TestCon

Reporting Bugs: Errors Made and Lessons Learned

Peter Sabev,
CEO
Fast Lane Soft Ltd.

Peter Sabev

- From Sofia, Bulgaria
- Wrote my first program at 8
- 15+ years professional QA experience, 20+ in IT
- From Junior QA to Head of QA
- CEO of Fast Lane Soft Ltd.
- PhD Student – Test Automation

QA
CHALLENGE
ACCEPTED
VERSION 6.0
www.qachallengeaccepted.com

Spot the details

DOLCE & GABBANA
DOUGLAS

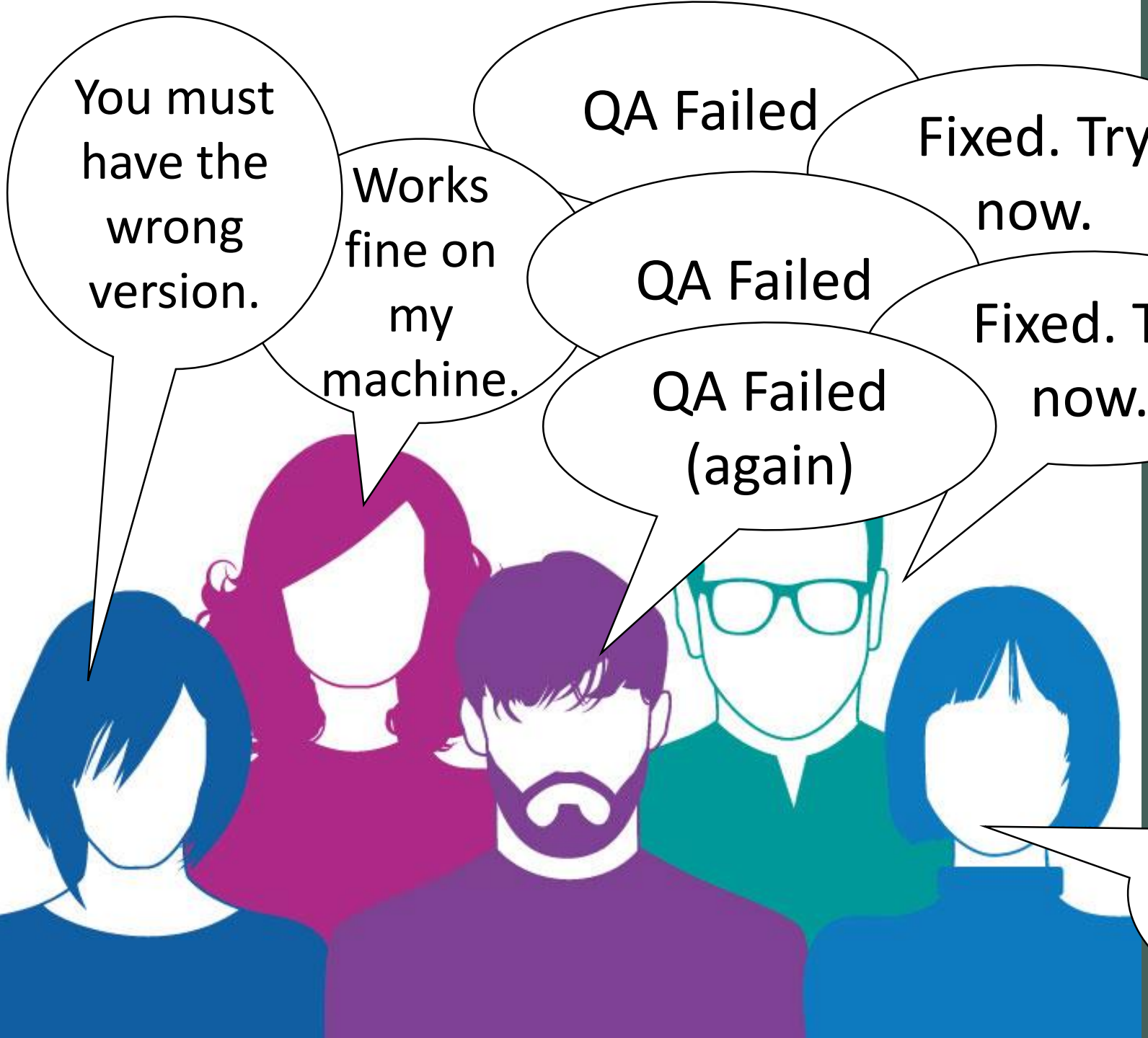
89
Nepriklausomybės aikštė-Stotis
18:52
Dailės akademija
Bernardinų sodas
Arkikatedra
VAIRUOTOJAS STOTELĖSE PARDUODA BILIETUS
PURCHASE TICKETS FROM DRIVER AT BUS STOP
BILIETO KAINA
TICKET PRICE
1€
PRAŠOM UŽ BILIETĄ MOKĖTI
Exact fare please
MONETOMIS ARBA BANKNOTAIS
Coins or notes
LENGVATINIŲ BILIETŲ KAINOS
Discount tickets prices:
SU 50 % NUOLAIDA
SU 80 % NUOLAIDA
NEPAMIRŠKITE PAŽYMĖTI BILIETĄ!
DO NOT FORGET TO PUNCH YOUR TICKET!
1851

18:52

1851

BERNARDINŲ
SODAS
STOP
STOP
STOP
STOP
STOP

On average, every single bug report is read by at least **5 people!**



But sometimes the bug report is read dozen times!

