


SilverFOCS Incubator

A stylized illustration of a laboratory incubator. The incubator is dark grey with a central door that is slightly open, revealing a blue interior. Inside the incubator, the text "S-FOCS (tech)" is written in orange. The incubator has two red handles on top. Surrounding the incubator are several colorful shapes: a large red cross-like shape on the left, a green circle with a white outline at the bottom left, a blue circle with a white outline at the bottom right, and several green circles of different sizes on the right side. The background is a light blue-grey color.

S-FOCS (tech)

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[Scenes.Home.GameLayer.Mouse.elm] Repetitive Code Analysis

-80 point(s)

The code below has a similarity rate of 1.000000:

- Scenes.Home.GameLayer.Mouse.elm (at 222:0 - 240:16):

```
222| upgradeSelectedIfPossible data =  
223|   case getFile data.selectedCoord data.tileMap of  
224|     Just tile ->  
225|       if tile.isUnlocked && canUpgradeTile data.resource upgradeTileCost.vp then  
226|         { data  
...|  
236|       else  
237|         data  
238|  
239|     Nothing ->  
240|       data
```

- Scenes.Home.GameLayer.Mouse.elm (at 200:0 - 218:16):

```
200| unlockSelectedIfPossible data =  
201|   case getFile data.selectedCoord data.tileMap of  
202|     Just tile ->  
203|       if not tile.isUnlocked && canUnlockTile data.resource unlockTileCost.ap unlockTileCost.vp then  
204|         { data  
...|  
214|       else  
215|         data  
216|  
217|     Nothing ->  
218|       data
```



Placeholder for discussion or question.



Placeholder for discussion or question.

- First bullet point
- Second bullet point



Solution: Use **design patterns**!

Definition

Definition placeholder.

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Placeholder for code example:

```
1  -- Elm code example
```




Placeholder for code call function:

```
1 -- Elm code example
```



Placeholder for code call function:

```
1 -- Elm code example
```

Placeholder for follow-up question.



Placeholder for operator or function explanation:

```
1  -- Elm code example
```

```
1  -- Elm code example
```



Placeholder for more calculations:



Placeholder for more calculations:

```
1  -- Elm code example
```



Placeholder for alternative operator:

```
1  -- Elm code example
```



Placeholder for alternative operator:

```
1 -- Elm code example
```

```
1 -- Elm code example
```



Placeholder for alternative operator:

```
1  -- Elm code example
```

```
1  -- Elm code example
```

Placeholder for data type question.

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Placeholder for calculations:

```
1 -- Elm code example
```



Placeholder for calculations:

```
1  -- Elm code example
```

Placeholder for tracing question.



```
1 -- Elm code example
```



```
1 -- Elm code example
```

Issue 1: Placeholder for issue description.



Placeholder for wrapping function:

```
1 -- Elm code example
```

New call function:

```
1 -- Elm code example
```



Placeholder for wrapping function:

```
1 -- Elm code example
```

New call function:

```
1 -- Elm code example
```

Issue 2: Placeholder for issue description.



Placeholder for logic extraction:

```
1  -- Elm code example
```

Here transform can be fed with calculation functions.



Change the remaining part of the code accordingly:

```
1  -- Elm code example
```



Change call function for better readability:

```
1  -- Elm code example
```



Change call function for better readability:

```
1  -- Elm code example
```

This is called the *Monadic* style.



Change call function for better readability:

```
1  -- Elm code example
```

This is called the *Monadic* style. Placeholder for explanation of differences and extensibility.



- Add new functions and modify call functions to test them.
- Find the similarities between the examples.



Placeholder for similarities and explanation.



Placeholder for similarities and explanation. Placeholder for further explanation.



Placeholder for similarities and explanation. Placeholder for further explanation. *Placeholder for quote.*

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A monad contains three things:

- **A type constructor** placeholder.
- **A function** placeholder.
- **A function** placeholder.



A monad contains three things:

- **A type constructor** placeholder.
- **A function** placeholder.
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Identify the three components in the examples above.



A monad contains three things:

- **A type constructor** placeholder.
- **A function** placeholder.
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Identify the three components in the examples above.

Placeholder for quote.



Placeholder for monad exercise and explanation.



Placeholder for monad exercise and explanation.

Exercise: List is also a Monad! Try to find the constructor, return and bind functions for it. Then, write a function that returns a list of all possible results of multiplying two integers in two respective lists.

Hint: Placeholder for hint.



Placeholder for package installation and usage.

```
1 elm install package/name
```

```
1 import Module.Name exposing (..)
```



Placeholder for package installation and usage.

```
1 elm install package/name
```

```
1 import Module.Name exposing (..)
```

Rewrite the previous exercise with the package.



- Placeholder for general design pattern explanation.
- Placeholder for interface/abstract class analogy.
- Placeholder for multiple monads for one container type.
- Placeholder for helper functions.



Placeholder for conclusion and further resources.

- Youtube. Video Title
- Wiki. Wiki Title
- Wikipedia. Wikipedia Title

