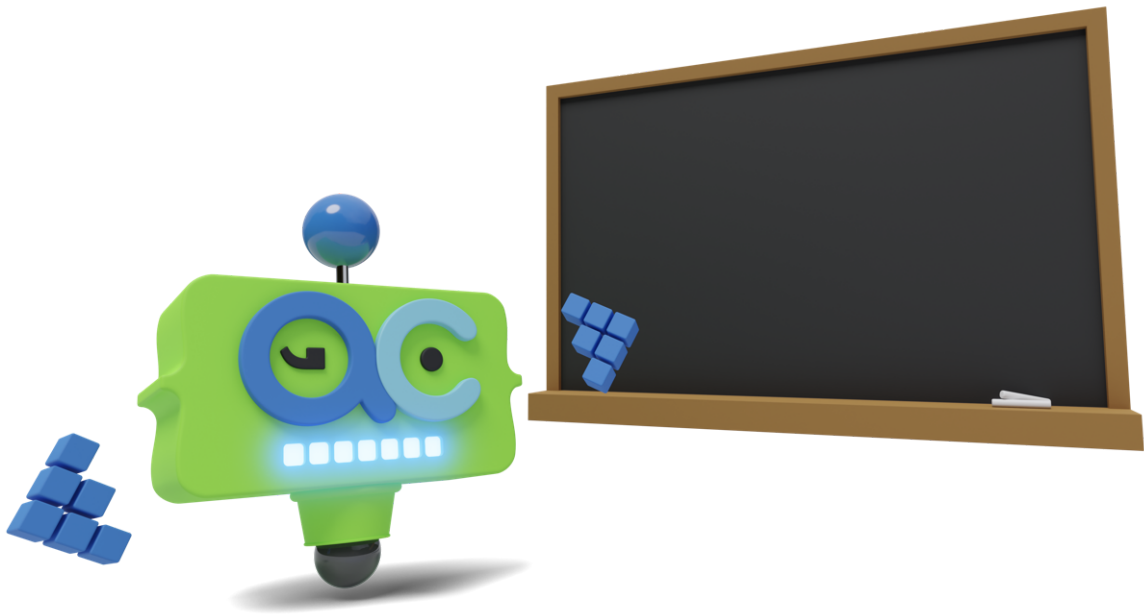


# Liferay-Gen

## TYPICAL USAGE FLOW



{ac} SOFTWARE  
engineering ideas 

## SUMMARY

### 1. WORKSPACE CREATION

### 2. SERVICE-BUILDER MODULE CREATION

### 3. MODIFICATION OF THE SERVICE BUILDER MODULE: ENTITY CREATION

#### 3.1 GUESTBOOK ENTITY

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### 4. PORTLET MODULE CREATION

#### 4.1 GUESTBOOK PORTLET

#### 4.2 GUESTBOOKENTRY PORTLET

### 5. BUILD, RUN AND DEPLOY

#### 5.1 BUILD

#### 5.2 RUN

#### 5.3 DEPLOY

### 6. TEST



# SUMMARY

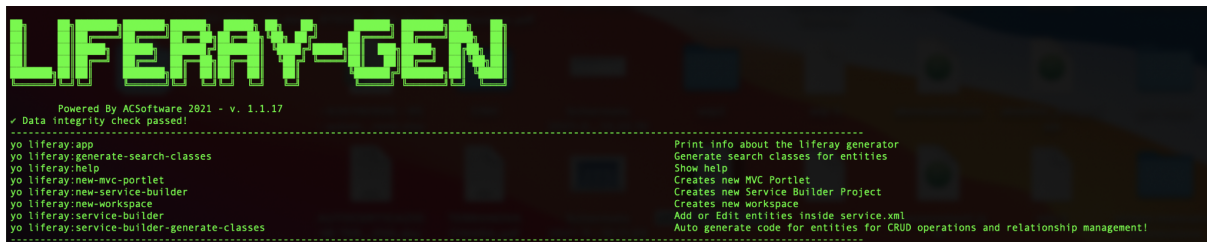
The purpose of this guide is to show you how to quickly create one or more control panel portlets thanks to the liferay code generator. In a few simple steps, we will create the Guestbook portlet and the GuestbookEntry portlet without ever having to open an editor. Finally, we will test the portlets on a liferay environment that we will launch via Docker, by means of the auto-generated yml file.

The main steps can be summarized in the following list:

1. Creating the *workspace*
2. Creating the *service builder module*
3. Creating the *entities in the service builder*
4. Creating the *portlets associated with the entities*

In these steps, we will also see how to integrate *indexing and search*.

