

Questions and Exercises

These questions and exercises is an opportunity to see what you've learnt from the lecture as well as practice the new things we've been talking about. In other words, these questions and exercises are completely optional but it's recommended to do them. In the end of the document you will find the answers to the questions as well as possible solutions to the exercises, note that one can solve an exercise in different ways. There will also be some suggestions about what one could code if one want to continue with some more advanced things. These suggestions will not come with a possible solution and might include things that haven't been covered in the lecture.

Question 1

What is an inventory in Minecraft? How can we make one?

Question 2

What different components do we need to show a normal interface?

Question 3

How do we prevent certain items from being put into an inventory?

Exercise

Create a block with an inventory of 10 slots. You should only be able to store cake in the inventory. The inventory should of course also have an interface that goes with it.

If you want you can download some textures at the link below

<https://dl.dropboxusercontent.com/u/46486053/CakeBoxTexturesLecture1.zip>

Further explorations

Improve the spaceship from the last course (if you didn't take that course just download the source for this lecture, it contains everything from the last course). Give the spaceship an inventory where the player can store ammunition, this is the ammunition that should be used by the spaceship. Give the spaceship an interface so the player can reload it.

Answers and solutions

Answer to Question 1

An inventory in minecraft can be anything. It can be blocks(TileEntities), entities or whatever we like. The only important part is that they implement IInventory, if they do, they are inventories. To create one we simple implement the interface and override all the required methods.

Answer to Question 2

To display an interface we need the interface itself (class and texture files). We also need a Container, this will be used on both the client and the server whereas the interface is only used on the client side. Furthermore, we also need a GuiHandler(that we must register) that will define which interfaces and containers that will be used when we want to display something. Finally, we need to call the method openGui from the NetworkHandler whenever we want to open the interface.

Answer to Question 3

The IInventory interface has a method called isStackValidForSlot, this can be used to determine if a specific item is allowed into the inventory. This doesn't however prevent the player from putting things in the inventory. To achieve that you'll have to create your own slot type and use the method isItemValid. Therefore, to do it properly you'll have to do both those things.

Possible solution to Exercise

<https://dl.dropboxusercontent.com/u/46486053/CakeBoxSolutionLecture1.zip>