

# Usability Testing in Open Source Software

Jim Hall  
Hallmentum



## About me

**Jim Hall**

Hallmentum

[jim@hallmentum.com](mailto:jim@hallmentum.com)

[hallmentum.com](http://hallmentum.com)



## About me

Jim Hall

Open source software

Usability testing

GNOME + Outreachy



UNIVERSITY OF MINNESOTA

**Driven to Discover®**



# What is **Usability**?



**Real people can do real  
tasks in a reasonable  
amount of time**



# When to do usability testing?

## Before

Paper prototype test

Mock-up of new interface

**How people will use it**

## During

Test a new design

Use the actual interface

**Update the design**



# Who can do usability testing?

## Not you

You know the system

Menus

Shortcuts

## Someone else

Represent your users

Real people

Real tasks



# How to do usability testing?

1. Personas

Watch someone else do it

2. Use Scenarios

What's easy?

3. Scenario Tasks

What's hard?

4. Test

5. Analyze





# 1. Personas



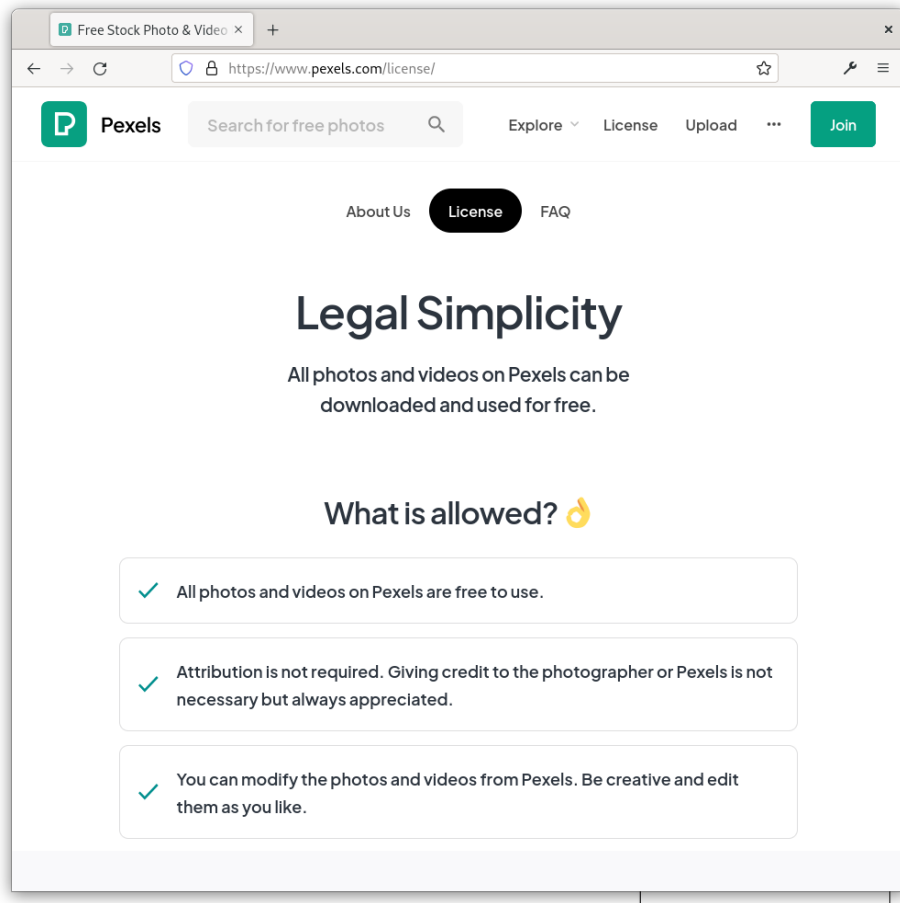