Int .: for a complete list of generator commands, type the command **yo liferay:help**



```
LIFERAY-GEN
Powered By ACSOFTWARE 2021 - v. 1.1.17
✓ Data integrity check passed!

yo liferay:app                Print info about the liferay generator
yo liferay:generate-search-classes Generate search classes for entities
yo liferay:help              Show help
yo liferay:new-mvc-portlet    Creates new MVC Portlet
yo liferay:new-service-builder Creates new Service Builder Project
yo liferay:new-workspace      Creates new workspace
yo liferay:service-builder    Add or Edit entities inside service.xml
yo liferay:service-builder-generate-classes Auto generate code for entities for CRUD operations and relationship management!
```

Image 1: yo liferay:help command list



# 1. WORKSPACE CREATION

Let's open a terminal in our development folder, without previously creating the folder that will contain our project. On the terminal, we type the command **yo liferay:new-workspace**:

```
lenzoterranova@enzo-terranova liferay-generated-examples $ yo liferay:new-workspace

LIFERAY-GEN

    Powered By ACSOFTWARE 2021 - v. 1.1.17
✓ Data integrity check passed!
  info Checking for new updates....
  info Checking requirements...
  info Checking gradle installation...
✓ Gradle 5.1 Found!
  info Checking java installation...
✓ Java 1.8 Found!
  info Checking JPM installation...
✓ JPM 4 Found!
  info Checking Blade installation...
✓ Blade 4 Found!
  info Checking Node installation...
✓ Node 14.15 Found!
✗ Cannot find modules folder!
  info Current version is: 1.1.17 , latest version is: 1.1.17
  info No updates found!
[?] What is the name of your Workspace? Guestbook
[?] What is the global package of this workspace? com.liferay.docs.guestbook
[?] Which version of liferay? portal-7.3-ga6
  info Creating workspace with blade tool...
✓ Workspace creation OK!
  force .yo-rc.json
  info Creating yo.rc file...
  force Guestbook/.yo-rc.json
  create Guestbook/docker-compose-guestbook
  info Task duration: 46040 ms
```

Image 2:yo liferay:new-workspace workspace creation

As shown in image (2), after the command execution, will be asked a series of questions with the aim of creating a project based on your needs. To create our project *Guestbook*, we answer the questions as follows:

1. What is the name of your Workspace? **Guestbook**
2. What is the global package of this workspace? **com.liferay.docs.guestbook**
3. Which version of liferay? **portal-7.3-ga6**

At the end of the process, the project folder will be created. **So let's navigate through the folder via the terminal before continuing.**





## 2. SERVICE-BUILDER MODULE CREATION

Let's create the **service builder** module, which will contain the **service.xml** that will contain in turn our entities. Inside the *workspace* type the command **yo liferay:new-service-builder**:

```
enzoterranova@enzo-terranova Guestbook $ yo liferay:new-service-builder

LIFERAY-GEN

Powered By ACSOFTWARE 2021 - v. 1.1.17
✓ Data integrity check passed!
  info Checking for new updates...
  info Checking requirements...
  info Checking gradle installation...
✓ Gradle 5.1 Found!
  info Checking java installation...
✓ Java 1.8 Found!
  info Checking JPM installation...
✓ JPM 4 Found!
  info Checking Blade installation...
✓ Blade 4 Found!
  info Checking Node installation...
✓ Node 14.15 Found!
Reading projects from: /Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules
  info Current version is: 1.1.17 , latest version is: 1.1.17
  info No updates found!
? What is the project name? Guestbook
? What is the Service builder namespace? GB
? What is the package for your portlet? com.liferay.docs.guestbook.persistence
  info Creating service builder with blade tool: blade create -t service-builder -v 7.3 -p com.liferay.docs.guestbook.persistence Guestbook
Successfully created project Guestbook in /Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules
✓ Service Builder project Guestbook creation OK!
  force .yo-rc.json
  force modules/Guestbook/.yo-rc.json
  create modules/Guestbook/Guestbook-service/src/main/resources/portlet.properties
  create modules/Guestbook/Guestbook-service/src/main/resources/META-INF/resource-actions/default.xml
  info Task duration: 25197 ms
```

image 3: `yo liferay:new-service-builder` service builder module creation

As for the previous step (see image 3), we will have to answer some questions:

1. What is the project name? **Guestbook**
2. What is the Service builder namespace? **GB**
3. What is the package for your portlet? **com.liferay.docs.guestbook.persistence**

At the end of the process the builder will have created the service builder module.



## 3. MODIFICATION OF THE SERVICE BUILDER MODULE: ENTITY CREATION

Once we have our service builder module, we have to populate the service xml with the desired entities. We will create 2 entities: **Guestbook** and **GuestbookEntry**.