Investing just

3 more minutes

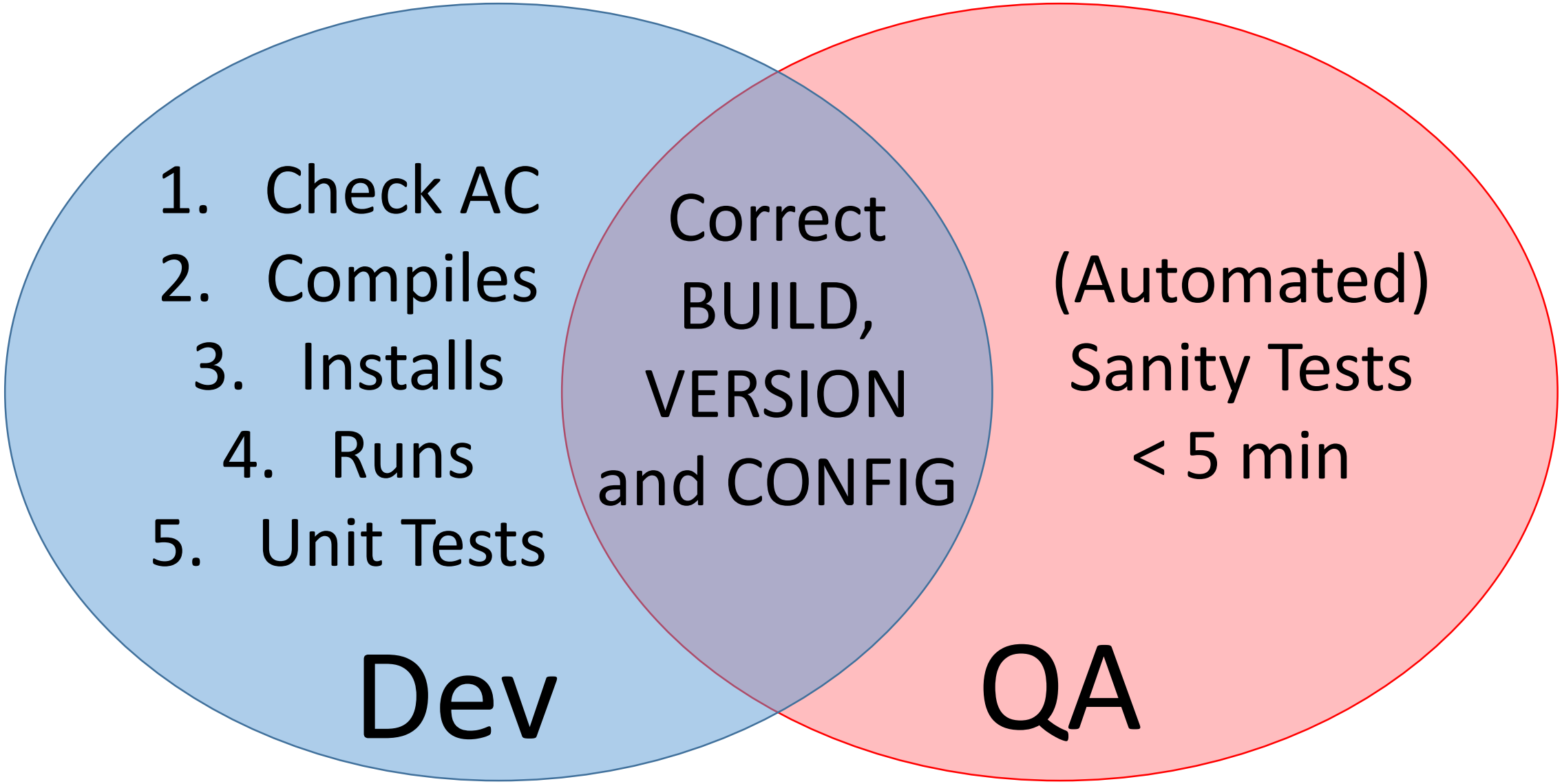
in your bug report

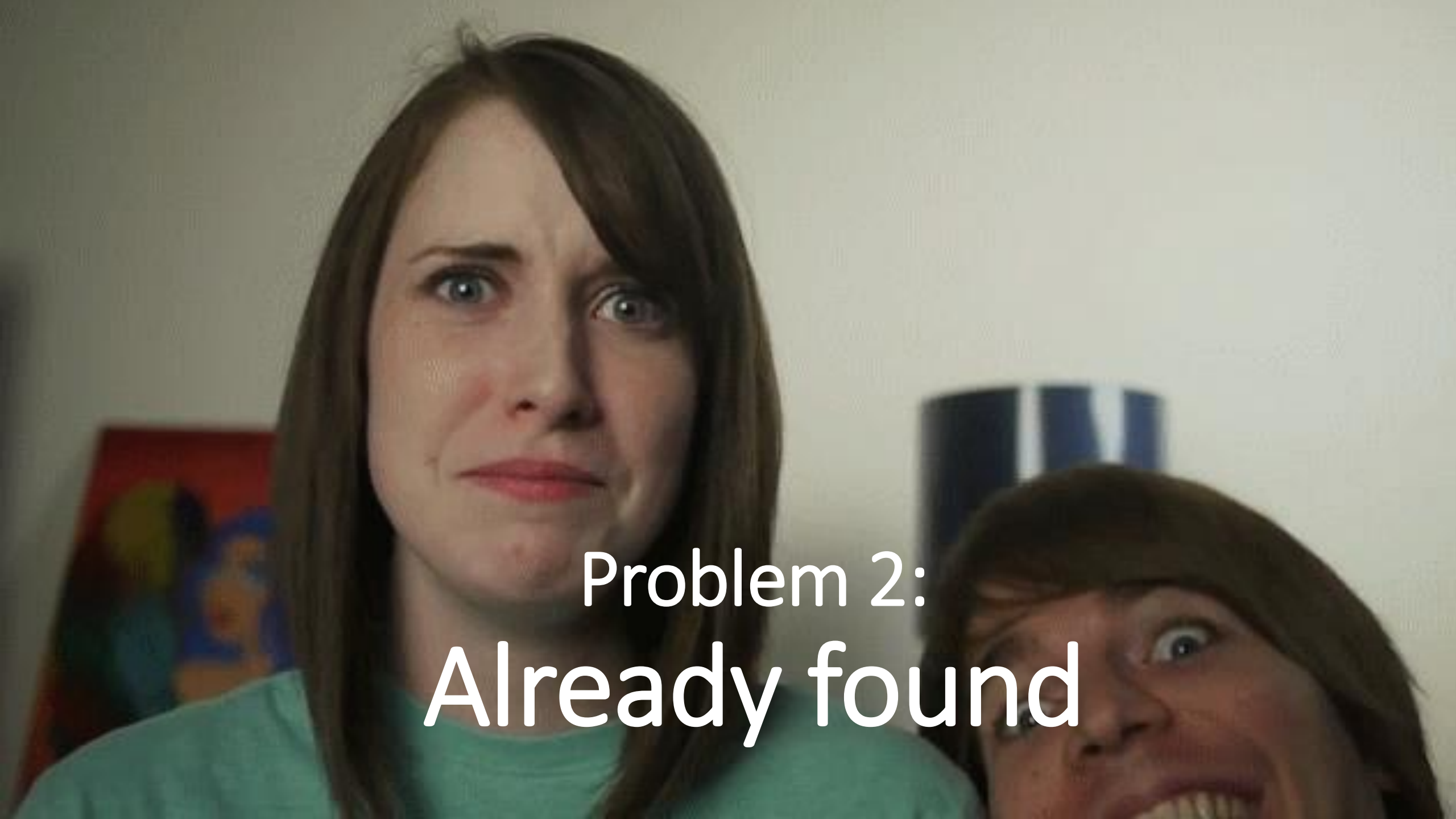
may save **hours**

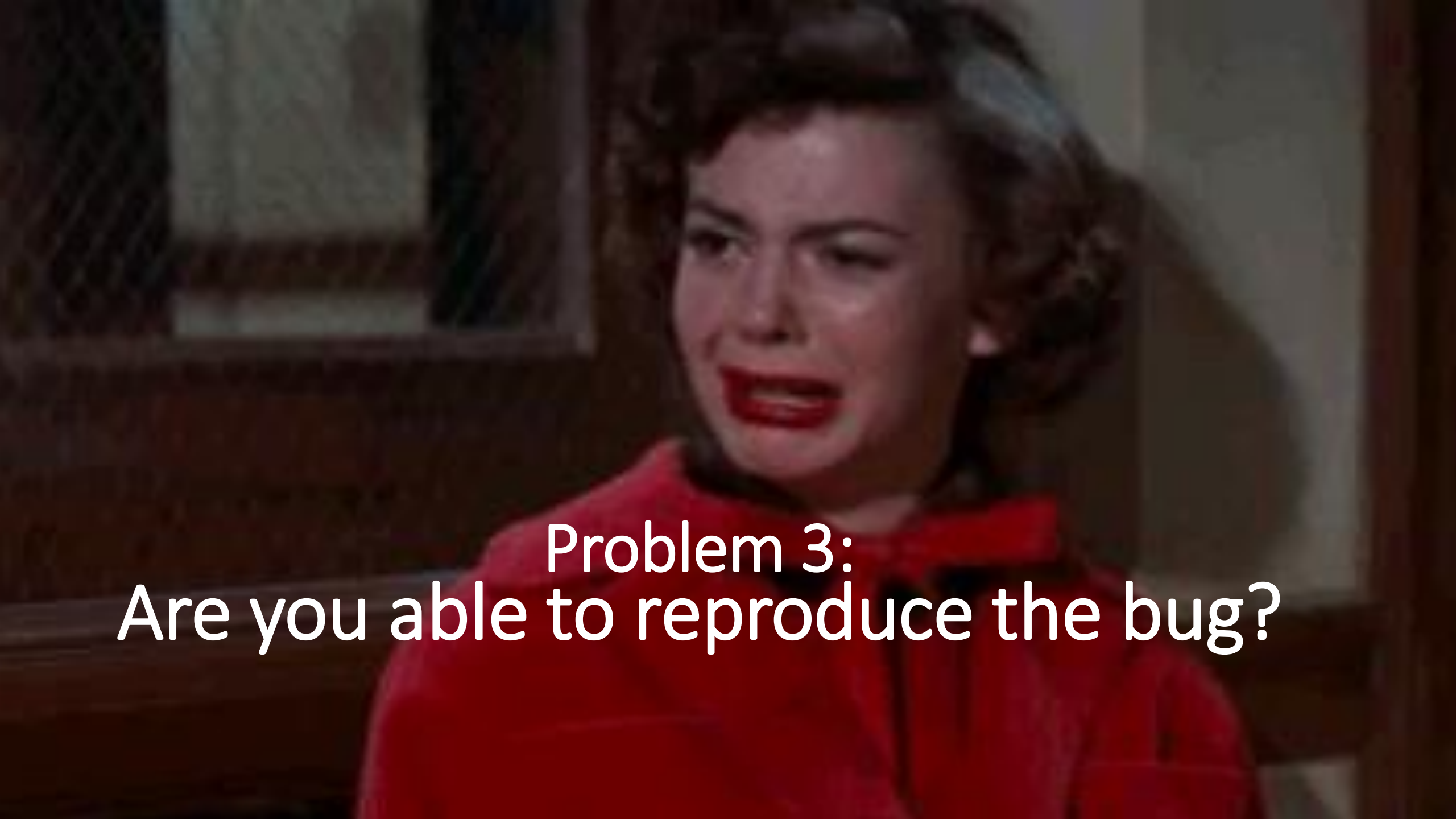
to the entire team.

Problem 1:
Nothing works at all!