# 1. Personas

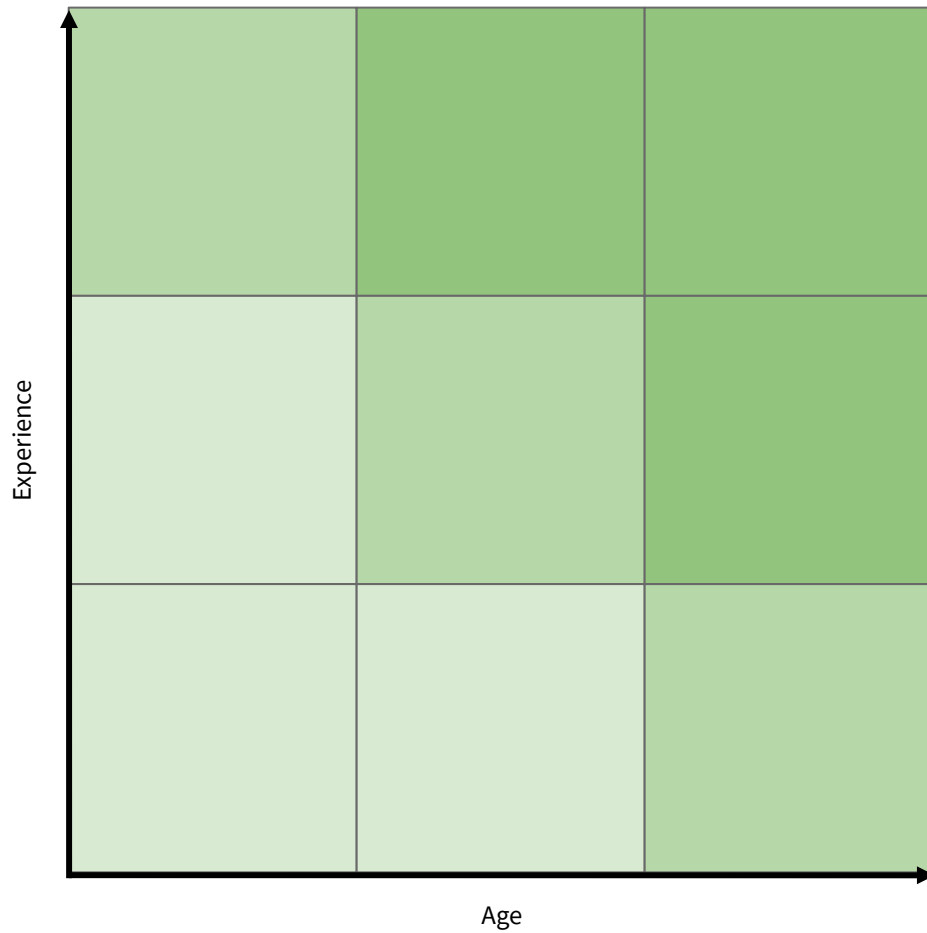
Fictional user

Make it real

Include a photo

Represent all users





## Todd

**Todd** (16, he/him) is a high school student who is getting interested in open source software.

At his school's computer club, a friend shows him Fedora, running GNOME on a lab PC.

Todd is learning about computers and is still getting started with using GNOME and the apps.



pexels.com

## Stevie

**Stevie** (24, they/them) is a marketer for a mid-size company. They used Windows until recently, but would have had to buy a new computer to run Windows 11.

One of the web developers at the company suggested Stevie try Linux and GNOME, and after running the Live image, they made the switch.

Stevie is experienced with computers but new to GNOME.



[bit.ly/QueerInTechPhotos](https://bit.ly/QueerInTechPhotos)

## Maria

**Maria** (33, she/her) is a web developer for an online retailer.

Maria has run Linux since she was an undergrad CS student. She was a GNOME 2 user but switched to KDE after GNOME 3.

