



El futuro digital
es de todos

MinTIC

«Misión TIC 2022»

ENGLISH COMPONENT – CYCLE 1 SESSION 8

CONDITIONAL ALGORITHMS

WORKSHEET 1.8



Universidad de Caldas



Worksheet 1.8.1

Match parts of the sentences from the three columns to make logical statements.

1. If you like fast food,	a. then take sunglasses,	i. else study something else.
2. If you like felines,	b. then study programming,	ii. else get a dog.
3. If you have a facemask,	c. then go to McDonald's,	iii. else take an umbrella.
4. If you are good at Mathematics,	d. then get a cat,	iv. else stay at home.
5. If it is sunny,	e. then you can go outside,	v. else eat vegetables.

1. _

2. _

3. _

4. _

5. _



Worksheet 1.8.2

A. Unscramble the letters and write the word.

1. Esel :Else
2. sveDice : Devices
3. loxpmCe : Complex
4. sCeioch : Choice
5. arlveSe : Several
6. htoB : Both
7. altseat : At least
8. keChc : Check
9. widarhtW : Withdraw
- 10.MTA :ATM

B. Complete the sentences using the words in exercise A.

1. The wolf and fox are BOTH wild animals.
2. The company has a COMPLEX organizational structure.
3. My mom gives the cards to someone ELSE
4. But now there are two CHOOISE for us
5. SEVERAL of the students have taken the exam.
6. Clean and rinse your hair LEAST twice a week.
7. I CHECK my emails every day.
8. Laura WITHDRAW some money from the ATM
9. I buy a new computer DEVICE



C. Finish the sentences using the right word from the previous exercises.

1. An _____ATM_____ is an electronic banking for completing basic transactions such as withdraw money.
2. _____SEVERAL_____ means three or more, but often less than many.
3. _____ELSE_____ refers to another person, place, or thing in a vague way.
4. _____DEVICES_____ are pieces of mechanical or electronic equipment.
5. _____BOTH_____ refers to two people or things .
6. _____WITHDRAW_____ means to remove or take away something from a particular place or position.
7. _____CHECK_____ means to examine something in order to determine its accuracy, quality, or condition.
8. Something ____COMPLEX_____ has two or more related parts, or is not simple in its structure.
9. _____AT LEAST_____ adds a positive comment about a generally negative situation.
10. _____CHOICES_____ are a range of possibilities from which one or more may be selected.



WORKSHEET 1.8.3

Scanning the text

Scan the text and tell your tutor what ideas from the text are related to these words:

- Text: article
- Mobile: devices
- Computer specialist: programmers
- Fast-food: hot dog, pizza, burger, restaurants
- Football: play soccer

Reading text

CONDITIONALS AND HOW THEY ARE USED IN ALGORITHMS

A **CONDITIONAL** is a type of a step in an algorithm where a decision must be made. In this article, we will focus on two types of **CONDITIONALS**: ***IF-THEN-ELSE*** and ***AND/OR*** conditionals.



IF-THEN-ELSE CONDITIONALS

One of the first things that programmers learn is how to use IF-THEN-ELSE conditionals. The basic idea is: **IF** some condition is true **THEN** do this, **ELSE** do that.



For example, imagine you have to connect to an online class, and you have two **devices**: a computer and a cellphone. You prefer to use the computer, but your computer is sometimes blocked. So the **CONDITIONAL** for your situation is: **IF** the computer works well **THEN** connect with the computer, **ELSE** connect with the cellphone.

Sometimes, you can have **complex** conditional statements when you have more than two **choices**. As humans, we make decisions with **several** options in a very different way than computers. We have the ability to select one item out of a group of choices, but a computer program has to make



binary decisions, meaning that it can only select between two things at a time.



Imagine you want to go to a restaurant. Your top-favorite is a pizza restaurant, your second favorite is a hot-dog restaurant, and your third favorite is a burger restaurant. There are no more restaurants in your town. Your **CONDITIONAL** for this situation is:

- **IF** pizza restaurant is open,
 - **THEN** go to pizza restaurant
- **IF** hot-dog restaurant is open,
 - **THEN** go to hot-dog restaurant
- **IF** burger restaurant is open,
 - **THEN** go to burger restaurant
- **ELSE** cook at home

All the options after the one that is selected are completely ignored. For example, if the pizza restaurant is open, the



computer program will ignore hot-dog and burger restaurants. When writing your program, it is important to think about the priorities.

AND/OR CONDITIONALS

If you want to **check** multiple conditions, you can use AND/OR statements. Using AND will cause the program to do something if **both** conditions are true. Using an OR statement will do something if one of the conditions is true.



Imagine you want to go to play soccer, but your mother says that you should do homework and walk the dog first. For this situation, the CONDITIONAL is: **IF** I finished homework **AND** I walked the dog, **THEN** I go to play soccer, **ELSE** I stay at home. Now, imagine a different situation – you want to participate in a school competition in Mathematics; to participate, you have to study minimum in the 9th grade or



you have to be minimum 15 years old. In this case, the CONDITIONAL is: **IF** I study in 9th grade or higher **OR** I am **at least** 15 years old, **THEN** I can participate in Mathematics competition, **ELSE** I cannot participate.

WORKSHEET 1.8.4

WRAP-UP

EVALUATION

Write a CONDITIONAL for each situation using the programming language you learned today: IF, THEN, ELSE, AND, OR.

1. Your flight is at 5 pm. You have to be at the airport at least 1 hour before. You get to the airport on time, you take the flight. You don't get to the airport on time, you buy a new ticket.
 - If i arrive to the airport 1 hour before AND i get to the airport on time THEN If take the flight ELSE I buy a new ticket
2. You want to withdraw 10 000 pesos from the ATM. You have 10 000 or more in your account; you get the money. You have less than 10 000 in your account, you get nothing.



- If i want to withdraw 10000 pesos from ATM or i have less than 10000 in my account ELSE i get nothing
3. You want to take salsa classes. Salsa classes start at 3 pm. Your university classes finish before 3 pm, you take salsa classes. Your university classes finish after 3 pm, you don't take salsa classes.
- If i want to take salsa classes AND the university classes finish before 3 pm THEN i take salsa classes ELSE i don't take salsa classes

WORKSHEET 1.8.5 SELF-EVALUATION

Answer the following self-evaluation questions:

1. La estrategia de Scanning me ayudó a tener una idea de qué se trata el texto.

Yes 😊

Maybe 😐

No 😞

2. Entiendo cómo se usan los CONDICIONALES en algoritmos.

Yes 😊

Maybe 😐

No 😞



3. Puedo aplicar los CONDICIONALES a situaciones de la vida cotidiana.

Yes 😊

Maybe 😐

No 😞