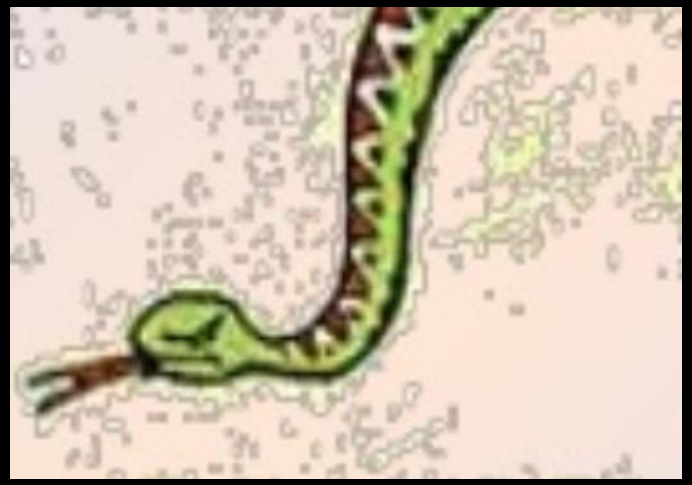
Entry Criteria

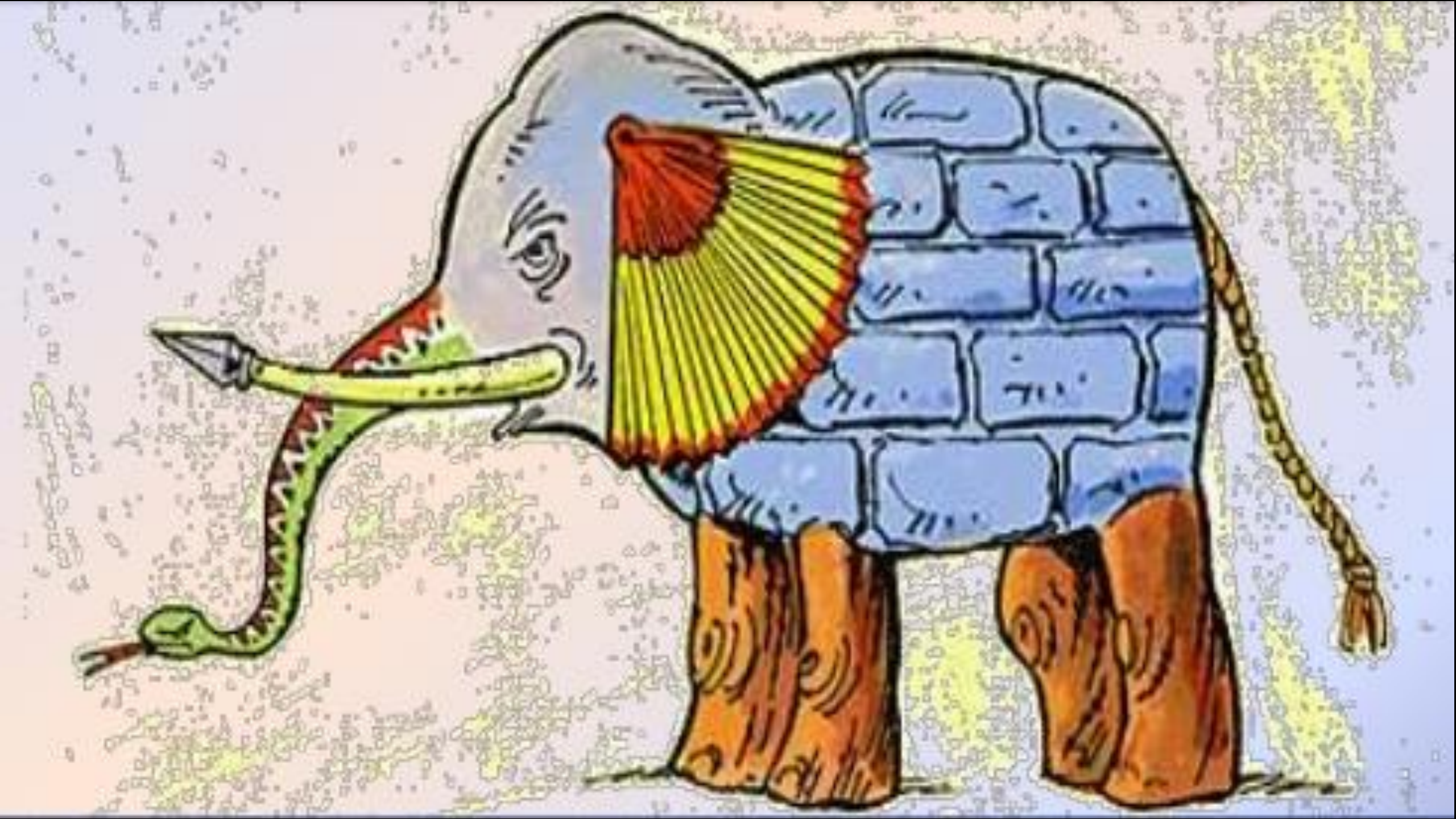


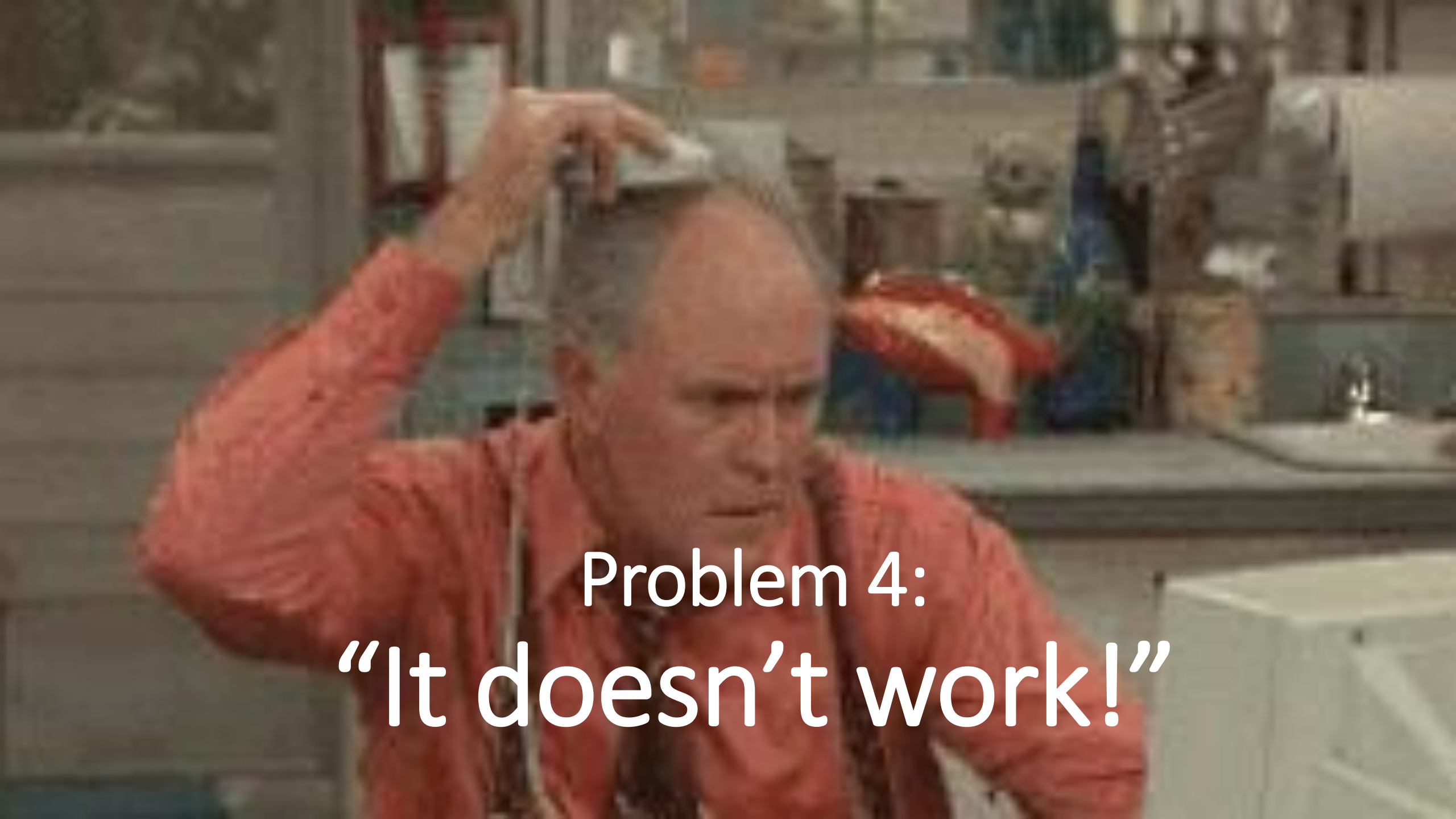

Problem 2:
Already found


Problem 3:
Are you able to reproduce the bug?