### 3.1 GUESTBOOK ENTITY

Run the command *launchyo liferay:service-builder*:

```
lenzoterranova@lenzo-terranova Guestbook $ yo liferay:service-builder
LIFERAY-GEN
    Powered By ACSOFTWARE 2021 - v. 1.1.17
✓ Data integrity check passed!
  info Checking for new updates...
  info Checking requirements...
  info Checking gradle installation...
✓ Gradle 5.1 Found!
  info Checking java installation...
✓ Java 1.8 Found!
  info Checking JPM installation...
✓ JPM 4 Found!
  info Checking Blade installation...
✓ Blade 4 Found!
  info Checking Node installation...
✓ Node 14.15 Found!
Reading projects from: /Users/lenzoterranova/dev/liferay-generated-examples/Guestbook/modules
  info Current version is: 1.1.17 , latest version is: 1.1.17
  info No updates found!
  info Creating entity for project: Guestbook
  info Reloading configuration of: Guestbook
  info Service XML path: /Users/lenzoterranova/dev/liferay-generated-examples/Guestbook/modules/Guestbook/Guestbook-service/service.xml
  info Default XML File: /Users/lenzoterranova/dev/liferay-generated-examples/Guestbook/modules/Guestbook/Guestbook-service/src/main/resources/META-INF/resource-actions/default.xml
  info Model Hints: /Users/lenzoterranova/dev/liferay-generated-examples/Guestbook/modules/Guestbook/Guestbook-service/src/main/resources/META-INF/portlet-model-hints.xml
  info Namespace: GB
  info Found an existing service.xml, the changes will continue on that one
? Do you want to edit an existing entity or add new one? AddNew
  info Creating new entity...
? What is your entity name? Guestbook
? Do you want to generate standard entity? (all audit fields with primary key <entity>Id)? Yes
? Has a local service impl? Yes
? Has a remote service impl? Yes
? Has a uuid? Yes
? Do you want to add your entity into Asset? Yes
? Do you want to add workflow fields? Yes
? Choose the workflow fields status, statusById, statusByUserName, statusDate
```

image 4: `yo liferay:service-builder` edit the service builder module

Let's answer these first questions that define the general parameters of the entity, before get into specifics. We answer the questions as follows:

1. What is your entity name? **Guestbook**
2. Do you want to generate standard entity? (all audit fields with primary key <entity>Id)? **Yes**
3. Has a local service impl? **Yes**
4. Has a remote service impl? **Yes**
5. Has a uuid? **Yes**
6. Do you want to add your entity into Asset? **Yes**
7. Do you want to add workflow fields? **Yes**
8. Choose the workflow fields: **status, statusById, statusByUserName, statusDate**



After these first questions, we will be shown a menu to allows us to insert details about the entity:

```
? What kind of element you want to add? (Use arrow keys)
> Column
  Finder
  Order
  Reference
  Relationship
  Print Entity
  Done
```

image 5: `yo liferay:service-builder` entity detail

Thanks to the previously given answers, the entity **Guestbook** already contains a *key*, the *audit fields* and the *workflow fields*. Let's add a column **name** of type *String*, simply by selecting the item **Column** from the menu and answering the questions:

```
? What kind of element you want to add? Column
? What is the column name? name
? What type is it? String
? Do you want to add localization to your field? Yes
? Do you want to add validation rules or define model hints for your field? Yes
? Which validation rules do you want to add? required( validator )
? Do you want to add validation rules or define model hints for your field? No
? Do you want to add a new column? No
```

image 6: `yo liferay:service-builder` column creation

1. What is the column name? **name**
2. What type is it? **String**
3. Do you want to add localization to your field? **Yes**
4. Do you want to add validation rules or define model hints for your field? **Yes**
5. Which validation rules do you want to add? **required( validator )**
6. Do you want to add validation rules or define model hints for your field? **No**
7. Do you want to add a new column? **No**

At this point will be shown again the menu in image 5. Let's create an **Order**:

```
? What kind of element you want to add? Order
? Order by asc or desc? desc
? Whats your order column name? createDate:Date
? What kind of element you want to add? (Use arrow keys)
```

image 7: `yo liferay:service-builder` order creation

1. Order by asc or desc? **desc**
2. Whats your order column name? **createDate:Date**



Let's add a **Finder**:

```
? What kind of element you want to add? Finder
[? Whats the finder name? GroupId
? What type it returns? Collection
? Whats the finder column name? groupId
```

Immagine 8: `yo liferay:service-builder` creazione finder

1. *Whats the finder name?* **GroupId**
2. *What type it returns?* **Collection**
3. *Whats the finder column name?* **groupId**
4. *Do you want to add a new finder?* **No**

We have finished the first entity. Before moving on to the next one, let's check what we have done so far, selecting the command **Print Entity**:

```
? What kind of element you want to add? Print Entity
info

Entity Name:Guestbook, local-service:true, remote-service:true, uuid:true

Columns:
  name:guestbookId, type:long, primary:true

  name:name, type:String, localized:true

  name:modifiedDate, type:Date
  name:createDate, type:Date
  name:userName, type:String
  name:userId, type:long
  name:companyId, type:long
  name:groupId, type:long

  name:statusDate, type:Date
  name:statusByUserName, type:String
  name:statusByUserId, type:long
  name:status, type:int

Order:
  by:desc
    order-column name:createDate

Finders:
  name:GroupId, return-type:Collection
    finder-column name:groupId
```

image 9: `yo liferay:service-builder` print entity



The output of this command is the detail of the entity we are creating. At this point you can decide to add other components to this entity or proceed further. In this case we will assume that the entity is terminated so we can select **Done**.

```
? What kind of element you want to add? Done
info Auto-generating finder CompanyId
[? Generate Services Code Now? Yes
force .yo-rc.json
```

image 10: `yo liferay:service-builder` generate services code

After selecting *Done* we will be asked if we want to generate the **Services Code**: we answer "yes". This response will trigger a process generating the CRUD code for the *ServiceImpl*.