After reading articles about GNOME 40, Maria would like to try GNOME again. She's very familiar with Linux distros but re-learning GNOME.



pexels.com

## Dan

**Dan** (45, he/him) teaches math and CS at a university.

Dan has been a Linux user since the 1990s and has tried all the Linux desktops: twm, olvwm, WM, fvwm, KDE, and GNOME. His favorite is GNOME, which he's used solidly since GNOME 2.

Dan uses GNOME for everything, including teaching classes.



pexels.com

## Jessica

**Jessica** (52, she/her) is a business analyst at a small marketing firm.

Most of her home computing is email and Facebook, on a Mac laptop. When it was time to buy a new Mac, her college-aged child suggested she try Linux instead.

Jessica is an occasional computer user who is completely new to Linux and GNOME.



pexels.com



# Write at least 3 personas



# Let's review!



## 2. Use Scenarios

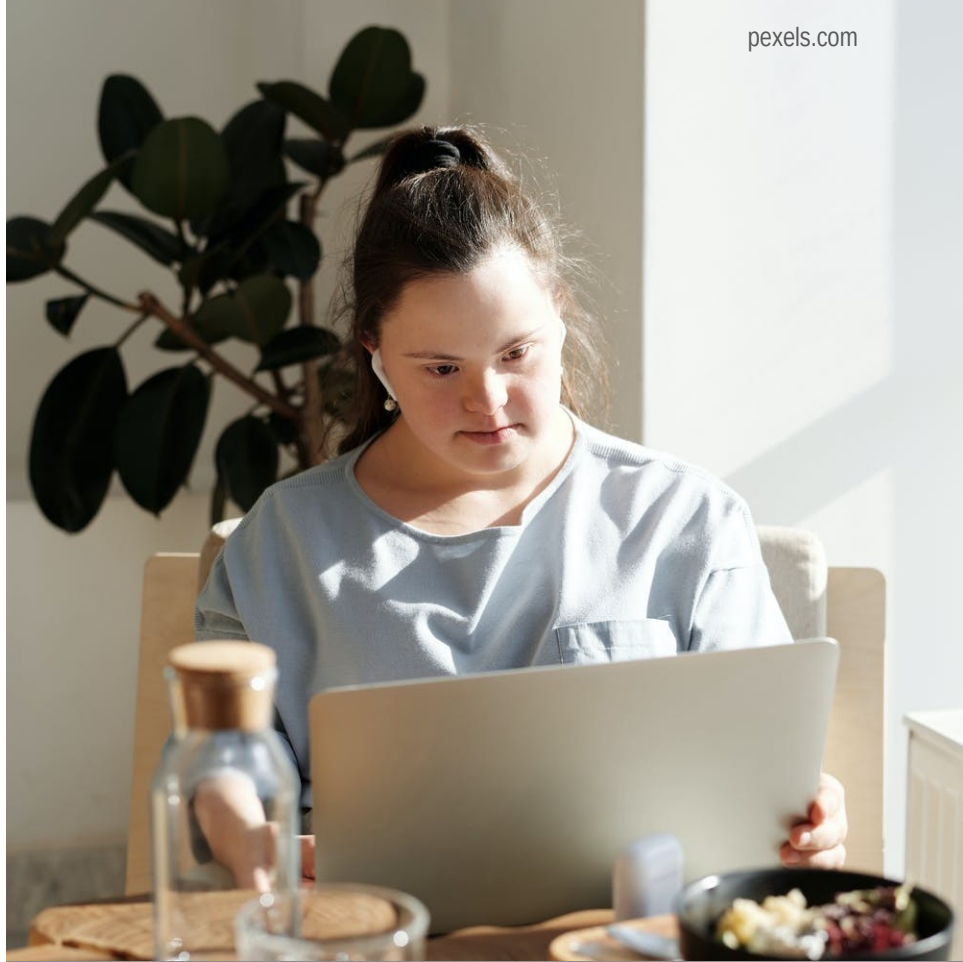