The story about the six men and the dark room







Problem 4:
“It doesn’t work!”

Issue Navigator

Displaying issues **1** to 5[illegible] of **2543** ma[illegible]ching issues.

Current View:
Browser (**Current Fields** | Printable | Full Content) | XML | RSS (Issues | Comments) | Word | Excel (All fields | Current fields)

Bulk Change: all 2,543 issue(s) | current pag
Configure your Issue Navigator

1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Next >>

T	Key	Summary	Assignee	Reporter	Pr	Status	Res	Created	Updated	Du
		"Go to Service" does not work				Closed	Fixed	30/Mar/10	10/Apr/13	
		Reboot does not work				Open	UNRESOLVED	27/Jan/12	08/May/15	
		Trackball does not work				Closed	Won't Fix	23/Jul/09	21/Apr/10	
		[Devices] Search does not work				Closed	Fixed	08/Nov/10	17/Nov/10	
		ImportZip does not work on IE9				Resolved	Fixed	19/Mar/14	19/Mar/14	
		Write Attributes Does not Work				Resolved	Fixed	30/Sep/09	13/Dec/10	
		getProperty command does not work				Resolved	Fixed	26/Aug/10	09/Sep/10	
		ServerSocket getLocalPort does not work				Resolved	Fixed	22/Mar/13	22/Mar/13	
		Transactional operations does not work				Open	UNRESOLVED	04/Mar/14	14/Mar/14	
		Bundle update does not work				Closed	Fixed	31/May/12	26/Mar/14	
		Server authentication does not work				Resolved	Won't Fix	04/Mar/14	02/Apr/14	
		Default VM arguments does not work				Closed	Fixed	21/Jun/12	26/Mar/14	
		[illegible] setParameterValue() on a LIST does not work.				Resolved	Fixed	23/Aug/12	15/Oct/14	
		ZigBee WebConsole does not work in IE				Resolved	Fixed	16/Mar/10	31/Mar/10	
		AstroTimer - after sunrise does not work				Resolved	Fixed	29/Nov/13	08/Jan/14	
		Default-StartLevel does not work always				Resolved	Fixed	29/Apr/15	05/May/15	
		Runtime Lifecyle Control does not work				Closed	Fixed	26/Jun/09	04/Sep/09	
		Backup agent does not work as expected				Open	UNRESOLVED	16/Jul/14	24/Apr/15	
		Install deployment unit does not work				Open	UNRESOLVED	02/Apr/15	04/May/15	
		Escape in filter does not work correctly				Closed	Fixed	25/Feb/10	16/Nov/10	
		demo does not work as the docs show				Open	UNRESOLVED	07/Jan/11	14/Jan/11	
		[illegible] Install of bundle does not work				Closed	Fixed	03/Jun/11	20/Jun/11	
		Bundle Update action does not work				Closed	Fixed	03/Jun/11	20/Jun/11	
		Show console action does not work				Closed	Fixed	09/Mar/10	04/Jul/11	
		[illegible] ON/OFF does not work				Resolved	Won't Fix	05/Jul/11	06/Jul/11	
		Most of the keyboard shortcuts does not work				Resolved	Fixed	01/Aug/12	15/May/13	

Which one is better?

✗ *“I feel unwell”*

OR

“I have headache, runny nose and 38.5°C temperature since yesterday” ✓

Anamnesis

1. Name
2. Age, height, weight
3. Family and childhood history
4. Allergies, work environment
5. Details about the complaints
6. Habits
7. Medical encounters
8. Other useful info

Bug Description

1. Title
2. Priority / Severity
3. Build / Version
4. Environment
5. Steps to reproduce
6. Expected vs. Actual Results
7. Screenshots / Logs
8. Other useful info

Short But Enough Description

One line should say it all:

Canceling a Copy dialog crashes File Manager

Software crashes

Steps to Reproduce

The most important part!

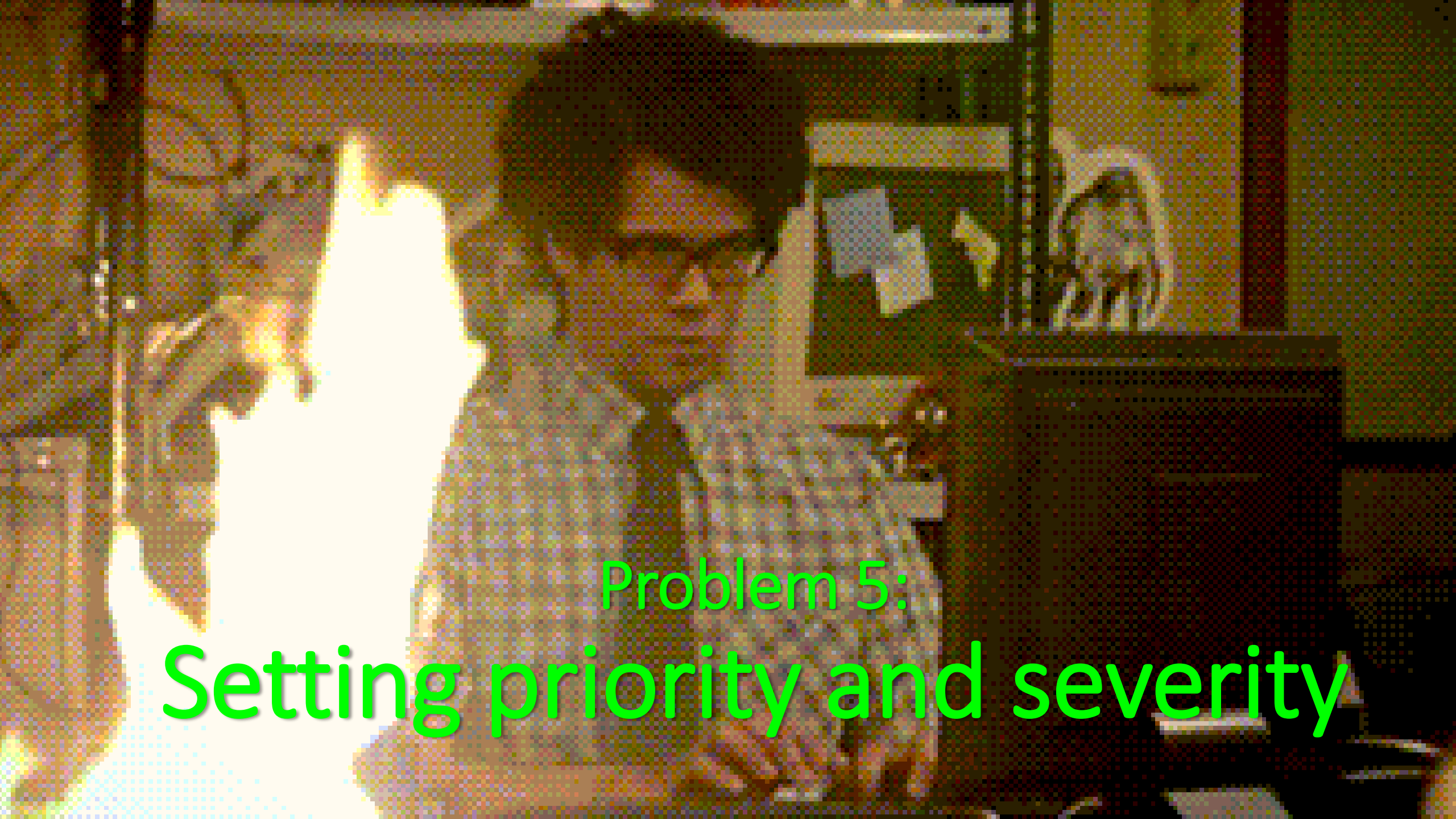
1. Press Cmd+N to open a new browser window
2. Type https://mail.google.com in the address bar
3. Press Enter

Open Gmail in another window

Expected vs. Actual Result

Instead of showing my inbox, it shows the message “Your browser does not support cookies (error -91)”.

It doesn't work.



Problem 5:

Setting priority and severity

Priority

Very High

Fix immediately and ASAP, absolutely must fix in 24h.

Notify!!!

High

Must be fixed until the next release cycle

Medium

Fix as part of standart SDLC. Must be fixed before GA.

Low

Could live with it, schedule when time is available.

Very Low

Nice to have. May never fix.