## 3.2 GUESTBOOKENTRY ENTITY

Let's relaunch the task `yo liferay:service-builder` to create the entity *GuestbookEntry*:

```
lenzoterranova@lenzo-terranova Guestbook $ yo liferay:service-builder
LIFERAY-GEN
Powered By ACSOFTWARE 2021 - v. 1.1.17
✓ Data integrity check passed!
info Checking for new updates....
info Checking requirements...
info Checking gradle installation...
✓ Gradle 5.1 Found!
info Checking java installation...
✓ Java 1.8 Found!
info Checking JPM installation...
✓ JPM 4 Found!
info Checking Blade installation...
✓ Blade 4 Found!
info Checking Node installation...
✓ Node 14.15 Found!
Reading projects from: /Users/lenzoterranova/dev/liferay-generated-examples/Guestbook/modules
info Current version is: 1.1.17 , latest version is: 1.1.17
info No updates found!
info Creating entity for project: Guestbook
info Reloading configuration of: Guestbook
info Service XML path: /Users/lenzoterranova/dev/liferay-generated-examples/Guestbook/modules/Guestbook/Guestbook-service/service.xml
info Default XML File: /Users/lenzoterranova/dev/liferay-generated-examples/Guestbook/modules/Guestbook/Guestbook-service/src/main/resources/META-INF/resource-actions/default.xml
info Model Hints: /Users/lenzoterranova/dev/liferay-generated-examples/Guestbook/modules/Guestbook/Guestbook-service/src/main/resources/META-INF/portlet-model-hints.xml
info Namespace: GB
info Found an existing service.xml, the changes will continue on that one
? Do you want to edit an existing entity or add new one? AddNew
info Creating new entity...
? What is your entity name? GuestbookEntry
? Do you want to generate standard entity ? (all audit fields with primary key <entity>Id)? Yes
? Has a local service impl? Yes
? Has a remote service impl? Yes
? Has a uuid? Yes
? Do you want to add your entity into Asset? Yes
? Do you want to add workflow fields? Yes
? Choose the workflow fields status, statusByUserId, statusByUserName, statusDate
```

image 10: `yo liferay:service-builder` GuestbookEntry entity creation

1. Do you want to edit an existing entity or add new one? **AddNew**
2. What is your entity name? **GuestbookEntry**
3. Do you want to generate standard entity ? (all audit fields with primary key <entity>Id)? **Yes**
4. Has a local service impl? **Yes**
5. Has a remote service impl? **Yes**
6. Has a uuid? **Yes**
7. Do you want to add your entity into Asset? **Yes**





8. Do you want to add workflow fields? **Yes**
9. Choose the workflow fields: **status, statusById, statusByUserName, statusDate**

At this point we're going to add 4 columns, 3 of which are the attributes of the entity: *name*, *email* and *message*; the other column is the foreign key *guestbookId* for membership in the *guestbook*. For the first 3 columns we will act as we have already done before for the *name* column of the *Guestbook*, while the *guestbookId* we will select the voice **Relationship**. Let's start with the columns *name*, *email* and *message*:

```
? What kind of element you want to add? Column
[?] What is the column name? name
? What type is it? String
[?] Do you want to add localization to your field? No
[?] Do you want to add validation rules or define model hints for your field? Yes
? Which validation rules do you want to add? required( validator )
[?] Do you want to add validation rules or define model hints for your field? No
[?] Do you want to add a new column? Yes
[?] What is the column name? email
? What type is it? String
[?] Do you want to add localization to your field? No
[?] Do you want to add validation rules or define model hints for your field? Yes
? Which validation rules do you want to add? required( validator )
[?] Do you want to add validation rules or define model hints for your field? Yes
? Which validation rules do you want to add? email( validator )
[?] Do you want to add validation rules or define model hints for your field? No
[?] Do you want to add a new column? Yes
[?] What is the column name? message
? What type is it? String
[?] Do you want to add localization to your field? Yes
[?] Do you want to add validation rules or define model hints for your field? Yes
? Which validation rules do you want to add? required( validator )
[?] Do you want to add validation rules or define model hints for your field? Yes
? Which validation rules do you want to add? editor( hint )
[?] What is the value of the validation rule? true
[?] Do you want to add validation rules or define model hints for your field? No
[?] Do you want to add a new column? No
```

image 11: yo liferay:service-builder creating columns

1. What kind of element you want to add? **Column**
2. What is the column name? **name**
3. What type is it? **String**
4. Do you want to add localization to your field? **No**
5. Do you want to add validation rules or define model hints for your field? **Yes**
6. Which validation rules do you want to add? **required( validator )**
7. Do you want to add validation rules or define model hints for your field? **No**
8. Do you want to add a new column? **Yes**
9. What is the column name? **email**
10. What type is it? **String**
11. Do you want to add localization to your field? **No**
12. Do you want to add validation rules or define model hints for your field? **Yes**
13. Which validation rules do you want to add? **required( validator )**



14. Do you want to add validation rules or define model hints for your field? **Yes**
15. Which validation rules do you want to add? **email( validator )**
16. Do you want to add validation rules or define model hints for your field? **No**
17. Do you want to add a new column? **Yes**
18. What is the column name? **message**
19. What type is it? **String**
20. Do you want to add localization to your field? **Yes**
21. Do you want to add validation rules or define model hints for your field? **Yes**
22. Which validation rules do you want to add? **required( validator )**
23. Do you want to add validation rules or define model hints for your field? **Yes**
24. Which validation rules do you want to add? **editor( hint )**
25. What is the value of the validation rule? **true**
26. Do you want to add validation rules or define model hints for your field? **No**
27. Do you want to add a new column? **No**

By answering these questions we have also specified validation, localization and model hints.

