

1st step in the digital world

2021-IT03-KA210-YOU-000033940



Instruction manual

**Game No 4:
"Understanding
Computer hardware"**



INTRODUCTION

Game No 4:

"Understanding Computer hardware"

PURPOSE OF THE GAME

The 'Understanding Computer hardware' game aims to help children learn about the most important PC components, their functions and how they are assembled, in an easy and fun way.

Build a real PC!

Players, with the help of the Trainer, have to build a real case step by step that will contain all the main components of the PC:

- 1.Processor;
- 2.Ram;
- 3.Motherboard;
- 4.Video card;
- 5.Power supply unit;
- 6.Case;
- 7.Solid state drive;
- 8.Heat sink CPU

Game Rules

Players and Game Duration

2 players per game set;
Game duration: 60 minutes.

What you need to get started:

- 1) Stickers;**
- 2) No. 2 cardboard shoe boxes (1 for components, 1 for computer case, dimensions L = cm 23 x D = cm 34.5 x H = cm 13);**
- 3) Scissors;**
- 4) Glue or adhesive tape.**

Before starting:

Download all the stickers from 'primopassoneldigitale.eu' and make sure you have all the materials you need to start playing!

How to play:

Follow the instructions below and build your own PC!
Follow all the steps, at the end of the game you will get your model computer and you will have learnt what it looks like!

Step 1:

Let's create the components of your PC!

1

After printing and cutting out all the stickers, place the stickers one by one on the first cardboard box, take the measurements and cut out the cardboard to obtain the shape of the **7 components** on which to stick the stickers.



2

Glue all the stickers onto the cut-out cards with glue or adhesive tape.

3

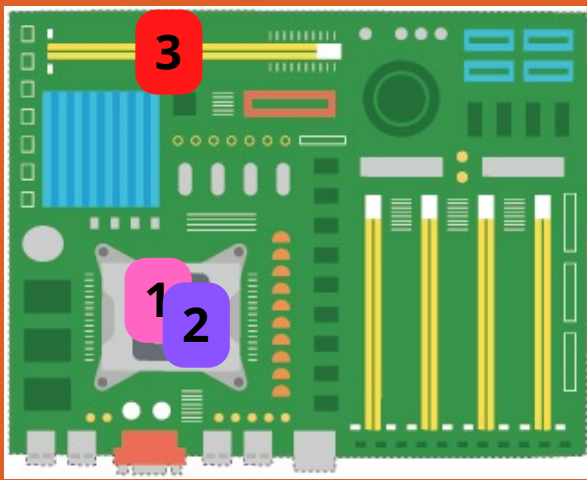
Use the same procedure to create the computer **CASE**

2nd Step:

Let's assemble the Motherboard!

Part I

Motherboard

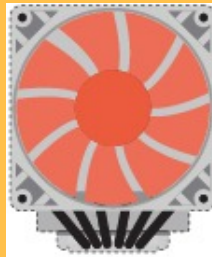


This is your motherboard! It is a very simple board model, place the following components on it, sticking them with glue or adhesive tape in the position corresponding to their number:

1 Processor:

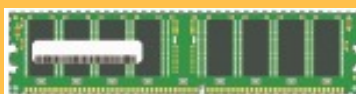


2 Heat sink CPU



The **heatsink** must be glued **over the processor** because that is usually where it is to be installed. The **heatsink** will then **cover the processor**.

3 Ram:



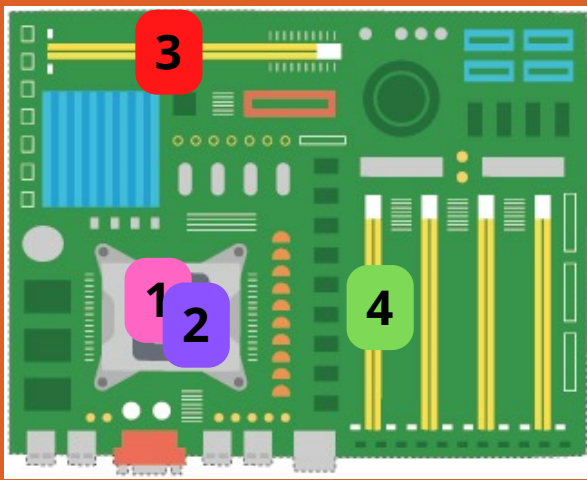
To position the RAM on the motherboard, create a **slot** along the **entire yellow line with scissors** and **insert the cardboard RAM** inside it as if it were real!

2nd Step:

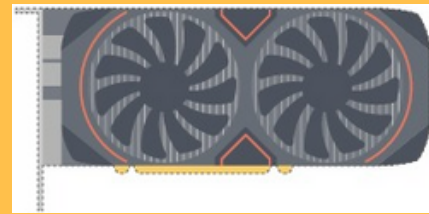
Let's assemble the Motherboard!

Part II

Motherboard



4 Video Card:



Follow the same procedure as for the RAM, the video card must also be inserted into the motherboard by creating a **slot** along the **yellow line** with **scissors!**

You made it!

