

Glamour packages - User study

Presentation

The goal of this study is to assess packages forming an application. You will assess packages through their classes and class references, analyzing what they use and how they are used, both internally and externally to the application.

This study is organized in three sections which require more and more in-depth look at packages and their classes. Each section implies that you play a different role when assessing the application, first as newcomer and potential client who wants to use the application, second as an architect who needs to assess the organization, third as a developer who performs maintenance. There are **11 questions** in this study, each question relating to a task.

You will perform the study on Glamour packages. Glamour is an engine for scripting browsers for any kind of models. If you are unfamiliar with Glamour, do not hesitate to test it before the study to get a basic understanding of Glamour capabilities. Information on usage and samples are available on: <http://www.moosetechnology.org/tools/glamour>

Tool used: System browser or OB System browser

Instructions

- Use only the tool indicated for the study. Do not use another browser/tool.
- Process questions in the given order (do not read questions in advance!)
- Please provide only accurate answers like the name of a class or a package, the association between two classes, the method which makes references.
- **Time yourself** for each question.
- Do not spend more than **20 minutes** on a question. If you reach this limit, write it down, stop the task, and proceed to the next question.
- You also have a time limit of **1h30** to answer the 11 questions so take care of your time.

A. Application assessment

As a potential client, you are assessing the package dependencies of the application. You want an idea about the size of the application and the kind of dependencies needed, especially if it involves new dependencies to be loaded with the application.

1) How big is the application?

2) *Time taken: 5 min*

(a) In number of packages

11

(b) In number of classes (one of the following ranges):

[] <100; [*] 100-200; [] 200-300; [] > 300

2) What are the most important packages?

3) *Time taken: 6 min*

(a) In terms of outgoing dependencies

Glamour-Morphic

(b) In terms of incoming dependencies : Glamour-Core

(c) Overall, considering both outgoing and incoming dependencies

Glamour-Core

3) Focus on package Glamour-Morphic:

4) *Time taken: 12 min*

(a) list all package dependencies which are external to Glamour.

(b) Annoucments-core, Kernel-Objects, Morphic-MorphTreeWidget, Morphic-Basic, Shout-
Windows, Morphic-Windows, Polymorph-Widgets-Windows, Polymorph-Widgets-
Themes, Polymorph-Widgets

(c) in this list, please signal any external package which is not part of Pharo base (i.e.,
package must be loaded with Glamour).

maybe Morphic-MorphTreeWidget

(d) are there other unexpected/unwanted package dependencies?

no

B. Application architecture assessment

As an architect, you now want to check the organization of your packages. You want your packages to have a good rationale for existence in the application. You want some parts of the application to be modular.

4) Please characterize **each** Glamour package as either:

5) *Time taken: 5min*

- a provider package for external clients (package with which external clients interact)

Glamour-Core, Glamour-Presentations, Glamour-Browser, Glamour-Scripting, Glamour-
Examples, Glamour-Tools

- an internal package (package which should not be accessed by external clients)

Glamour-Morphic, Glamour-annoucment, Glamor-Helpers, Glamour-tests, Glamour-Test-
Morphic

5) Are some Glamour packages optional/modular (package can be unloaded without
impacting application core)?

Glamour-Scripting, Glamour-tests, Glamour-Tests-Morphic, Glamour-Examples, Glamour-
Tools

6) *Time taken: 2 min*

6) What are the important classes (consider incoming, outgoing, inheritance
dependencies) in Glamour-Core? If possible, explain their roles.

GLMPane, GLMPresentation, GLMCompositePresentation, GLMTransmission

7) *Time taken: 5 min*

7) Are there direct cyclic dependencies from Glamour-Core to another package?

no (I really don't know how I could see that :)

8) *Time taken: 2min*

C. Detailed assessment

As a developer, you want a detailed comprehension and assessment of dependencies between classes and packages and optionally to refactor such dependencies, assessing impact of change.

First give a precise answer then provide your explanation.

8) What are the most cohesive packages of the application?

Glamour-core

9)

10) *Time taken: 3*

11)

12) There is a dependency to `DeprecatedPreferences` in `Glamour-Morphic`. Can you detect the faulty class? Explain the dependency: do you see an easy way to solve it?

`GLMMorphicRenderer` make a reference to `Preferences`. An easy way to solve it is to remove `'Preferences standardMenuFont'` by setting directly a specific font

13) *Time taken: 4*

14) Can you explain the organization of `Glamour-Morphic` and its relationship with other packages?

`GlamourMorphic` provide an interface with the morphic classes. An important class seems to be `GLMMorphicRenderer` (making references to a lot of `Glamour-Morphic` classes). `Presentations` will then interact with it to render their morphic content. There is also some extended `Morph` classes.

15) *Time taken: 9*

16)

17) Multiple packages of `Glamour` have dependencies to external library `Mondrian`. List such packages. Could you extract this dependency and make it optional (you can propose a solution)?

`Glamour-presentations`, `Glamour-tests`, `Glamour-Morphic`, `Glamour-Test-Morphic`

18) *Time taken: 6 min*

D. Personal remarks

You can provide any additional remarks about the study itself, the tasks, the tool used.