

Worksheet for the Cubeling app

Task 1. Build using the 3D view!

- a slalom
- a row
- a tower
- your favorite animal


Task 2. Build using the building plan!

- a thick tower
- a pyramid
- a fish
- a house

Task 3. Turn off the 3D view and the building plan! Continue building!

- a wall
- a tower
- the first letter of your name
- the largest possible „X“

Task 4. Answer the following questions about the code view! Explore the app!

- What buttons are there and what happens when you click on them?
- What is the meaning of the gray arrow at the left edge of the code view?
- What do the colored squares represent in the code view?
- For what can you use the arrows that appear when you click on one of the squares?
- What happens when you build a cube outside of the grid? How do you even do that?
- What happens when you want to remove a non-existent cube?
- What happens when you build a cube “wrongly”, i.e. not specifying a green or blue number?
- What does the symbol  allow you to do?

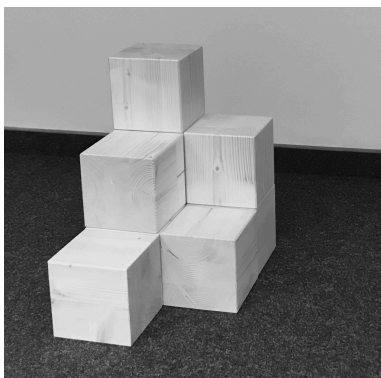
Use only the code view for the next tasks! If necessary, you can use the 3D view and building plan to check your results.

Task 5.

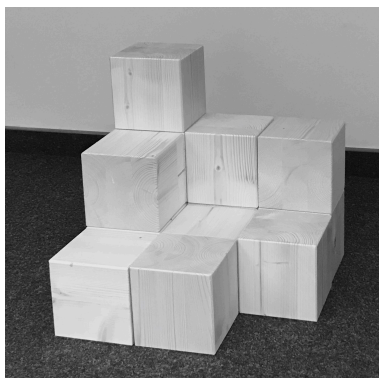
- Create a cube structure (it doesn't have to be connected, but it shouldn't be too complicated)!
- Insert two blank lines!
- Now, in the code view, try to reflect this structure over the vertical center!
 - How do the green and blue numbers of the reflected structure change in comparison to the original structure?
 - Can you find a general rule?
 - Would this also be the case in an 8x8 or 9x9 grid?

Task 6.

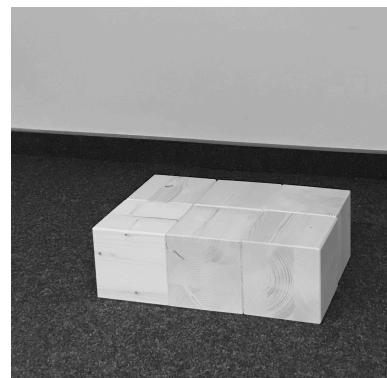
- Build cube structure 1 using the code view!
- By adding additional lines of code, construct structure 2!
- By then again adding more lines of code, transform it into structure 3!



Structure 1



Structure 2



Structure 3

Task 7.

Play the following game:

- Think of a cube structure and show your partner this structure in only one of the views.
- Choose a view (3D, building plan, or code) for your partner to recreate the structure in!
- Compare your results. If your partner has made no mistakes, they receive a point.
- Then, switch roles. The first one to 3 points is the winner.