Our motherboard is now complete!
Now, all we have to do is create the **computer case** and install it into it So let's move on to the next step!

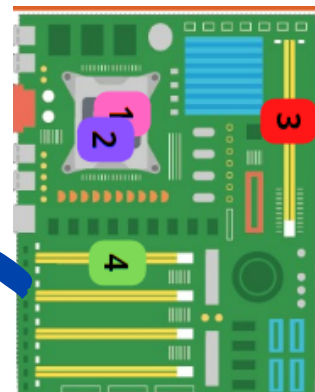
Step 3:

Assembling the PC CASE

Part I

Pc case

Glue the previously printed stickers No. **5** and No. **6** onto **your shoe box**, as shown in the picture.

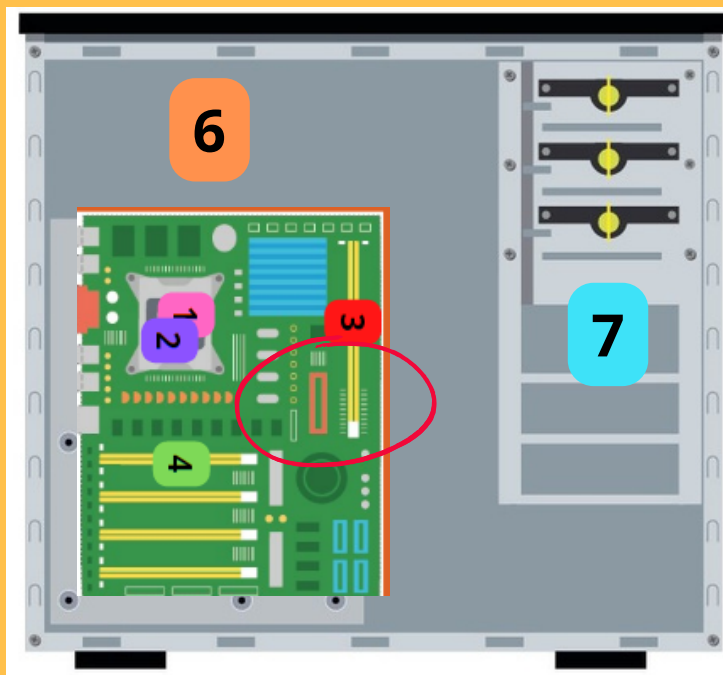


Now you can put the **motherboard in the case**, in the space indicated by the arrow (**follow the direction of the board shown in the picture above**).

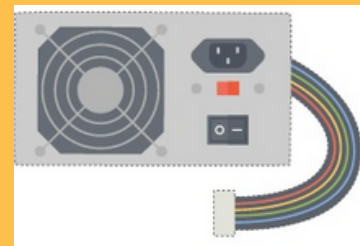
Step 3:

Assembling the PC CASE

Part II



6 Power supply unit



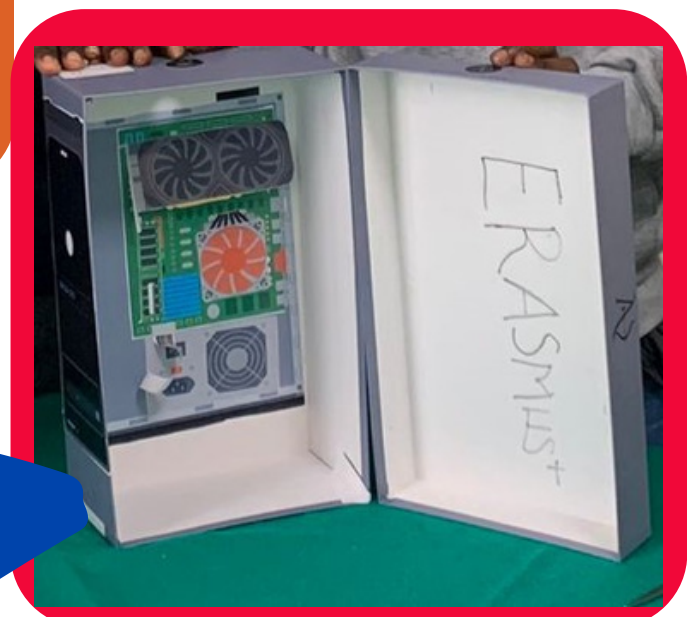
The **PSU** should be placed on top of the motherboard. As a rule, the **cables** you see connected to it should be plugged into the **section INDICATED BY THE RED CIRCLE** on the motherboard.

7 Solid state drive



Finally, place your **SSD** in **section 7**

YOUR PC IS READY!!!



RESULTS

By building a PC step by step, participants will improve:

1 Cognitive skills

The participants train their memory and **problem-solving skills**. In addition, since the game lasts up to **60 minutes**, the children will have to concentrate in order to reach their goal: this will increase their ability to concentrate, their level of attention and their planning and reasoning skills.

2 Social skills

Since they have to work together to create the various components, the participants will develop more **empathy** and their **social skills**, becoming familiar with their peers and, consequently, strengthening their social bond.

3 Basic IT skills

By participating in the board game, the children will learn how the **most important components of computer work** and know how to talk about and identify them.