

6 Programming languages

Vocabulary: Programming languages
Reading: Java

Grammar: Giving instructions
Listening: Web programmers

Speaking: Creating an online tutorial
Writing: A set of instructions

Vocabulary



- What is a programming language?
- How many programming languages do you know?
- What are the two most common types of programming languages?

Programming languages

1 Complete the definition of programming language with the words in the box.

software code Java language tasks rules programmers



A programming (a) _____ is a set of (b) _____ for instructing a computer to perform specific (c) _____. Each language has keywords and a special syntax for organising program instructions. Languages that (d) _____ use to write code are called "high-level languages" such as (e) _____ or C++. Those languages help developers build useful (f) _____ with only a few lines of (g) _____.

2 There are two common types of programming languages: compiled and interpreted. Match them with the following definitions.

a) It is a programming language which needs compilers to generate machine code from source code. _____

b) It is a programming language which executes instructions directly without previously compiling a program. For this reason, this language is slower since it requires more time to be executed. _____

3 Divide programming languages that you know into compiled or interpreted.

COMPILED	INTERPRETED

Vocabulary

4 Match the following programming languages with their correspondent definitions.

PHP

Java

Objective-C

HTML

C/C++

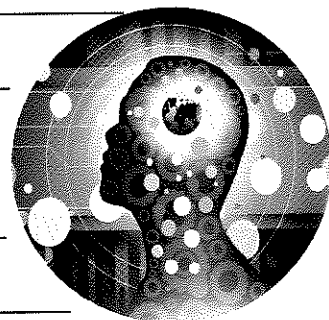
XML

JavaScript

- It is a markup language web pages are written in.
- It is a markup language used in documents. For example, it allows the user to create a database of information without having the actual database.
- Interpreted language used in a combination of HTML and XML to make programs more dynamic. This is commonly used to access databases and create HTML web pages with the data gathered from them.
- This programming language can be integrated into standard HTML pages. It is mainly used to create dynamic and interactive webs.
- The fastest languages in terms of execution. They were used for writing Unix programs but now they are used to write applications for any available platform.
- It is the Cadaptation for Apple devices.
- Now maintained by Oracle, it is multiplatform and is used in applications and games.

5 Write a definition for the following words. Use the Internet if necessary.

- To program: _____
- Compiler: _____
- Variable: _____
- Function: _____
- Parameter: _____



6 Complete the sentences with the words in the box.

execute

debug

script

IDE

- A _____ is a list of commands that are executed one by one.
- To _____ means to identify and remove errors from computer software.
- _____ stands for Integrated Development Environment. Software program that is designed to help programmers and developers build software.
- To _____ implies carrying out an instruction or program.

7 Work in pairs. Talk with your partner about these questions:



- What is the programming language used in your school?
- Who is the programmer of your school?
- Which programming languages do you study in this vocational training course?

1 Read the following text.

JAVA

1 Java is one of the most popular programming languages. It **was developed** by Sun Microsystems. Since 1995, Java **has been** a language developed specially to run on the Web but it has also made devices smarter, more functional and more entertaining. It does not only work on the Internet but also behind applications and devices that users find in their day-to-day lives. Most computer users and even non computer-literate people know or have heard of Java and its specifications. However, curiously enough, what has caused more interest among the population is the history of Java's name. Why did they decide to call it Java? Java seemed to be such a weird name for a programming language that people started to wonder why the engineers **had chosen it** for a language that **would revolutionize** the computer world. Why they did so is still something of a mystery.

10 Java **was created** by a group of Sun engineers led by James Gosling and it **was first named** Oak after an oak tree that stood outside Gosling's office. However, this name was soon discarded as it already belonged to an existing trademark. The way to find the perfect name for the new language **had just started**. The engineers working on the project did not want a name that contained the word "web" or "net" because it implied a direct association with the web and the Internet. Moreover, people were used to seeing those words in computer devices and programs and that is why they intended to escape from routine and from the expected. Kim Polese -manager of the product- says that they **were looking for** something that reflected the essence of technology; something lively, dynamic, easy, unique and revolutionary.

20 All the engineers involved in the project agree that the name Java originated in a meeting where about a dozen people got together to brainstorm. Everyone yelled out original, non-sense and out-of-the-blue names which were written on a board. Names like DNA, Pepper, Neon or Silk came up. It is said that they had been in the meeting for so many hours that one of the engineers, while he **was drinking** a cup of Peet's Java coffee, picked Java as an example to add to that long list of proposals. Chris Warth is believed to have suggested the name but there are still doubts about who really did. From that list of names, they chose their three favourites: Java, Silk and DNA. They even asked opinion to their colleagues, family members and friends and the result of this non-official survey was that Java got more positive reactions.