At this point we add the **Relationship**:

```
? What kind of element you want to add? Relationship
? What is the name of the other entity? Guestbook
? What is the type of the relationship? ManyToOne
[? Do you want to add a relationship to another entity? No
```

image 12: `yo liferay:service-builder` relationship creation

1. What kind of element you want to add? **Relationship**
2. What is the name of the other entity? **Guestbook**
3. What is the type of the relationship? **ManyToOne**
4. Do you want to add a relationship to another entity? **No**

Let's also add for this entity an **Order**:

```
? What kind of element you want to add? Order
? Order by asc or desc? desc
? Whats your order column name? createDate:Date
```

image 13: `yo liferay:service-builder` order creation

1. What kind of element you want to add? **Order**
2. Order by asc or desc? **desc**
3. Whats your order column name? **createDate:Date**

And finally add a **Finder**:



```
[?] Whats the finder name? G_G
? What type it returns? Collection
? Whats the finder column name? groupId, guestbookId
[?] Do you want to add a new finder? No
```

image 14: yo liferay:service-builder creation finder

1. Whats the finder name? **G\_G**
2. What type it returns? **Collection**
3. Whats the finder column name? **groupId, guestbookId**
4. Do you want to add a new finder? **No**

We have finished our entity. As for the previous one, we do a check by running the command **Print Entity**:

```
Entity Name:GuestbookEntry, local-service:true, remote-service:true, uuid:true
Columns:
  name:guestbookEntryId, type:long, primary:true

  name:name, type:String
  name:email, type:String
  name:message, type:String, localized:true
  name:guestbookId, type:long

  name:modifiedDate, type:Date
  name:createDate, type:Date
  name:userName, type:String
  name:userId, type:long
  name:companyId, type:long
  name:groupId, type:long

  name:statusDate, type:Date
  name:statusByUserName, type:String
  name:statusByUserId, type:long
  name:status, type:int

Order:
  by:desc
    order-column name:createDate

Finders:
  name:Guestbook, return-type:Collection

  name:G_G, return-type:Collection
    finder-column name:groupId
    finder-column name:guestbookId
```

image 14: yo liferay:service-builder print entity





At this point we select **Done** to generate the service code as already done for the previous entity. In the next paragraph we will generate the control panel portlets for the two newly created entities.



## 4. PORTLET MODULE CREATION

### 4.1 GUESTBOOK PORTLET

For the portlets creation we are going to execute the task **yo liferay:new-mvc-portlet**. This task will guide us, through a series of questions, to the creation of a control panel portlet based on an entity of the *service.xml*:

```
lenzoterranova@enzo-terranova Guestbook $ yo liferay:new-mvc-portlet

LIFERAY-GEN

    Powered By ACSoftware 2021 - v. 1.1.18
✓ Data integrity check passed!
  info Checking for new updates....
  info Checking requirements...
  info Checking gradle installation...
✓ Gradle 5.1 Found!
  info Checking java installation...
✓ Java 1.8 Found!
  info Checking JPM installation...
✓ JPM 4 Found!
  info Checking Blade installation...
✓ Blade 4 Found!
  info Checking Node installation...
✓ Node 14.15 Found!
Reading projects from:/Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules
  info Current version is: 1.1.18 , latest version is: 1.1.18
  info No updates found!
[?] What is the name of your new module? Guestbook
[?] What is the package for your portlet? com.liferay.docs.guestbook.portlet
[?] What is the category of your new portlet? hidden
[?] Do you want your module will be instancable? No
[?] Do you want to create a panel app for your portlet? Yes
[?] Which type of panel app category you want to insert?: Liferay Panel App Categories
[?] Insert panel app category name: CONTROL_PANEL_APPS
[?] Do you want to create jsp for CRUD operations? Yes
  info Creating entity for project:Guestbook
  info Reloading configuration of: Guestbook
  info Service XML path: /Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules/
  info Default XML File: /Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules/
  info Model Hints: /Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules/Guest
  info Namespace:GB
[?] Choose the entity for jsp creation Guestbook
[?] Choose the entity fields you want to show in list view name
[?] Choose the column to use for sorting name
  info Press <enter> if you want to skip relationships...
[?] Choose the entity fields you want to show in the input html form name
[?] Crud portlet needs the generation of search indexes classes, do you want to generate it? Yes
```

image 15: yo liferay:new-mvc-portlet portlet creation

1. ? What is the name of your new module? **Guestbook**
2. ? What is the package for your portlet? **com.liferay.docs.guestbook.portlet**
3. ? What is the category of your new portlet? **hidden**



