

# Computer Games Exercises: 2024s s03 (all)

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## Answer header

Please put the author information in the header of all code files.

- `name` (Name)
- `coauthor list`

## G05b: Signals and messaging system

### Preparation

Read the documentation further under *Getting started - Step by step* and *Manual - Math*:

- [Using signals](#)
- [Matrices and transforms](#)

## Task

Read the source code of the provided game "instancing" and extend the game.

- No further member variables should be added to the `Main` scene.
- Add one `Label` object to the main scene by code when the game starts. It should show the value 0 by default.
- Connect the built-in signal `child_entered_tree()` of the main scene to a new callback function, which increases the value shown on the label by 1.
- Add one custom signal to the main scene, which is emitted when the value shown on the label is a multiple of 5.
- Connect the custom signal to a new callback function of the `Ball` scene, which halves the size of its children `Sprite2D` and `CollisionShape2D`, when a ball is instantiated.

## Questions

Write the corresponding answers in the script file.

- Which type of message system are the signals in Godot?
- How to realize broadcasting with the message system in Godot?