25 There **has always been** a concern about the origins of Java. People have always been interested in solving the mystery. **If you do** a quick search of this topic, **you may find** that Java was the name of the cafeteria the engineers used to go to while working on the project, that Java was chosen because they loved the island of Java, that they chose the coffee name for marketing reasons... The truth is that the decision was not made by just a hero or for just one reason; it was the result of a group of individuals trying to achieve their goals and a cup of coffee placed in the perfect room at the perfect time.



Reading comprehension

2 Read the text again and answer the following questions.

- Why were people so interested in the origins of Java's name?
- Why was Oak not a possible name?
- What did the engineers want to avoid in the new name?
- How did Chris Warth come up with the idea of Java in the meeting?
- What may you find if you research the origins of Java's name?



Reading

3 Say if the following sentences are true or false. Explain the false ones.

- a) Java has contributed to the web as well as to the improvement of applications and devices.
- b) Oak was suggested as a name after the oak that was in Golding's office.
- c) The word "web" was a must for a name that implied the essence of technology.
- d) In the brainstorm meeting the attendants were euphoric and enthusiastic when giving ideas.
- e) Chris Warth is today believed to have suggested the name Java.
- f) The name Java was chosen by family members, colleagues and friends out of three final names.
- g) The truth is that Java refers to the cafeteria the engineers used to go to.
- h) The origin of the name comes from the willingness of a group of people and a pure coincidence.

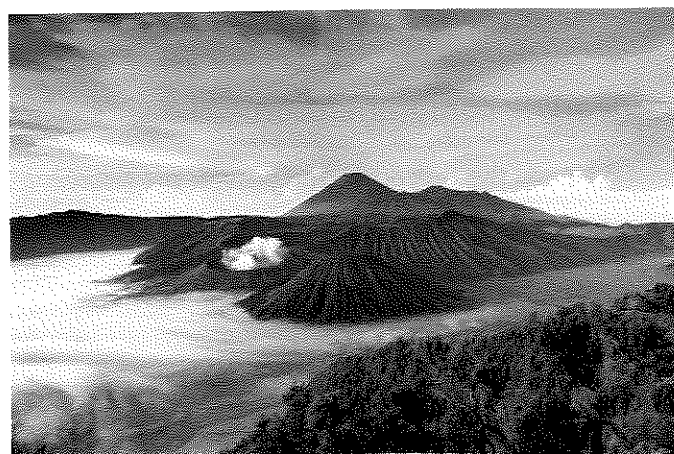
4 Match the following words/expressions from the text with their correspondent synonyms or definitions.

smart - weird - achieve - survey - discard - trademark - lively - concern -
run - dozen - yell out - out of the blue - day-to-day - computer-literate

- | | |
|--------------------------|--------------------------|
| a) animated, cheerful | h) odd, bizarre |
| b) cry out, shout | i) twelve |
| c) worry | j) analysis, study |
| d) intelligent | k) daily, periodic |
| e) operate, perform | l) able to use computers |
| f) get rid of, eliminate | m) unpredicted |
| g) symbol, brand | n) get |

5 Find the verbs in bold in the text and classify them. Can you find more examples?

- a) Conditional
- b) Present Perfect
- c) Past Perfect
- d) Passive
- e) Past Continuous



Giving instructions

① There are many ways to give instructions in English. Read the following examples:

Imperative	By + -ing
<ul style="list-style-type: none"> ▪ Click on the right button. ▪ Search the information using this search engine. 	<ul style="list-style-type: none"> ▪ Start the search by typing a word in the search box. ▪ Print the document by pressing the green button.
Sequence words	Complex instructions
<ul style="list-style-type: none"> ▪ First, select the information you want. ▪ Then, press Ctrl+C to cut it. ▪ Finally, press Ctrl+V to paste it in the new document. 	<ul style="list-style-type: none"> ▪ After having clicked on "send", you won't be able to make any changes. ▪ Once the document has been sent, you won't be able to make any changes.
To + infinitive	
<ul style="list-style-type: none"> ▪ To print the document, press the green button. ▪ To scan the document, use the new scanner. 	

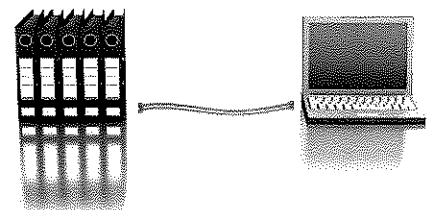
② Your mother has a new mobile phone and she does not know how to take photos and send them to you. Write instructions for her using the previous forms:



- _____
- _____
- _____
- _____
- _____
- _____
- _____

③ Complete the following instructions for scanning a document:

- First _____ (switch on) the scanner by _____ (press) the orange button.
- To _____ (scan) the document in black and white, _____ (press) the "copy" button.
- Start the scan process by _____ (press) the "scan" button.
- Having _____ (scan) the first side of the paper, _____ (turn) the page.
- Once the document _____ (scan), _____ (switch off) the scanner.
- Finally, _____ (save) the new document in your folder or pen drive.



- 4 Work in pairs. Give instructions to your partner orally for the following actions. Use the expressions in exercise 1.