4. ? Do you want your module will be instanceable? **No**
5. ? Do you want to create a panel app for your portlet? **Yes**
6. ? Which type of panel app category you want to insert?: **Liferay Panel App Categories**
7. ? Insert panel app category name: **CONTROL\_PANEL\_APPS**
8. ? Do you want to create jsp for CRUD operations? **Yes**
9. ? Choose the entity for jsp creation **Guestbook**
10. ? Choose the entity fields you want to show in list view **name**
11. ? Choose the column to use for sorting **name**
12. ? Choose the entity fields you want to show in the input html form **name**
13. ? Crud portlet needs the generation of search indexes classes, do you want to generate it? **Yes**

The last question asks us to generate the indexing classes needed for the search bar to work. So answering **yes**, then the generation will start:



```

LIFERAY-GEN

Powered By ACSoftware 2021 - v. 1.1.18
✓ Data integrity check passed!
  info Checking for new updates....
  info Checking requirements...
  info Checking gradle installation...
✓ Gradle 5.1 Found!
  info Checking java installation...
✓ Java 1.8 Found!
  info Checking JPM installation...
✓ JPM 4 Found!
  info Checking Blade installation...
✓ Blade 4 Found!
  info Checking Node installation...
✓ Node 14.15 Found!
Reading projects from:/Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules
  info Removing old projects configuration:undefined
  info Current version is: 1.1.18 , latest version is: 1.1.18
  info No updates found!
  info Creating entity for project:Guestbook
  info Reloading configuration of: Guestbook
  info Service XML path: /Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modu
  info Default XML File: /Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modu
  info Model Hints: /Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules/G
  info Namespace:GB
  info Found an existing service.xml, the changes will continue on that one
? Please select Summary title field: guestbookId:long
? Please select Summary content field: guestbookId:long
? Please select search fields: guestbookId:long, name:String
  
```

image 16: yo liferay:new-mvc-portlet generation of indexing classes

1. ? Please select Summary title field: **guestbookId:long**
2. ? Please select Summary content field: **guestbookId:long**
3. ? Please select search fields: **guestbookId:long, name:String**



After answering the questions for the indexing classes, the portlet generation will be complete. We can proceed with generating the *GuestbookEntry* portlet.



## 4.2 GUESTBOOKENTRY PORTLET

Let's run again the task `yo liferay:new-mvc-portlet`:

```
enzoterranova@enzo-terranova Guestbook $ yo liferay:new-mvc-portlet

LIFERAY-GEN

Powered By ACSOFTWARE 2021 - v. 1.1.18
✓ Data integrity check passed!
  info Checking for new updates....
  info Checking requirements...
  info Checking gradle installation...
✓ Gradle 5.1 Found!
  info Checking java installation...
✓ Java 1.8 Found!
  info Checking JPM installation...
✓ JPM 4 Found!
  info Checking Blade installation...
✓ Blade 4 Found!
  info Checking Node installation...
✓ Node 14.15 Found!
Reading projects from: /Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules
  info Removing old projects configuration: undefined
  info Current version is: 1.1.18 , latest version is: 1.1.18
  info No updates found!
[?] What is the name of your new module? GuestbookEntry
[?] What is the package for your portlet? com.liferay.docs.guestbook.entry
[?] What is the category of your new portlet? hidden
[?] Do you want your module will be instanceable? No
[?] Do you want to create a panel app for your portlet? Yes
[?] Which type of panel app category you want to insert?: Liferay Panel App Categories
[?] Insert panel app category name: CONTROL_PANEL_APPS
[?] Do you want to create jsp for CRUD operations? Yes
  info Creating entity for project: Guestbook
  info Reloading configuration of: Guestbook
  info Service XML path: /Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules/Guestbook/Guestbook-service/service
  info Default XML File: /Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules/Guestbook/Guestbook-service/src/main/resources
  info Model Hints: /Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules/Guestbook/Guestbook-service/src/main/resources
  info Namespace: GB
[?] Choose the entity for jsp creation GuestbookEntry
[?] Choose the entity fields you want to show in list view name, email, message, guestbookId
[?] Choose the column to use for sorting guestbookEntryId
  info Find possible one-to-many relationship between GuestbookEntry and Guestbook on field: guestbookId
  info Press <enter> if you want to skip relationships...
[?] Choose which one relationship you want to insert in your jsp: GuestbookEntry has one Guestbook identified by field : 'guestbookId'
[?] Choose the entity fields you want to show in the input html form name, email, message
[?] Crud portlet needs the generation of search indexes classes, do you want to generate it? Yes
[?] Select management toolbar: Existing
[?] Select already existing management toolbar or a custom management toolbar: toolbar-portlet
```

image 17: `yo liferay:new-mvc-portlet` creating portlet

1. ? What is the name of your new module? **GuestbookEntry**
2. ? What is the package for your portlet? **com.liferay.docs.guestbook.entry**
3. ? What is the category of your new portlet? **hidden**
4. ? Do you want your module will be instanceable? **No**
5. ? Do you want to create a panel app for your portlet? **Yes**
6. ? Which type of panel app category you want to insert?: **Liferay Panel App Categories**
7. ? Insert panel app category name: **CONTROL\_PANEL\_APPS**
8. ? Do you want to create jsp for CRUD operations? **Yes**
9. ? Choose the entity for jsp creation **GuestbookEntry**
10. ? Choose the entity fields you want to show in list view **name, email, message, guestbookId**
11. ? Choose the column to use for sorting **guestbookEntryId**
12. ? Choose which one relationship you want to insert in your jsp: **GuestbookEntry has one Guestbook identified by field : 'guestbookId'**



