC1	The application has good battery management (i.e., it does not consume a lot of battery).
PSC2	The application allows/enables the use of sensors to provide interaction in different ways: through GPS (location), accelerometer (movement), gyroscope (gestures) and voice recognition.

Let’s look through some successful and unsuccessful interface design cases



airbnb

Жилье Впечатления

Сдать жилье на Airbnb

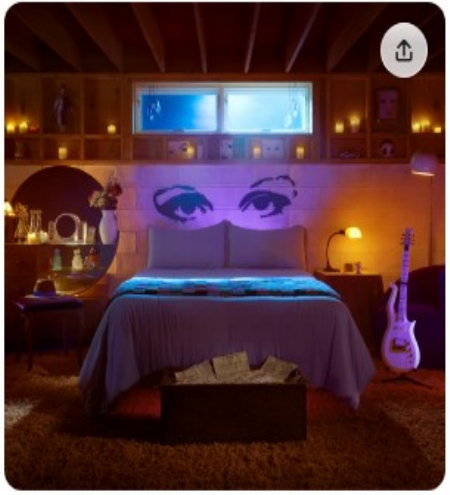
Где
Поиск направлений

Прибытие
Когда?

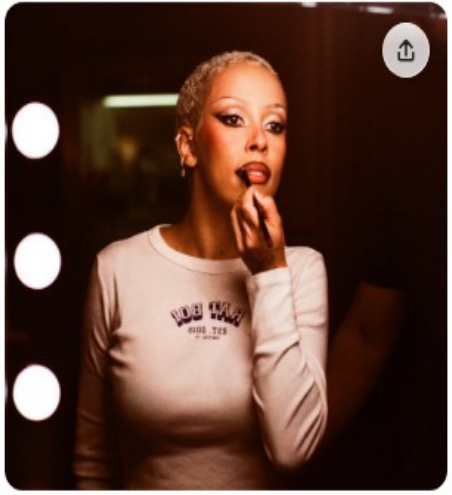
Выезд
Когда?

Кто
Кто едет?

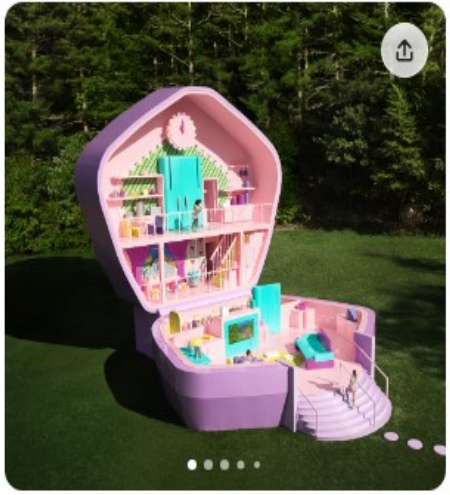
Суперзвезды | Города мечты | Супербассейны | Острова | Отличные виды | Комнаты | У пляжа | Большие кухни | Замки | Тропики | Арктика | Серфинг



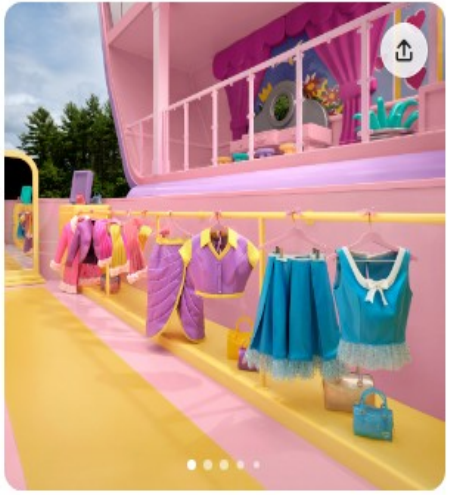
Дом Принса из фильма «Пурпурный д...
Хозяева: Венди и Лиза
Откроется: сентябрь