## 2. Use Scenarios

Brief story

What they're doing

Why they're doing it



Write at least 1 scenario  
for each persona



# Let's review!

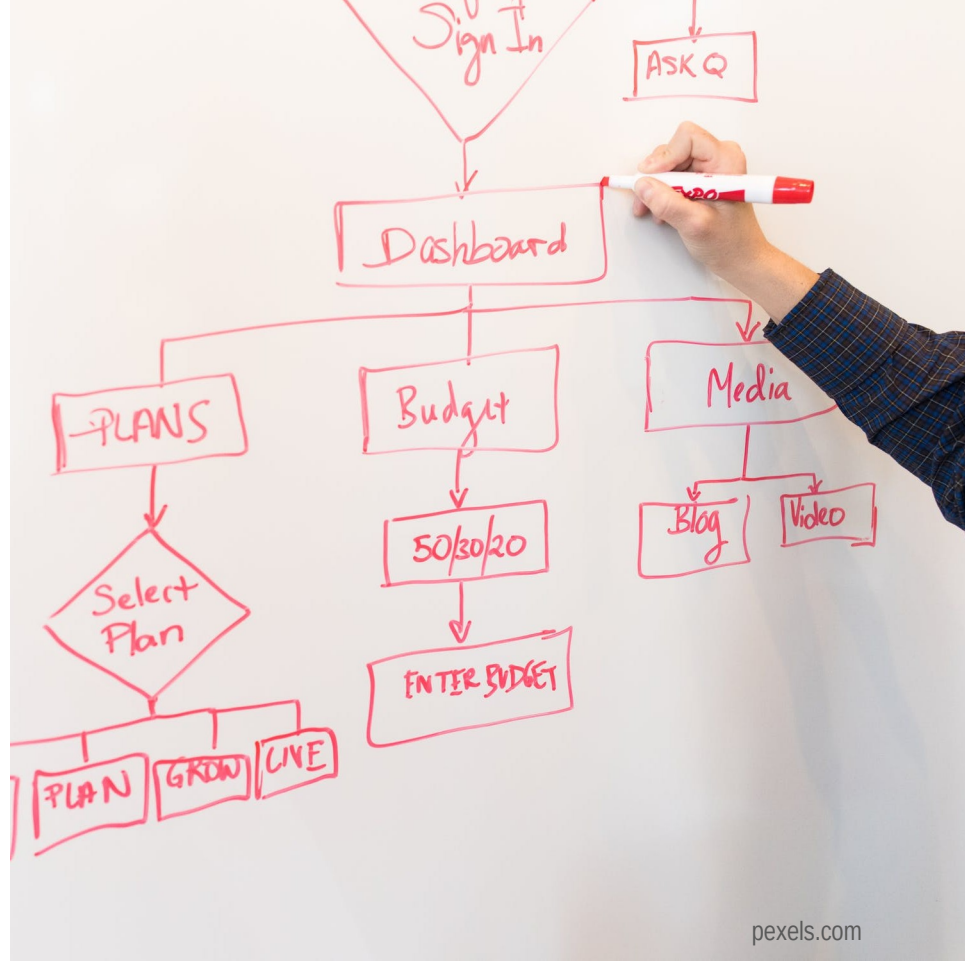


# 3. Scenario Tasks



### 3. Scenario Tasks

Set a **brief context** then ask the tester to do something **specific**



pexels.com



## Sample Scenario Tasks

[Gedit] You want to finish writing a draft of a blog post that you are using in a project. You start the Gedit text editor (this has been done for you). Please open the file **blog post draft.txt** from the Documents folder.

[Gedit] Some of the names are incorrect in the document. Replace every occurrence of **Applejack** with **Fluttershy**, and all instances of **Rainbow Dash** with **Twilight Sparkle**.



## Sample Scenario Tasks

[Calendar] A client has asked to meet with you at their office next week. Add an event called **Meeting with client** to the calendar for next week on Thursday at 10:00.