13. ? Choose the entity fields you want to show in the input html form **name, email, message**
14. ? Crud portlet needs the generation of search indexes classes, do you want to generate it? **Yes**
15. ? Select management toolbar: **Existing**
16. ? Select already existing management toolbar or a custom management toolbar: **toolbar-portlet**

For the toolbar we have selected the portlet toolbar created during the generation of the previous portlet. Here too we are asked to generate the indexing classes:



```

LIFERAY-GEN

Powered By ACSOFTWARE 2021 - v. 1.1.18
✓ Data integrity check passed!
  info Checking for new updates....
  info Checking requirements...
  info Checking gradle installation...
✓ Gradle 5.1 Found!
  info Checking java installation...
✓ Java 1.8 Found!
  info Checking JPM installation...
✓ JPM 4 Found!
  info Checking Blade installation...
✓ Blade 4 Found!
  info Checking Node installation...
✓ Node 14.15 Found!
Reading projects from:/Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules
  info Removing old projects configuration:undefined
  info Current version is: 1.1.18 , latest version is: 1.1.18
  info No updates found!
  info Creating entity for project:Guestbook
  info Reloading configuration of: Guestbook
  info Service XML path: /Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules/Guestbook/Guestbook
  info Default XML File: /Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules/Guestbook/Guestbook
  info Model Hints: /Users/enzoterranova/dev/liferay-generated-examples/Guestbook/modules/Guestbook/Guestbook-serv
  info Namespace:GB
  info Found an existing service.xml, the changes will continue on that one
? Please select Summary title field: guestbookEntryId:long
? Please select Summary content field: guestbookEntryId:long
? Please select search fields: guestbookEntryId:long, name:String, email:String, message:String, guestbookId:long
  
```

image 18: `yo liferay:new-mvc-portlet` generation of indexing classes

At this point we have finished generating the portlets. We can continue with the next steps: build, deploy and portal start.





## 5. BUILD, RUN AND DEPLOY

### 5.1 BUILD

To build the service module and portlet modules, run the command `gradle clean build dockerDeploy` inside the workspace folder:

```
[enzoterranova@enzo-terranova Guestbook $ gradle clean build dockerDeploy
Starting a Gradle Daemon (subsequent builds will be faster)

> Task :stopDockerContainer
Stopping container with ID 'Guestbook-liferay'.
No container with ID 'Guestbook-liferay' running.

> Task :removeDockerContainer
Removing container with ID 'Guestbook-liferay'.
No container with ID 'Guestbook-liferay' found.

> Task :cleanDockerImage
Removing image with ID 'Guestbook-liferay:7.3.5-ga6-d1.5.2-20210228191341'.
No image with ID 'Guestbook-liferay:7.3.5-ga6-d1.5.2-20210228191341' found.

> Task :modules:Guestbook:Guestbook-service:compileJava
Note: Some input files use or override a deprecated API.
Note: Recompile with -Xlint:deprecation for details.
Note: Some input files use unchecked or unsafe operations.
Note: Recompile with -Xlint:unchecked for details.

BUILD SUCCESSFUL in 20s
177 actionable tasks: 44 executed, 133 up-to-date
```

Image 19: `gradle clean build dockerDeploy` build of the modules

### 5.2 RUN

Let's start liferay on Docker. To do this, launch the command `docker-compose -f docker-compose-guestbook up` (docker must be installed):

```
[enzoterranova@enzo-terranova Guestbook $ docker-compose -f docker-compose-guestbook up
Docker Compose is now in the Docker CLI, try `docker compose up`

Starting 937646b91156_postgresql-guestbook-liferay ... done
Starting guestbook-liferay ... done
Attaching to 937646b91156_postgresql-guestbook-liferay, guestbook-liferay
937646b91156_postgresql-guestbook-liferay | The files belonging to this database system will be owned by user "postgres".
937646b91156_postgresql-guestbook-liferay | This user must also own the server process.
937646b91156_postgresql-guestbook-liferay |
```

Image 20: `docker-compose -f docker-compose-guestbook up liferay boot`

Once the server is started, go to <http://localhost:8080>.