Severity

Blocker (Showstopper)

Serious crash, testing completely blocked, security, data loss

Critical (Severe)

Incorrect calculations, missing features, problems with no workaround, far from expected, unable to test partially

Major (Serious)

Functionality not working but able to test system

Normal (Moderate)

Not meeting criteria, bad UI/UX, missing images/msgs

Minor (Trivial)

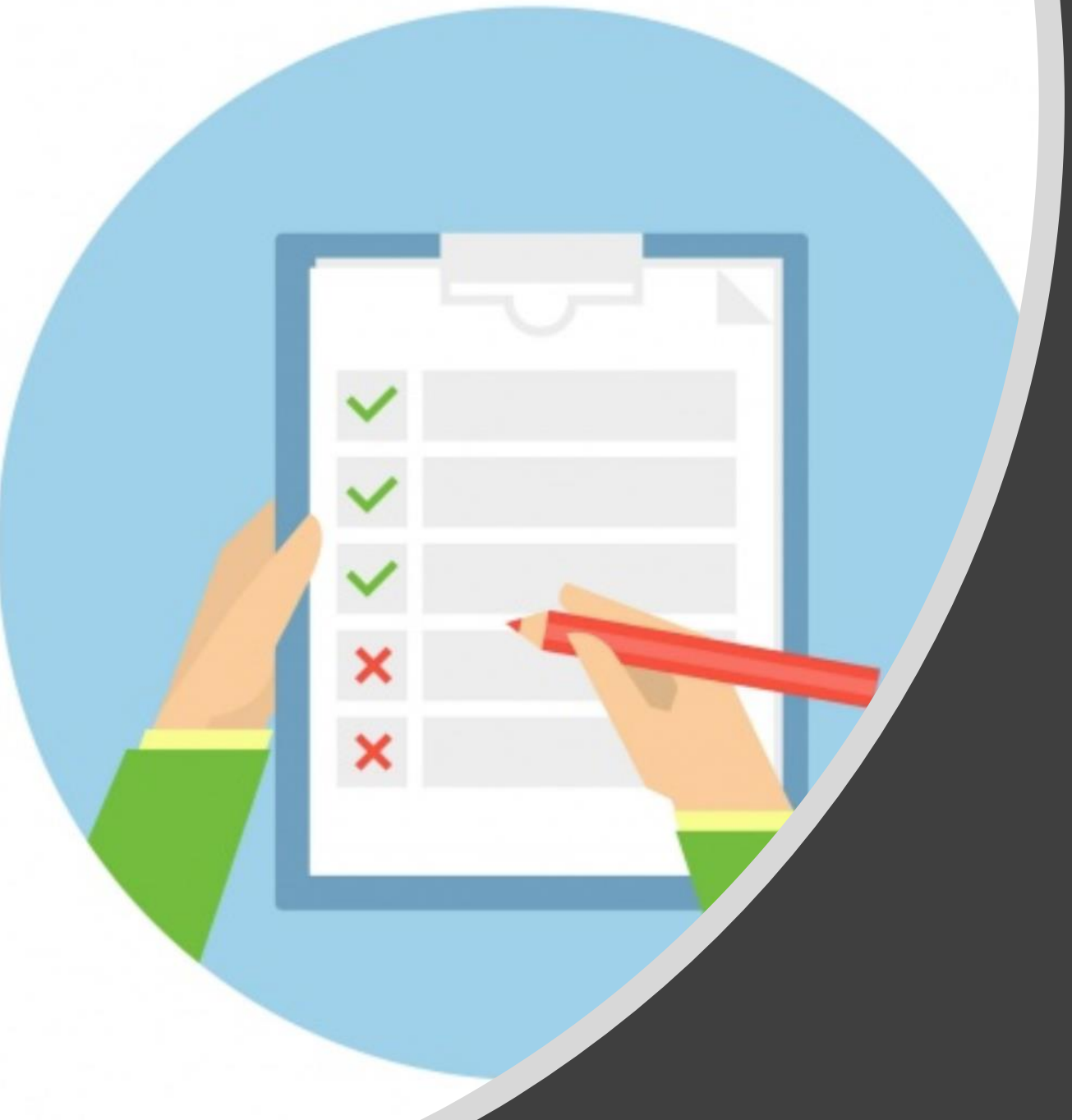
Very minor UI/UX or cosmetic issues, typos, proposals

QA team **sets severity** and **proposes priority**

Product team can amend priority later.

Priority / Severity Mapping Script

- If **both** are set, good.
- If **one** is set, **map the other** to it.
- If **none** is set, **disallow publishing** the bug report.

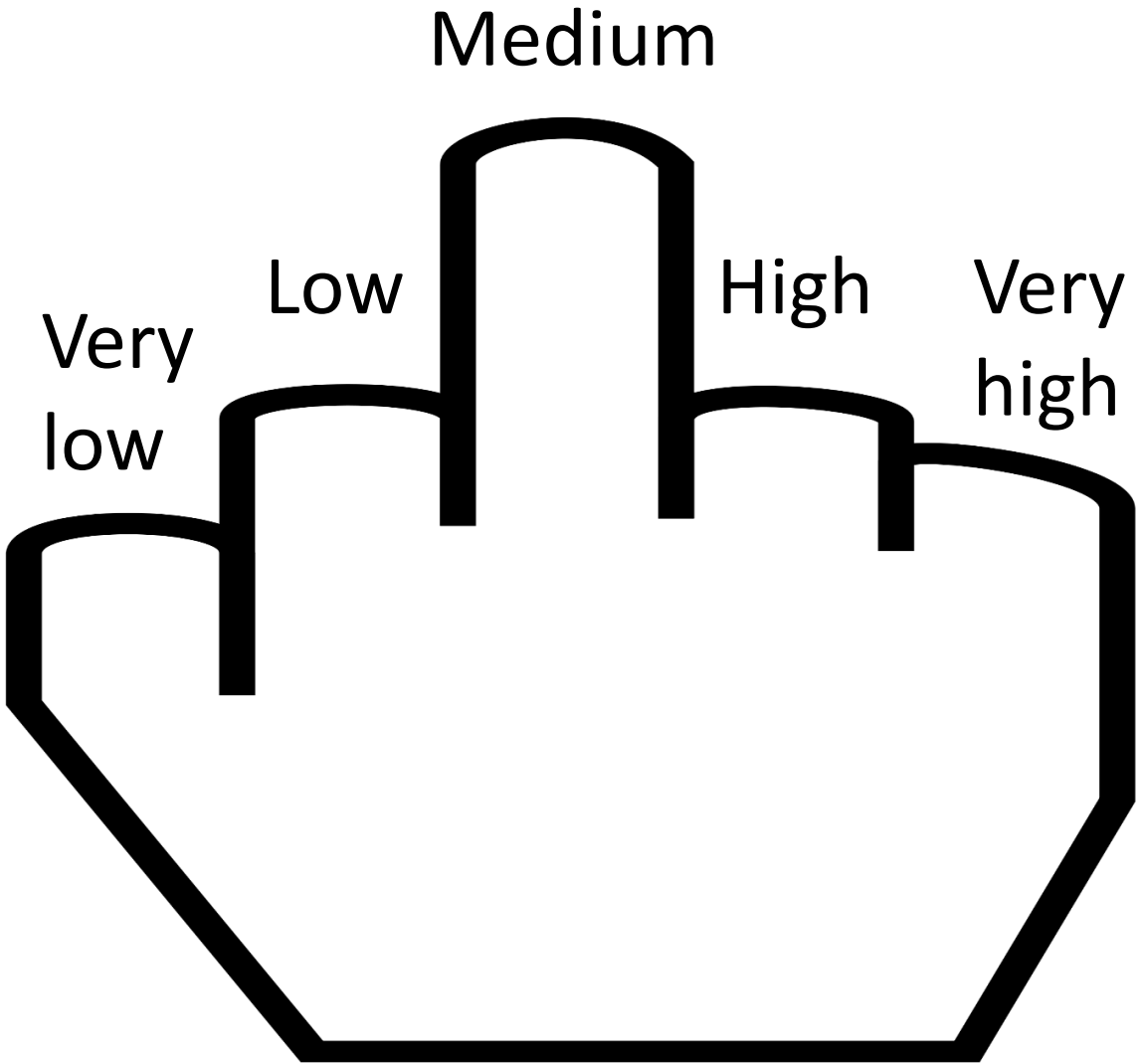


If possible:

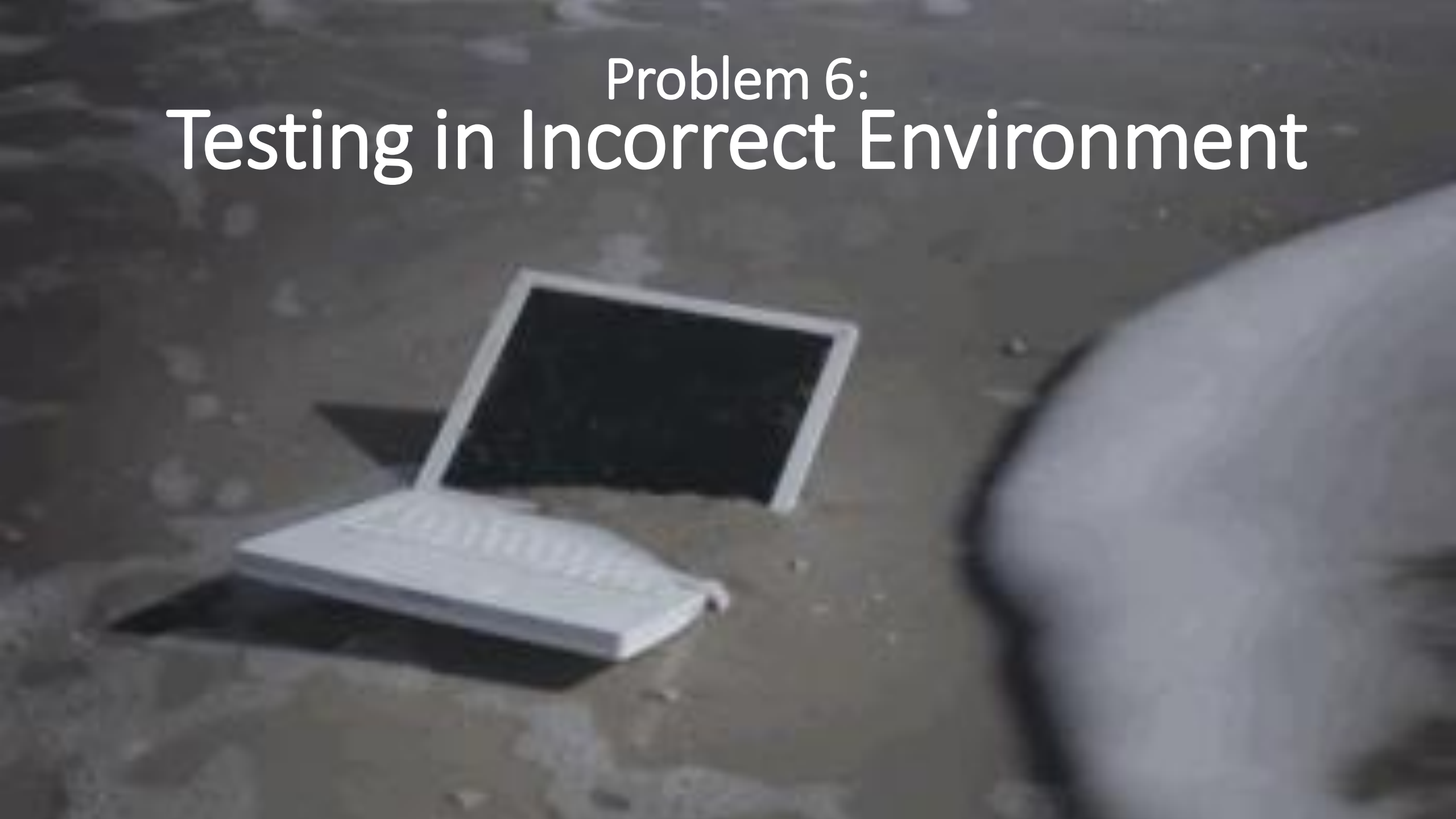
Require PRIORITY/SEVERITY

but do NOT set a default value

Bug distribution by priority in an average company when the default value is **Medium:**



Problem 6:
Testing in Incorrect Environment



Environment / Versions

Include information about the environment and all software related to the project you are testing.

Semantic versioning (semver.org)

MAJOR.MINOR.PATCH.EXTENSION

incrementing

- MAJOR when you make incompatible API changes,
- MINOR when you add functionality in a backwards-compatible manner, and
- PATCH when you make backwards-compatible bug fixes.

Problem 7:

Providing screenshots and videos

- Good bug report has at least 1 screenshot (or video), but only if appropriate.
- Logs and/or stack traces should be provided only if they are related to the defect and can be used as a source of information.
- If you think there are other sources of valuable information about the defect, include these sources as well.
- Give more information rather than less.

My favourite FREE tools I am using:

For screenshots capturing:

getgreenshot.org

For video capturing:

tinytake.com

Can one report a bug without giving steps to reproduce, expected results and actual results?

Can you find out what is the problem with this patient without asking them anything?

Booking.com online hotel reservations

BGN | List your property | Register | Sign in

Accommodation | Flights | Car rentals | Tours & Activities | Airport taxis

The main logo is missing

Find deals for any season

From cosy country homes to funky city flats

What are you looking for? | Check-in — Check-out | 2 adults · 0 children · 1 room | Search

I'm travelling for work

Off-Peak Deals

School holidays are over but yours are not. Enjoy 20% off stays September-October.

View deals

Dashboard / Users Management

Users Management

+ Create

Any characters are allowed as username

Filter

Click on any row to edit user

Username	First Name	Last Name	Active	Actions
8htePCGm!e3y!*UnG&ks2$g&7D#G!JVRzS&gmb6gQyg#SQFDpS	Name	Surname	✓	
@cUdTf30cTTgtuSLZB6U!Ol1t*PTjlp%q@FW8R1xjb80UPAGkt@cUdTf30cTTgtuSLZB6U!Ol1t*PTjlp%q@FW8R1xjb80UPAGkt	Test	Test	✗	
ADMIN	Admin	Admin		
AdmIn	Admin	Admin		
Admin	Admin	Admin		
admin	Admin	Admin	✓	
user	User	User	✓	
Римский император Константин I Великий по достоинству оценил выгодное местоположение	Константин	Великий	✓	⋮
ابن خلدون	Arabic	text	✓	⋮
東海林晉蔵	東海林晉蔵	東海林晉蔵	✓	⋮