[Calendar] Your boss just reminded you about an important conference you need to attend **August 15-18**. You already planned a trip for around that time, so you want to check if you are free to attend the conference. Please check your calendar to see when you have your vacation, and if you are able to attend the conference.



# Sample Scenario Tasks

[File Manager] Yesterday, you re-organized your files and you don't remember where you saved the copy of the class paper you were working on. Please search for a file named **The Hobbit.odt**.

[Firefox] You don't have your glasses with you, so it's hard to read the text on the website. Please make the text bigger on the website.



Write 3-2 scenario tasks  
for each scenario



# Let's review!



# 4. Test



## 4. Test

Use the scenario tasks

Observe them

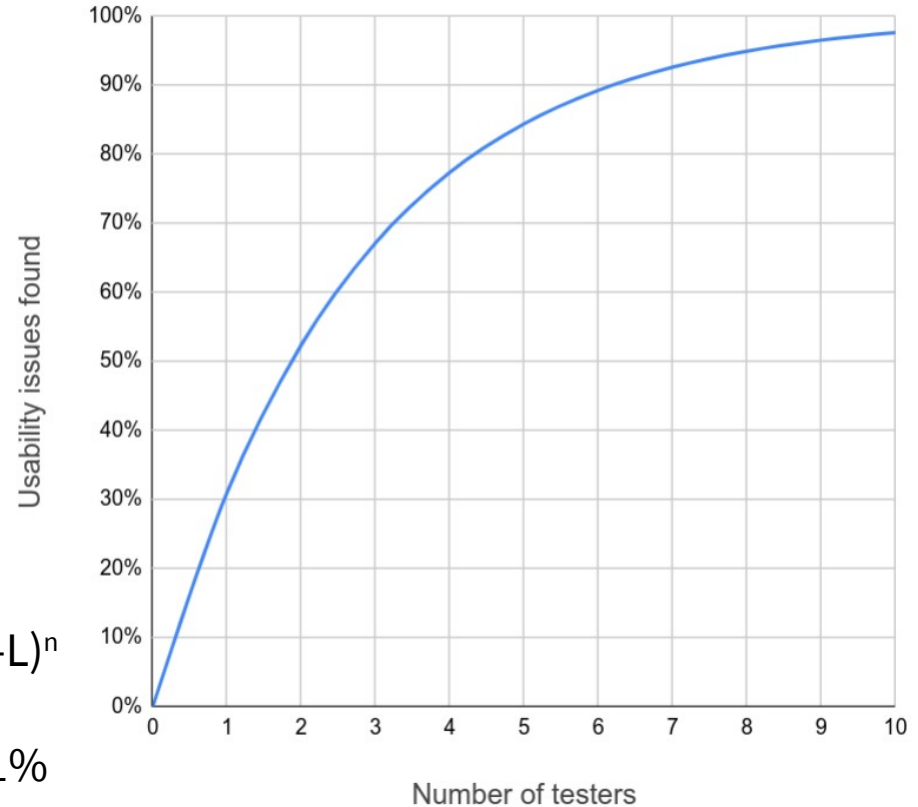
Take notes

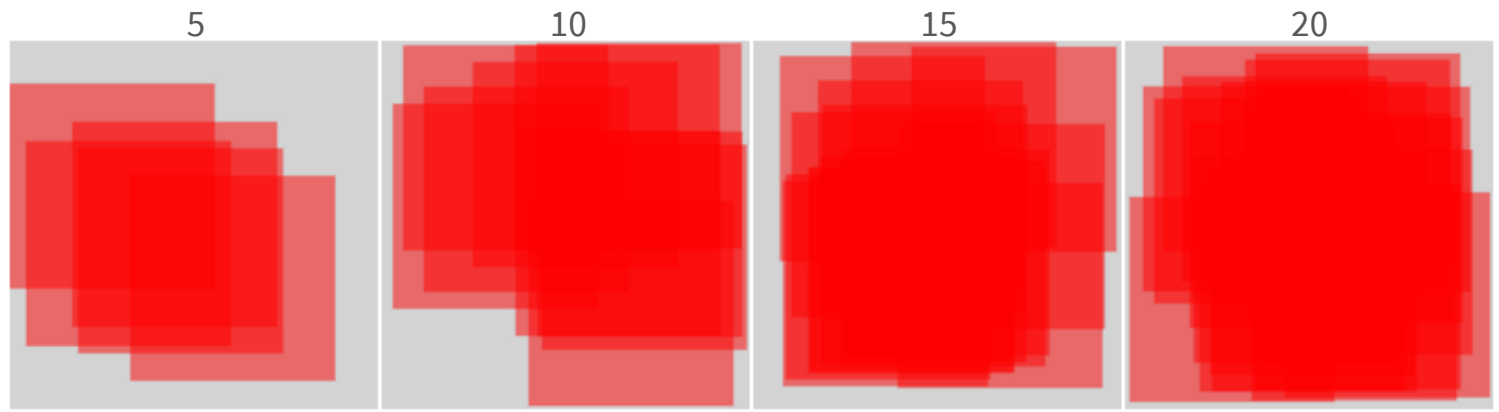
Follow-up questions

$$1 - (1-L)^n$$

$$L = 31\%$$

Usability issues found vs Number of testers





L = 31%



## 4. Test

Welcome

Overview of the test

“Speak aloud” protocol

Get demographics

⇒ **Test**

Follow-up questions?

“Thank you”