## 5.3 DEPLOY

The builds created in point 5.1 can be found in the path `Guestbook/build/docker/deploy`. Copy the files contained in this folder and paste them in the related path `Guestbook/docker/liferay/deploy`. The files will be immediately processed and will disappear as soon as they are pasted (if this does not happen, delete and paste them again):

```
guestbook-liferay | 2021-04-25 18:12:52.722 INFO [com.liferay.portal.kernel.deploy.auto.AutoDeployScanner] [AutoDeployDir:271] Processing com.liferay.docs.guestbook.entry.web-1.0.0.jar
guestbook-liferay | 2021-04-25 18:12:52.750 INFO [com.liferay.portal.kernel.deploy.auto.AutoDeployScanner] [AutoDeployDir:271] Processing com.liferay.docs.guestbook.persistence.api-1.0.0.jar
guestbook-liferay | 2021-04-25 18:12:52.774 INFO [com.liferay.portal.kernel.deploy.auto.AutoDeployScanner] [AutoDeployDir:271] Processing com.liferay.docs.guestbook.persistence.service-1.0.0.jar
guestbook-liferay | 2021-04-25 18:12:52.814 INFO [com.liferay.portal.kernel.deploy.auto.AutoDeployScanner] [AutoDeployDir:271] Processing com.liferay.docs.guestbook.toolbar.portlet.web-1.0.0.jar
guestbook-liferay | 2021-04-25 18:12:52.826 INFO [com.liferay.portal.kernel.deploy.auto.AutoDeployScanner] [AutoDeployDir:271] Processing com.liferay.docs.guestbook.web-1.0.0.jar
```

Image 21: deploy

## 6. TEST

To test what we have made, log in to liferay by entering the following credentials:

1. Email-address: [test@liferay.com](mailto:test@liferay.com)
2. Password: test

From the control panel, in the marketplace section you will find (in addition to the default portlets) the two previously generated portlets: Guestbook and GuestbookEntry. To test, let's first create a Guestbook:

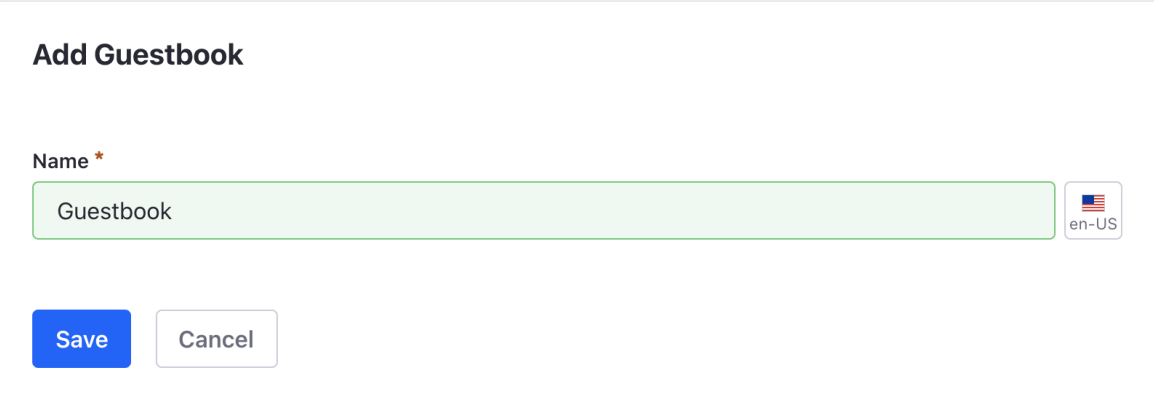


Image 21: creating a guestbook





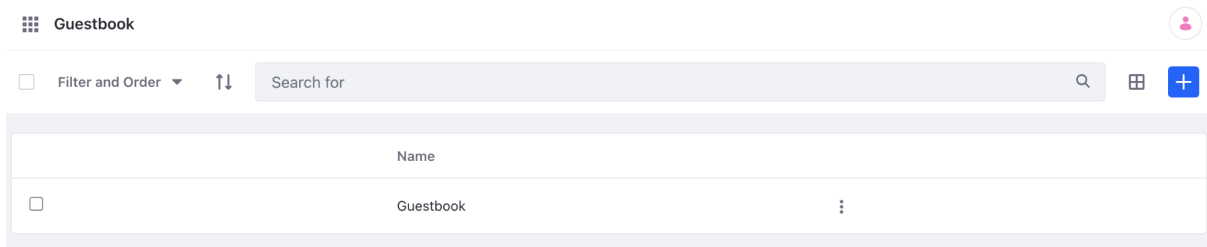


Image 22: Guestbook portlet

Once created the guestbook, let's create a GuestbookEntry by going to the second portlet we created:

The screenshot shows the 'Add GuestbookEntry' form. It has three main input fields: 'Name' (containing 'entry'), 'Email' (containing 'hattorihanzo360@gmail.com'), and 'Message' (containing 'ciao'). The 'Message' field has a rich text editor toolbar with options like 'Styles', 'B', 'I', 'U', 'List', 'Link', 'Image', and 'Source'. Below the message field is a 'guestbook-id' dropdown menu set to 'Guestbook'. At the bottom are 'Save' and 'Cancel' buttons.

Image 23: creating a GuestbookEntry



GuestbookEntry

Filter and Order Search for

	Name	Email	Message	GuestbookId	
<input type="checkbox"/>	entry	hattorihanzo360@gmail.com	<p>ciao</p>	1	:

Image 24: portlet GuestbookEntry

