



El futuro digital  
es de todos

MinTIC

# «Misión TIC 2022»

WORKSHEET

USABILITY AND ACCESSIBILITY OF COMPUTER PROGRAMS



Universidad de Caldas

# Usability and Accessibility of Usability and accessibility of computer programs

## Worksheet 12.1

**Finish the sentence using possible ways:**

**“A product is accessible if ...”**

- It is cheap!

-

-

-

-

-

-

-

-

-

-

## Worksheet 12.2

Read carefully the statements and choose if they are true or false!  
Correct the false statements to make them true using the next words:

**Limits / End / Consistent / Not / Present**

1. Measure: A standard unit used to express the size, amount, or degree of something.

**True / False**

2. Disability: A physical or mental condition that improves a person's movements, senses, or activities.

**True / False**

3. Average: A number that is calculated by adding quantities together and dividing the total by the number of quantities.

**True / False**

4. Inner: situated inside or further in; internal.

**True / False**

5. Consistency: irregular behavior or treatment.

**True / False**

6. Trust: Believe in the reliability, truth, or ability.

**True / False**

7. Unreliable: Someone or something able to be relied upon.

**True / False**

8. Ultimate: Being or happening at the begin of a process; final.

**True / False**

9. Nowadays: At the future time, in contrast with the past.

**True / False**

## Worksheet 12.3

### Reading strategy practice!

Answer the following question:

- Can content words, like verbs and nouns, be keywords?

Yes, they can / No, they cannot

- Can function words, like prepositions and articles, be keywords?

Yes, they can / No, they cannot

- Do you think that keywords are often repeated in the text?

Yes, they are / No, they aren't

- Make sure you list all the keywords you find in the reading.

#### Keywords

Keywords	

## Worksheet 12.4

Read the text then create a word cloud using the key words you found in the text.

### CONCEPTS OF USABILITY AND ACCESSIBILITY IN SOFTWARE DEVELOPMENT

#### UNIVERSAL DESIGN

Usability and accessibility are two important concepts in the process of software development. Usability measures how easy it is to use a program, and accessibility measures how accessible a program is for people with different disabilities. Typically, programs are designed for the average user and do not consider all the possible characteristics of potential users. Ideally, developers should consider the principles of the “universal design” when creating a new product. Universal design means that absolutely everyone can use the final product. The application of universal design principles during product design has the potential to make products accessible to and usable by more consumers.

#### USABILITY TESTING

Many companies do usability testing to guarantee that the product is satisfactory for the users. This usability process is frequently done at different phases of product development. The objective of the usability testing is to make the product more efficient and attractive to users. Jakob Nielsen, one of the most visible proponents of usability processes, articulated five elements that comprise a definition of usability (Nielsen, 1996).

1. *Ease of use*. The user must be able to use the product in a simple form.
2. *Simplicity of learning*. The features of a product must have inner consistency and logic.
3. *Improved reliability*. When users can trust that they can use products as expected, satisfaction can increase.
4. *Reduction in errors*. Designers can reduce user errors. It is important for the developers to understand that the product can be culpable or unreliable. In this case, they can re-design it in a good way.
5. *Improved user satisfaction*. If user satisfaction is important for the developers, they should incorporate all the previous recommendations in the product. As a result, users will be happy to use it.

## **ACCESSIBILITY**

Accessibility refers to creating products that are accessible for different kinds of people. Accessibility tests on new products are not very common, and when companies do this type of tests, they usually do them after usability testing. As a result, many products meet only minimum accessibility standards, but this doesn't mean that they are easy to use for all people.

For example, historically, people with disabilities are not included in the standard usability tests of many products because designers do not consider people with disabilities to be part of the ultimate users. However, nowadays the population of people with disabilities grows and it means that more and more products for them will be necessary.

The word cloud contains the following terms, categorized by their approximate position in the circular arrangement:

- Top-Left (Purple Quadrant):** Usability, Design, Program, Software, Characteristics, Universal, Potential, Efficient, Simplicity, Attractive, Learning, Users, Satisfaction, Accessibility, Disabilities, Design, Program, Software, Characteristics, Universal, Potential, Efficient, Simplicity, Attractive, Learning, Users, Satisfaction, Accessibility, Disabilities.
- Top-Right (Green Quadrant):** Usability, Design, Program, Software, Characteristics, Universal, Potential, Efficient, Simplicity, Attractive, Learning, Users, Satisfaction, Accessibility, Disabilities, Design, Program, Software, Characteristics, Universal, Potential, Efficient, Simplicity, Attractive, Learning, Users, Satisfaction, Accessibility, Disabilities.
- Bottom-Left (Blue Quadrant):** Usability, Design, Program, Software, Characteristics, Universal, Potential, Efficient, Simplicity, Attractive, Learning, Users, Satisfaction, Accessibility, Disabilities, Design, Program, Software, Characteristics, Universal, Potential, Efficient, Simplicity, Attractive, Learning, Users, Satisfaction, Accessibility, Disabilities.
- Bottom-Right (Orange Quadrant):** Usability, Design, Program, Software, Characteristics, Universal, Potential, Efficient, Simplicity, Attractive, Learning, Users, Satisfaction, Accessibility, Disabilities, Design, Program, Software, Characteristics, Universal, Potential, Efficient, Simplicity, Attractive, Learning, Users, Satisfaction, Accessibility, Disabilities.

## Worksheet 12.5

Answer these True or False questions to check your understanding of the text.

1. Usability and Accessibility are two synonyms that mean the same.

TRUE / FALSE

2. A universal design product is easy to use by all the people.

TRUE / FALSE

3. The objective of usability testing is to make the product more attractive for the users.

TRUE / FALSE

4. Accessibility test are very common in many companies.

TRUE / FALSE

5. Companies often do not take people with disabilities into account when designing new products.

TRUE / FALSE



## Worksheet 12.6

**Answer the following questions.**

1. Entiendo que es “usability” y “accessibility” y la diferencia entre ellos.

Si      No      Tal vez

2. Entiendo cómo buscar las palabras claves en un texto.

Si      No      Tal vez

3. Buscar las palabras claves en un texto me ayuda a identificar los conceptos principales del texto.

Si      No      Tal vez