Student A

- Share a document with your partner using Dropbox or Google Drive
- Make ten photocopies of a document
- Play your favourite videogame
- Make a Spanish omelette
- Use the washing machine

Student B

- Send a photograph to your friends via Whatsapp
- Download and install an antivirus
- Play your favourite mobile game
- Prepare a nice cup of coffee
- Use the microwave

- 5 Match the sentences a-e to 1-5 to give appropriate instructions.

- | | |
|--|--|
| a) Turn on the television | 1. use the kettle. |
| b) Having finished the activity, | 2. add them to the pan. |
| c) To heat the water, | 3. by pressing the red button of the remote. |
| d) Once the selection of photos has been made, | 4. help your partner with it. |
| e) Having whisked the eggs, | 5. delete the rest. |

Asking for instructions

- 6 Work in pairs. Student A is going to ask for suggestions to use the following devices. Student B is going to give specific instructions.



How do you...?

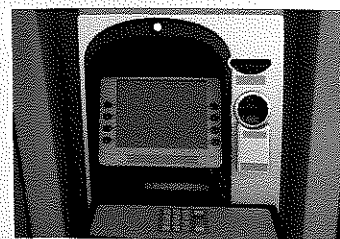
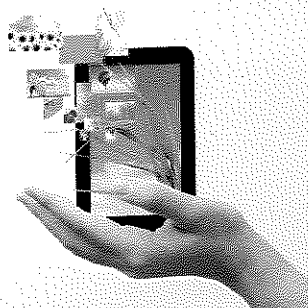
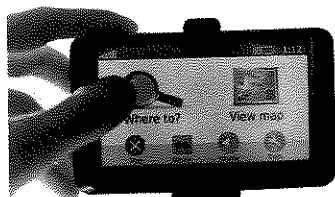
What is the best way to...?

What do you suggest?

What is the first step?

What do you do next?

Can you explain to me how...?



Speaking

Creating an online tutorial



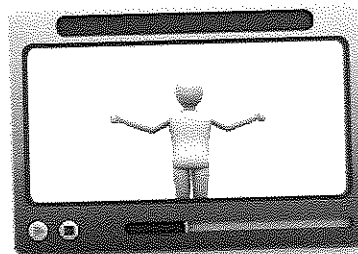
1 Answer these questions and share your ideas with the class:



- a) What is a tutorial?
- b) Have you ever searched a tutorial online? Was it useful? Why/Why not?
- c) What are the websites that people usually visit to find good tutorials?
- d) Who are the creators of tutorials? Who is the target audience?
- e) What are the most common topics that tutorials are made about?
- f) Mention the elements that make a tutorial useful and good.
- g) Is music necessary in an online tutorial? Why/Why not?

2 Work in groups. Search an online tutorial in English and show it in class. Analyse the following elements:

- Instructions
- Clarity and brevity
- Image and sound
- English language
- Usefulness



3 Work in pairs or groups. You are going to create a video-tutorial. Follow these instructions:



1. Choose the device/service/program you want to give instructions for.
2. Prepare an outline with the necessary instructions. Be clear and concise.
3. Use proper grammar (page 55- instructions) and specific vocabulary.
4. Record a video using the digital resources that you need: camera, video-editing programs, audio programs or other specific programs.
5. Present the video to the class.
6. Pay attention to fluency, grammar, vocabulary, content, structure and pronunciation.



A set of instructions

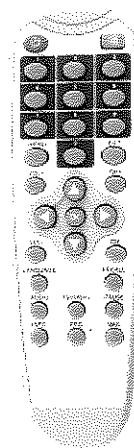
- ① Read the following set of instructions for setting up a TV remote control:

ENG FAIOS REMOTE CONTROL

This user manual will show you how to program and operate your new FAIOS remote control.

1. **Turn on** the TV and the FAIOS remote control. Make sure you can see live television.
2. **Locate** the 3-digit code for your TV brand in the list that appears on the screen.
3. Once you have located the brand code, **press** and **hold** the <OK> button. The red led on the remote will **blink** twice and then stay on.
4. Press <OK> to **save** this TV brand code programming.
5. **Turn** the TV **off** by using the red button.
6. Turn the TV on to test that the remote control is programmed for your TV.
7. Press and **release** <VOL +> <VOL -> and <CH +> <CH -> to make sure that these keys work.

YOUR REMOTE CONTROL IS NOW PROGRAMMED FOR YOUR TV!



- ② Read the text again and look at the words in bold. What do they mean?

- ⑤ Write a set of instructions for setting and programming two of the following devices.

- ③ Underline the following grammar structures in the text:

- a) Imperative forms of the verbs
- b) Future forms
- c) By + *ing* structures

ebook - Thermomix - fan - vacuum cleaner -
microwave - air conditioning - TV - iron -
DVD player - fridge - stereo - washing machine

- ④ Look for sets of instructions you may have at home. Check that they are in English and take them to class. Analyse them in groups.