Домашний концерт с Доджей
Хозяйка: Доджа Кэт
Откроется: октябрь



Ночевка в мини-домике Полли Покет
Хозяин: Polly Pocket
Бронирование закрыто

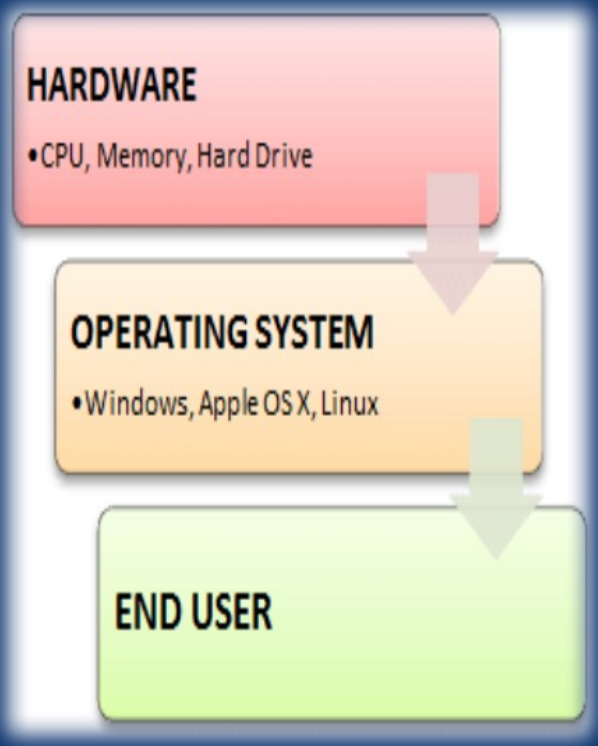


Идем в гости к Полли Покет
Хозяин: Polly Pocket
Бронирование закрыто

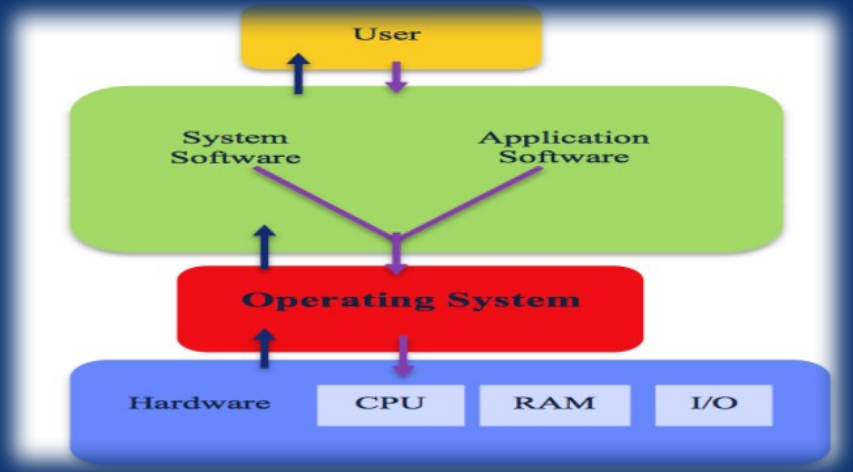
Healthcare.gov Interface Design Case



OS – operating system



An operating system (OS) is a set of programs that manage computer hardware resources and provide common services for application software.



icons



Icon is a pictogram (symbol) displayed on a computer screen . On our monitor icons represent office equipment, software programs, and social media networks.

shortcut



What is a Shortcut?

- A **shortcut** offers a way of doing a task more quickly such as starting a program or accessing a document. The shortcut icon has a **small arrow in the left corner** to help you distinguish it from the actual icon that represents programs and files.
- When you **delete** a shortcut, the original item still exists on your computer in its original location.