Case insensitive

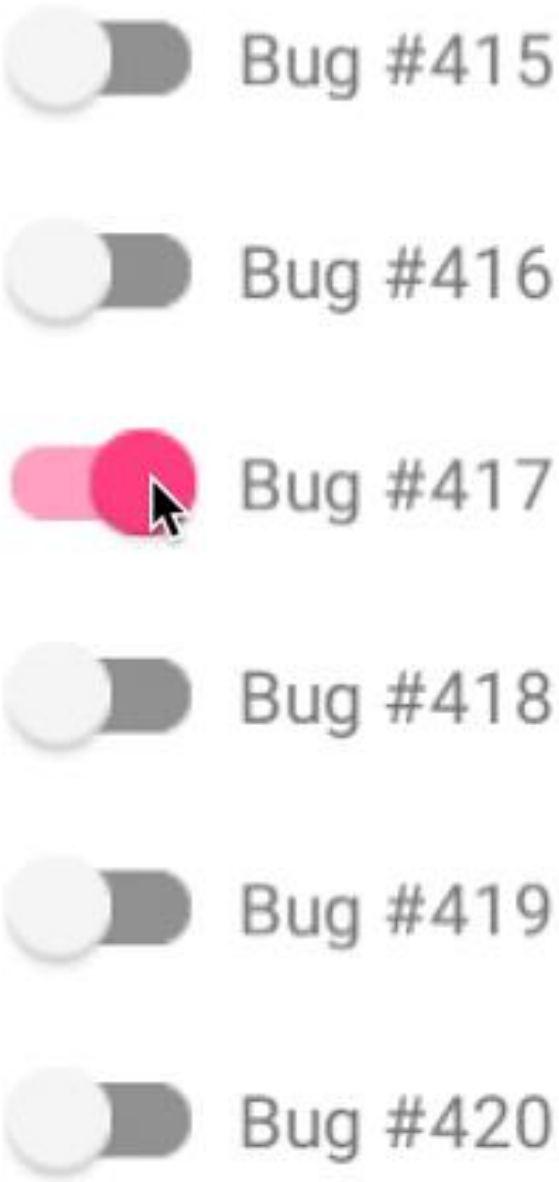
Unicode characters allowed

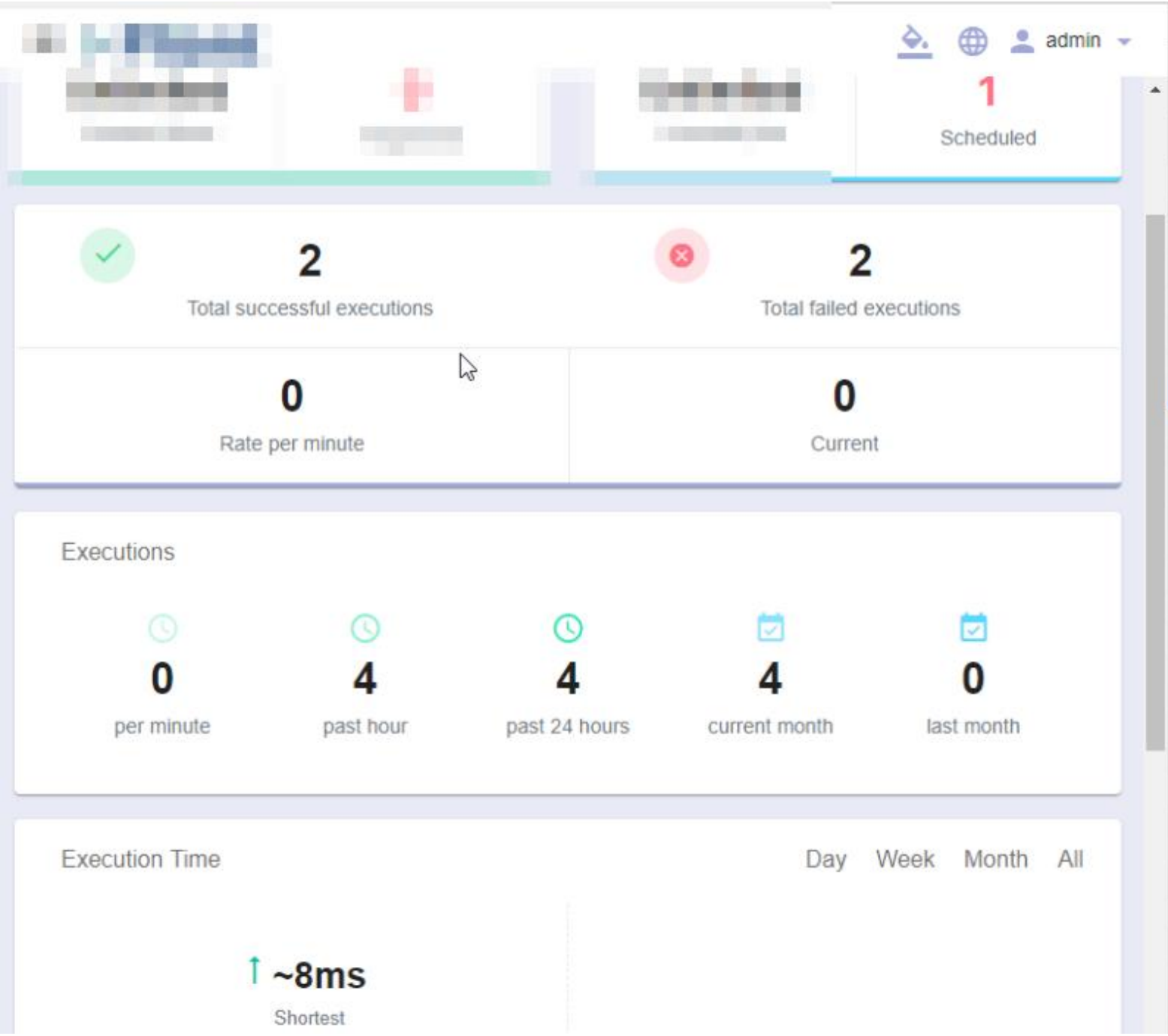
Handling several issues at once

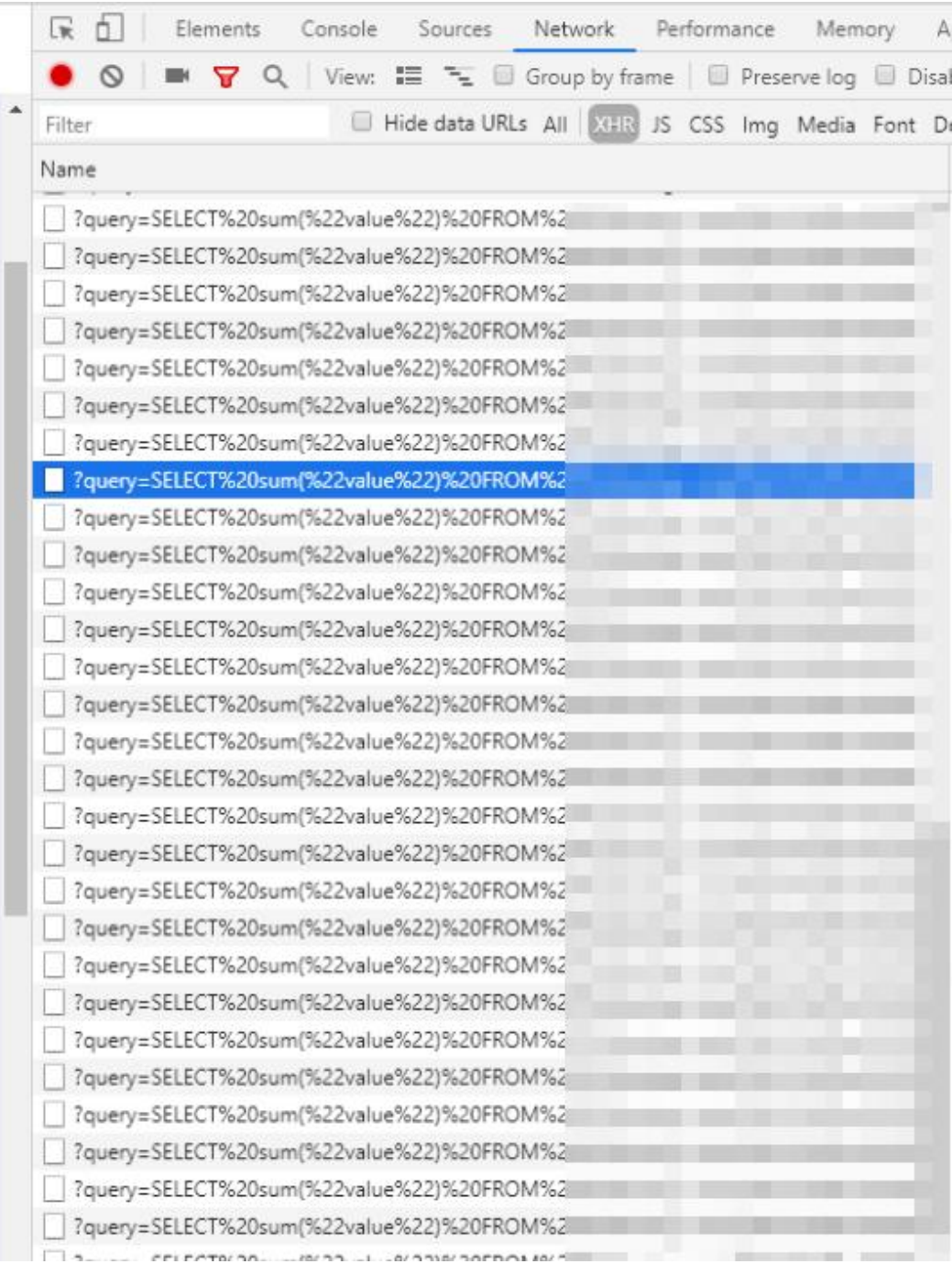
Items per page 10 1 - 10 of 10

Bugs often have dependencies

Do not forget to link issues!

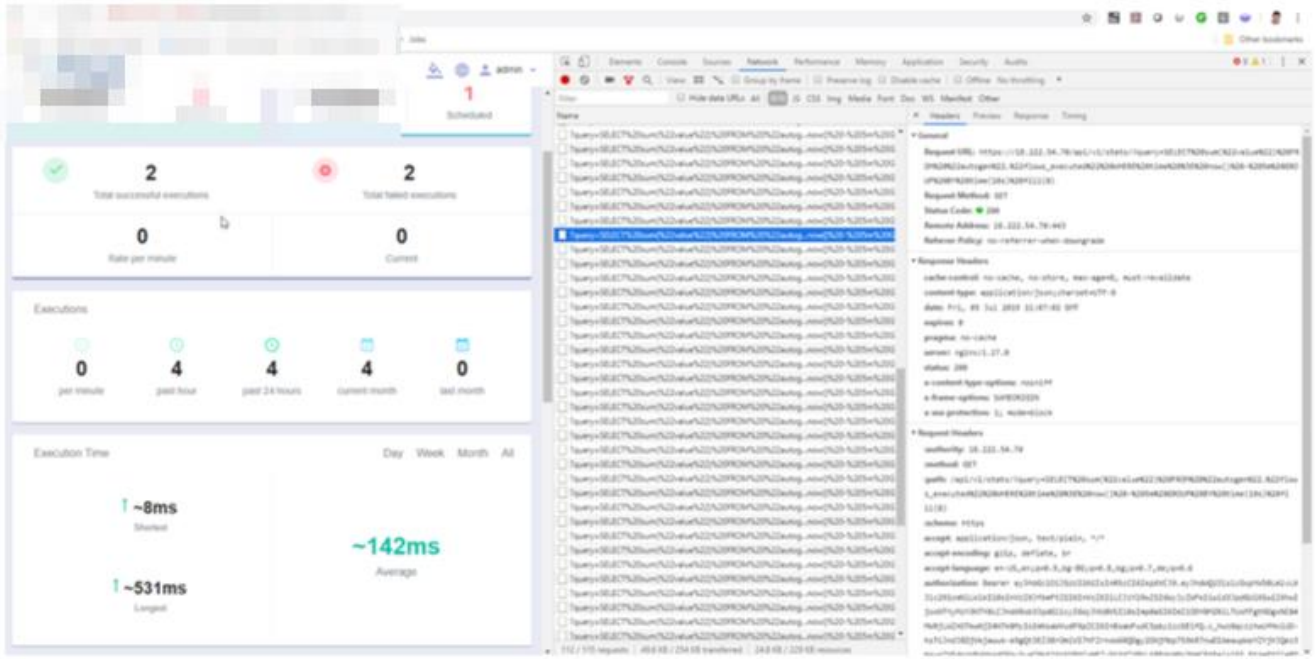



admin
1
Scheduled
2
Total successful executions
2
Total failed executions
0
Rate per minute
0
Current
Executions
0
per minute
4
past hour
4
past 24 hours
4
current month
0
last month
Execution Time
Day
Week
Month
All
~8ms
Shortest