# 5. Analyze



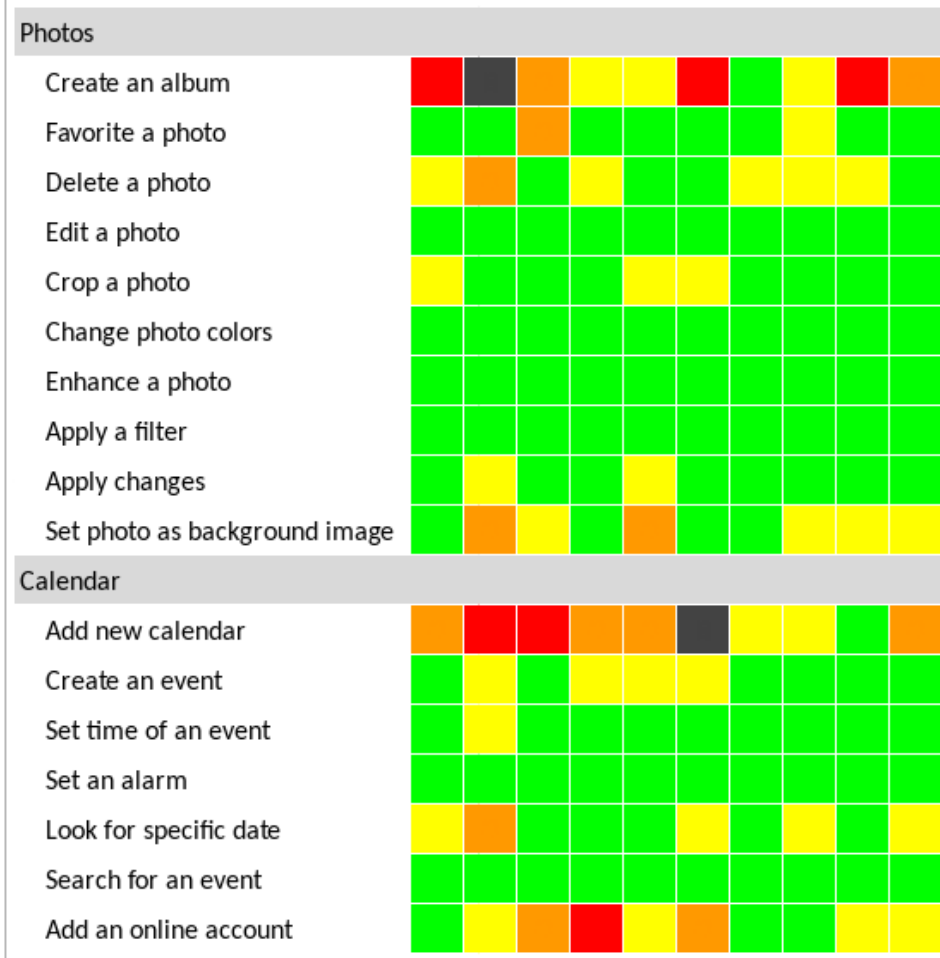
## 5. Analyze

How easy/hard?

Find “hot spots”

Make it actionable

Renata Gegaj [GNOME]

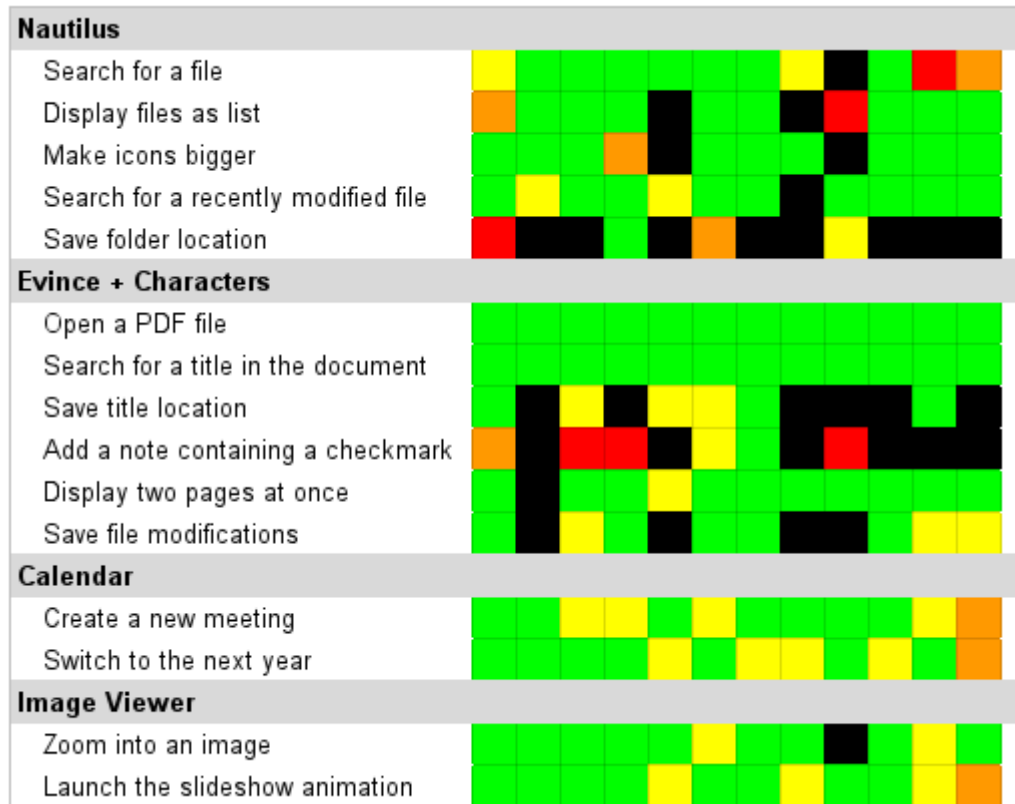


## 5. Analyze

Look for “hot rows”

Why was this hard?

(look at notes)



Gina Dobrescu [GNOME]



## Follow up

**Jim Hall**

Hallmentum

[jim@hallmentum.com](mailto:jim@hallmentum.com)

[hallmentum.com](http://hallmentum.com)