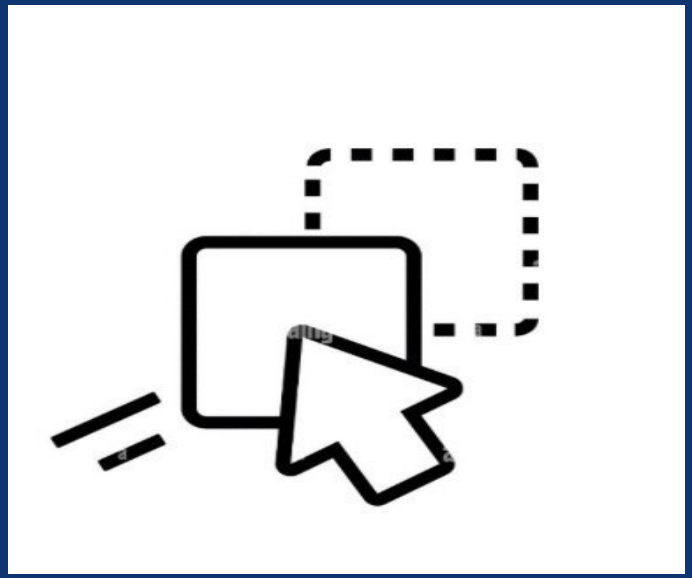
GUI – graphical user interface

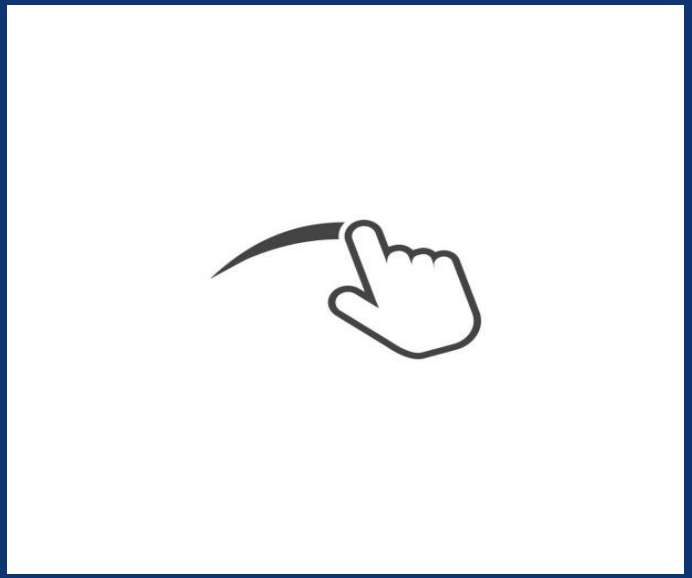


Modern operating systems provide graphical user interface (GUI) to make the applications software easier to use. A GUI allows a computer user to work directly with an application program by manipulating text and graphics on the monitor screen through the keyboard and a pointing device such as a mouse.

Drag

To drag files, folders or icons is to move them around on a desktop





Fill in the blanks with the correct words or phrases from the word bank

word BANK

icons desktop operating system
pointer windows GUI

1 Use the pointer to choose files and commands.

2 Small pictures or symbols in software are icons.

3 The operating system is the program that makes a computer work.

4 When something is on the desktop you see it onscreen.

5 An OS that uses small pictures to represent files is a GUI.

6 You can minimize files and programs in different windows.

Choose the best definition for each word

1. Drag

A. save an icon

B. close a desktop

C. move a file

2. Folders

A. organize files

B. move windows

C. create shortcuts

3. Shortcut

A. a type of software

B. a type of icon

C. a type of window

The New CCC OPERATING SYSTEM

Welcome to the CCC **(OS)**. Review these key terms before starting your new system.

Icons: The CCC **graphical user interface** (GUI) uses icons. These pictograms are on the **desktop**. They represent files and software.

Pointer: Use the pointer to click on icons. This opens files or starts software. The pointer also **drags** files to different folders.

Shortcuts: Shortcuts are special icons. They are placed on the desktop, and you can click them to get to a program quickly.

Folders: Store your files in these icons.

Windows: Visual areas on a computer screen where different programs are operating.

Minimize: Hide windows without taking them off screen.

Maximize: Extend windows to the full width of the screen.

Menu: Each window has a menu. Click it to select a command from the list.

1 What is the main idea of the passage?

A where to locate shortcuts

B the advantages of the CCC OS

C how to identify and use parts of the OS

D types of operating systems available

2 What can you infer about this operating system?

A It comes with free software.

B Files have to stay in one folder.

C Menus contain multiple commands.

D Folders do not maximize or minimize.

3 According to the passage, what does the pointer NOT do?

A move files

B open menus

C start software

D minimize windows

Listen to a customer calling the help line about the operating system. Choose the correct answers.

1. What is the dialogue mainly about?

A. Saving files
B. Organizing icons
C. Finding shortcuts
D. Locating folders

2. The customer does not know where to find the ... .

A. icons
B. desktop
C. pointer
D. options menu



Listen again and complete the conversation

Support Technician: Hello, CCC Solutions. What do you need help with today?
Customer: Well, it's my 1) _____. I add a shortcut one day, and it's gone the next.
Support Technician: Oh, no problem. Just 2) ____them to the desktop.
Customer: Okay. How do I do that?
Support Technician: First, add the shortcuts. Then, move the pointer to the 3) _____ and click ‘save icons and folders’.
Customer: Options? 4) _____, where is that?
Support Technician: See the ‘CCC’ icon in the corner? 5) _____-that.
Customer: Got it. 6) _____!

