

Instructor: Date:

Learner: Regional Branch:

Program: Center:

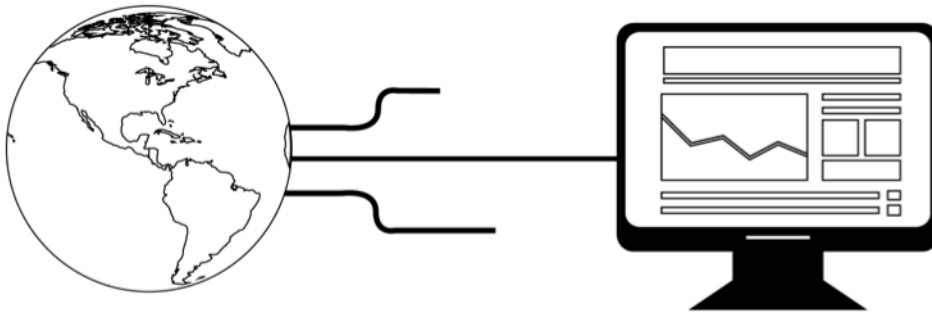
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Let's Start!

The Interface, a Bridge to the World Wide Web!



Learning Outcome:

Understands systems theories, business processes and basic concepts on IT.

Create a map of processes that allows identifying areas in an information system, using IT tools to generate reports based on the company's needs.

Can Do Statements:

- I can give brief information about the interface.
- I can talk about the hardware interface in a simple way.
- I can talk about the software interface in a simple way.

Ask your partner:

- What kind of programs do you think are useful to transfer information in a computer?
- Why do some websites prohibit access to all the information?





Let's Explore!

The Interface: a Very Important Element of Software Engineering



Instructions: Read the text below.

A very important part of software engineering is the interface. When we talk about that, we refer to the different types of connections or interactions between two different systems or devices. In fact, interface also refers to the interaction between a machine and a human. In simple words, this is the process in which a surface allows the communication and exchange of information between two different parts in a computer system. For example, a printer receives printing information from a computer through an interface.

Now, that interface takes place under different circumstances. To start, there are two different types of interfaces; these are the hardware and software ones. Let's start with the first one. The hardware interface connects two different parts together, like devices, components or systems. Furthermore, this type of interface contemplates connectors, ports and plugs that link devices, such as the mouse or keyboard, to a computer.

On the other hand, we have the software interface. It is important not to confuse these two different types of interfaces and to always keep their differences in mind. When we run any type of program on a computer, it works through a software interface. Now, we can say that this type of interface basically enables the communication of different programs with each other or with the operating system. All in all, the software interface is basically a language and message format as the system uses commands and codes to communicate and transfer data from point A to point B. processes safe, and it helps companies to increase their productivity!



**Let's Practice!**

Let's say what interface is.

Instructions: Proofread the sentences. Correct the mistakes. Read the sentences aloud. Check your pronunciation with your instructor.

1. When we talk about that, we refer to the different types of connections or interventions between two different systems or devices.

2. In fact, interface also refers to the interaction between a machine and a computer.

3. In simple words, this is the process in which a surface allows the communication and exchange of programs between two different parts in a computer system.

**Let's Practice!**

Those elements are hardware interfaces.

Instructions: Underline all the demonstrative pronouns. Read the sentences aloud.

1. Hardware interfaces connect those physical elements over there.
2. Hardware interfaces permits interaction between these components inside the computer.
3. This plug links the device to a computer.





Extension Activity

Make a list of software and hardware interfaces.

Instructions: Complete the following steps. Fill in the Self-Assessment.

- Look for information about software and hardware interfaces.
- Make a chart in which you list some examples of both software and hardware interfaces, each on its own side.
- Share your chart with the class and add any relevant examples to your chart.

Self-Assessment

Yes

No

- I find information about software and hardware interfaces. ☐ ☐
- I make a chart in which I write down examples for both the software and the hardware interfaces. ☐ ☐
- I share my chart with the class and add any relevant examples to it. ☐ ☐



Target Words

- **device** (noun): an electronic element
e.g. When we talk about that, we refer to the different types of connections or interactions between two different systems or devices.
- **printer** (noun): a machine we use for printing a document or file
e.g. For example, a printer receives printing information from a computer through an interface.
- **plug** (noun): the end of a cable or wire
e.g. Furthermore, this type of interface contemplates connectors, ports and plugs that link devices, such as the mouse or keyboard, to a computer.
- **link** (verb): to connect two different elements
e.g. I want to do a contextualization and give brief information about the interface, a complex concept.
- **enable** (verb): to permit, to make possible
e.g. Now, we can say that this type of interface basically enables the communication of different programs with each other or with the operating system.



Learning Points

Simple Present Tense - Affirmative Form

You use the **simple present** tense to talk about general actions, habits and processes.

In general, you use the **simple present in affirmative** to make statements for repetitive actions, facts, habits and things that are always or generally true.

Remember that the structure that we follow for the affirmative form is:

Subject + **verb (add -s if it is third person)** + complement.

For example:

*Interfaces **work** as a perfect medium between users.*

*The hardware interface **comprehends** a lot of connections.*

It is important to remember that when we conjugate the verbs in present, they can change depending on the type of subject the sentence has. Check the following chart:

HOW TO ADD THE -S TO THIRD PERSON / SPELLING RULE	
For verbs that end in -O, -CH, -SH, -SS, -X, or -Z we add -ES	<ul style="list-style-type: none"> • <i>fix – fixes</i> • <i>catch – catches</i>
For verbs that end in a consonant + Y , we remove the Y and add -IES .	<ul style="list-style-type: none"> • <i>study – studies</i> • <i>carry – carries</i>
For verbs that end in a vowel + Y , we just add -S .	<ul style="list-style-type: none"> • <i>enjoy – enjoys</i> • <i>say – says</i>

Examples

- *A very important part of software engineering is the interface.*
- *Now, that interface takes place under different circumstances.*
- *All in all, the software interface is basically a language and message format as the system uses commands and codes to communicate and transfer data from point A to point B.*





Learning Points

The Interface

We use an **interface** to exchange information among different elements or components of a computer system.

An interface does not only happen between the components of a computer, but it happens when there is an interaction between a human and a machine, too. For example, devices like touchscreens send and receive data through an interface; plus, devices such as the mouse or microphone provide an interface to send data to a system.

We can also define interface as a supporting arrangement to the connection between devices. However, there are two different types of interface, the hardware interface and the software interface. Check the following chart to learn about them:

HARDWARE INTERFACE	SOFTWARE INTERFACE
Transfers data from an external device to the computer's internal elements through signaling , a sequence of mechanical, electrical and logical signals.	Transfers information among programs and applications through streams , sequences of data that are available one at a time. Software can interface with hardware, too.

There are some important terms that we have to learn about hardware and software interface. Check the table below:

HARDWARE INTERFACE	SOFTWARE INTERFACE
Parallel: Several connections taking parts of data at the same time from one side to another. Serial: Sends data one bit at a time.	Constant: Identifiers that get an associated value and that you cannot change. Data Types: Classification according to types of data, the value, the path of operation for such data, and the way the system records the value. Subroutine: A sequence of program instructions that perform a specific task. Exception handling: The process of facing the emergence of an exception during computation. Type of signature: Defines the inputs and outputs for a function, subroutine or method.