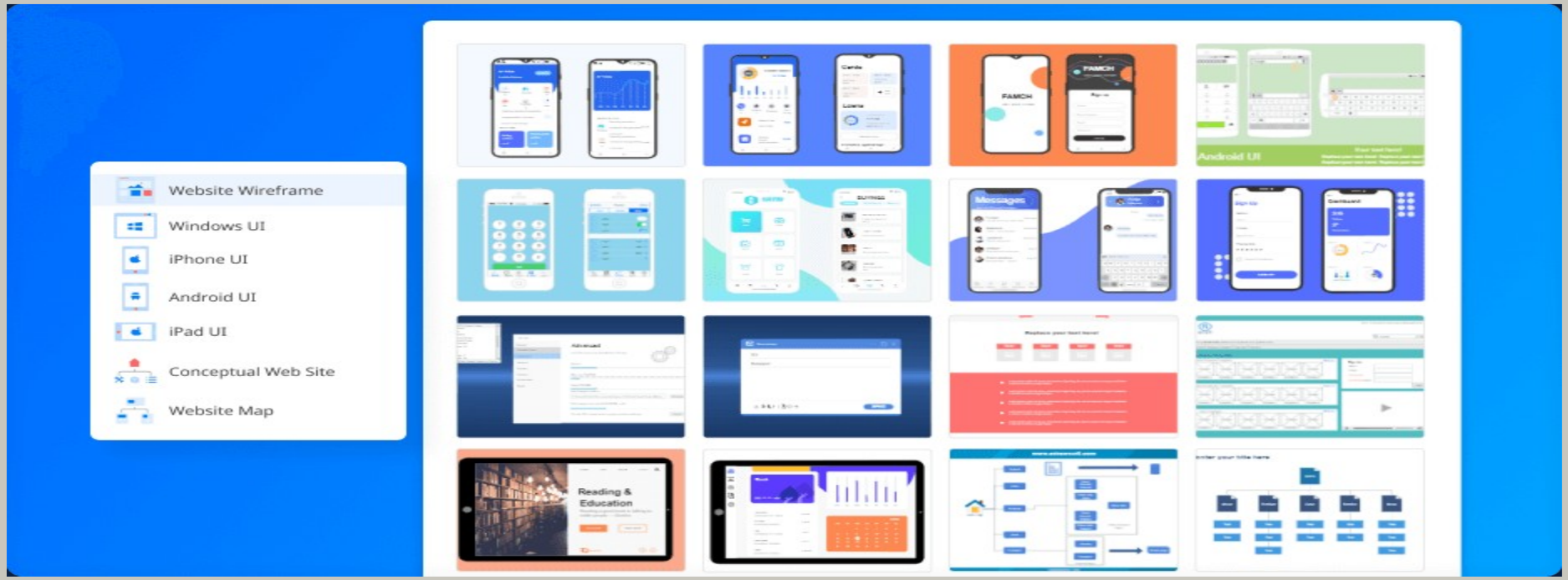
Answers: 1. desktop icons; 2. save; 3. options menu; 4. I’m sorry; 5. right-click; 6. Thanks

What is a wireframe? What types of wireframes are there?

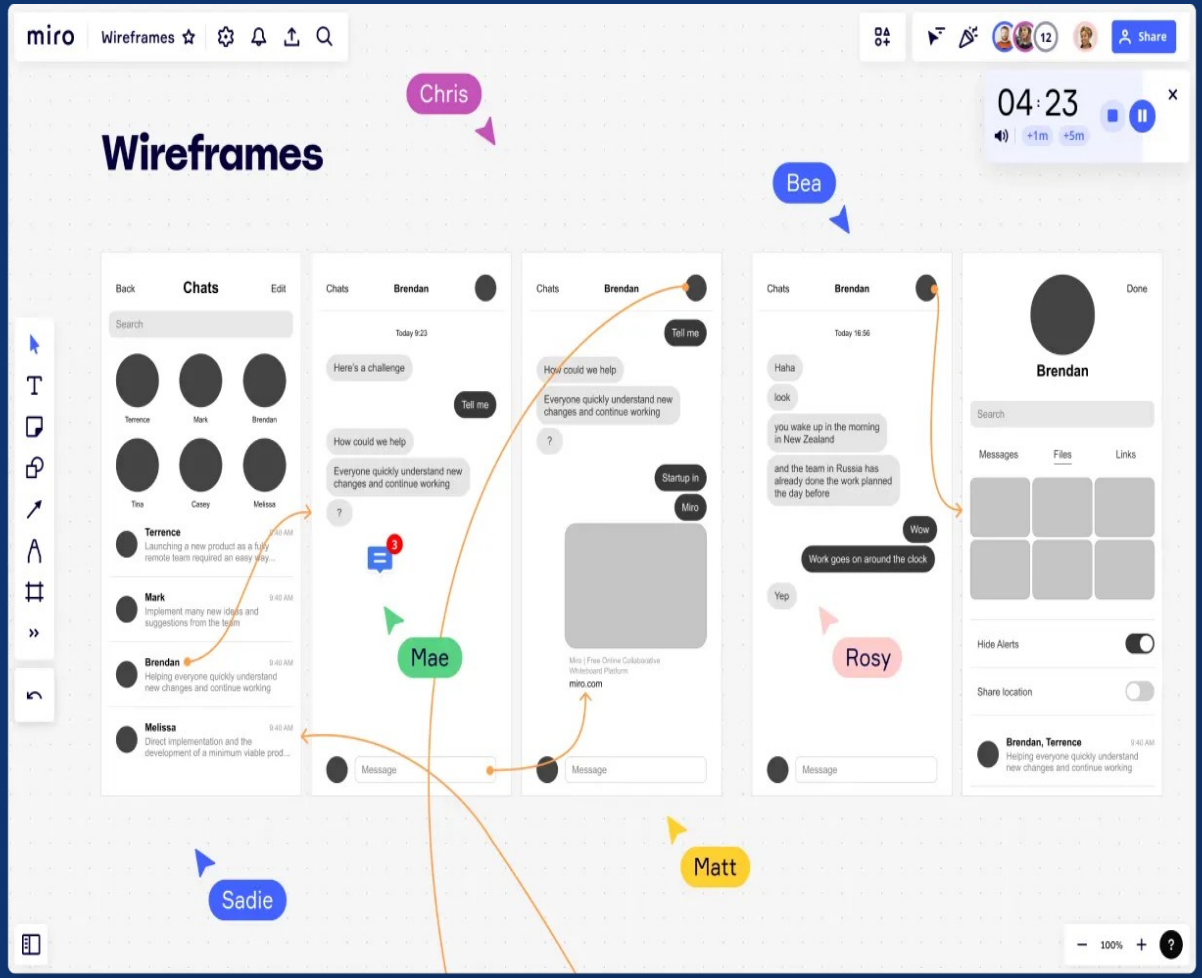
Here should be a video to watch ;)

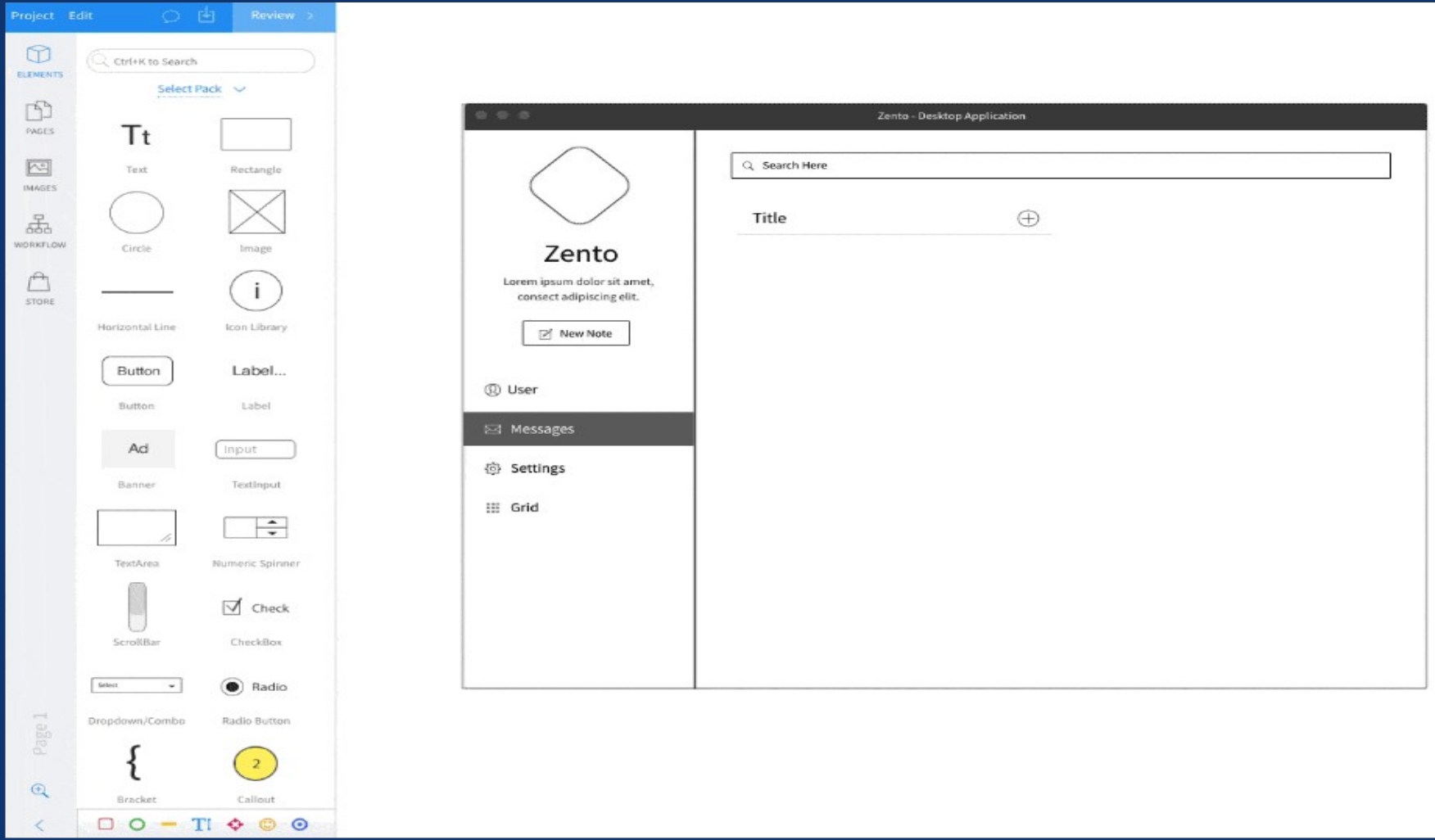
Case Study

What are Wireframe tools and why are they important?



Wireframing is a simple way to visualize the design of an app or website, and to identify the elements of a new project. The simple diagram created will make it easy to visualize how the different elements will interact with each other and identify potential UI issues.




Project
Edit
Review
ELEMENTS
PAGES
IMAGES
WORKFLOW
STORE
Ctrl+K to Search
Select Pack
Text
Rectangle
Circle
Image
Horizontal Line
Icon Library
Button
Label...
Button
Label
Ad
Input
Banner
TextInput
TextArea
Numeric Spinner
ScrollBar
Check
CheckBox
Select
Radio
Dropdown/Combo
Radio Button
Bracket
2
Callout
Page 1
Zento - Desktop Application
Zento
Lorem ipsum dolor sit amet, consect adipiscing elit.
New Note
User
Messages
Settings
Grid
Search Here
Title

Figma



Skill Level:

Suitable for designers who are looking for a collaborative and simple design tool that requires no coding expertise.

Pros:

- The free plan comes with exciting features, cloud storage, and the benefit of collaborating with team members
- Frequently updated
- Unlimited viewers allowed on a project

Cons:

- Prone to lagging and doesn't function properly in the absence of a strong internet connection
- Lacks control to restrict viewers' actions when they access a shared prototype, so it's best to make changes in the copy instead of the original design

Available on:

macOS, Windows, Web browsers, and Linux

Price:

- Free plan (up to 3 projects and 2 editors)
- Premium plan comes free for students and costs $12/month/editor with unlimited projects

Activity

Use one of the existing interfaces (websites, mobile apps, software applications) for a group critique. Provide constructive feedback based on usability principles and design guidelines. Experiment with different design ideas in a group.

Home assignment

Choose one of the websites to analyze the user interface and provide constructive feedback based on usability principles and design guidelines.


Thank you
For your
Attention