Elements
Console
Sources
Network
Performance
Memory
View:
Group by frame
Preserve log
Filter
Hide data URLs
All
XHR
JS
CSS
Img
Media
Font
Name
?query=SELECT%20sum(%22value%22)%20FROM%2

Overview

Currently SQL queries are executed as parameter of the HTTP query:



Why this is a bad practice?

SQL Injection (SQLi) is a type of an injection attack that makes it possible to execute malicious SQL statements and gain control on a database server behind a web application. Attackers can use SQL Injection vulnerabilities to bypass application security measures (authentication and authorization) and retrieve, add, modify or delete the content of the entire SQL database.

The application code should never use the input directly. The visibility of any database info (such as queries, records, tables or errors) must be turned off.

For more information, see:

- https://www.owasp.org/index.php/SQL_Injection
- https://www.owasp.org/index.php/Testing_for_HTTP_Parameter_pollution_(OTG-INPVAL-004)
- https://resources.infosecinstitute.com/sql-injection-http-headers/#gref

STORY POINT ESTIMATE

None

SPRINT

DONE IN VERSIONS

REPORTER

Peter Sabev

DEVELOPMENT

+ Create branch

Created 5 days ago

Problem 9:
Everything is broken!

Investigate!

Computer is working slowly.

I am using 8-core i7-5960X, and I saw CPU 0 utilization is 99.9% while the others are idle. The process that uses most CPU time is SearchIndexer.exe

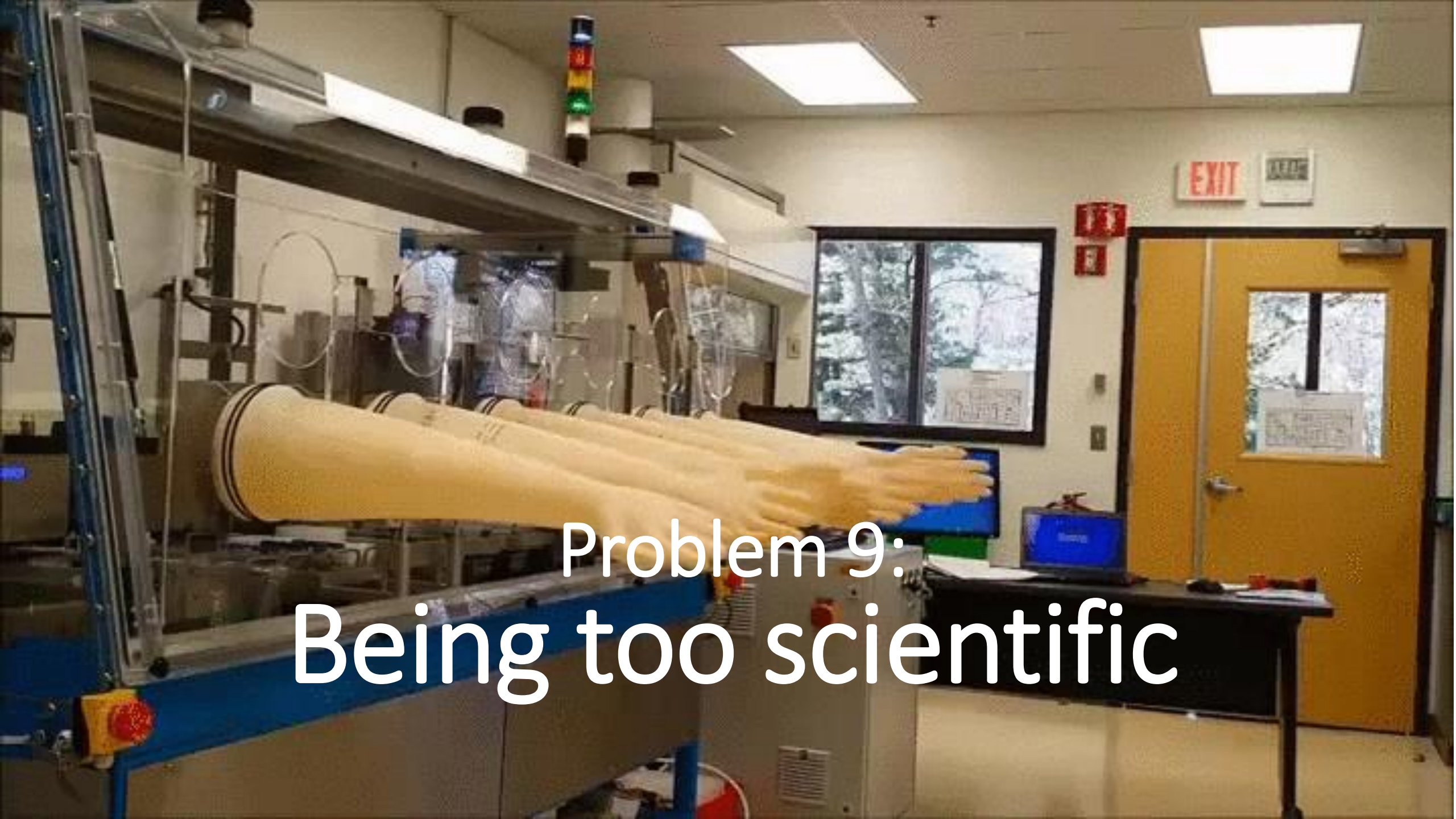
Files changed (1)

+2 -0 M src/app[redacted]dit/jobs-edit.component.ts

src/app/[redacted]s-edit/jobs-edit.component.ts MODIFIED

...

```
212  212                if (job.month && job.month.includes(',')) {
213  213                    this.selectedMonths = job.month.split(',').map(x => +x);
214  214                }
     215  +             // else ==> PNT-571 if just one month is selected
215  216            }
216  217
217  218            private setSelectedDaysOfWeek(job: JobModel): void {
218  219                if (job.dayOfWeek && job.dayOfWeek.includes(',')) {
219  220                    this.selectedWeekdays = job.dayOfWeek.split(',').map(x => +x);
220  221                }
     222  +             // else ==> PNT-571 if just one day of week is selected
221  223            }
222  224
223  225            private listenForUseDefaultParamsChange(): void {
```



Problem 9:

Being too scientific

(Especially valid for developers)

API request to CDN forces re-fetch from origin Azure Storage that invalidates CC header set for the blob on ARM when BSP is enabled together with ZDF.

Old website logo is loaded instead of the rebranded one

Problem 10:
Stop before it’s too late

Know when to stop

DBData was accidentally deleted.

DBData was accidentally deleted.

I tried reinstalling the software and defragmented the HDD but nothing helped.

Problem 11:

Be able to restore!

Always have a backup plan

Use virtual machines or containers, create snapshots and backups, and revert when needed.

Test [on production] without having way to go back if something goes wrong.

Admin can "kill themselves" by removing the system/ permission

Description

Overview

Admin is able to remove the **system/** role in **Admin/Roles Management/Admin.**

As the **system/** role does not appear in the left pane list, admin loses control over the entire system.

Steps to Reproduce

1. Login as admin.
2. Go to **Admin/Roles Management.**
3. Choose **admin** role.
4. Under **Actions** column, click on the vertical ellipsis (⋮).
5. **Warning! This will make you lose admin rights on the system!** Choose **Delete.**
6. Note that you can no longer see flows and most of the menus are empty.

Expected result

The role **system/** must be always visible on the left pane for admins.

Actual result

Admin cannot get their **system/** role permission back.

Policy restrictions should not affect admins - that is why this is a backend development task.

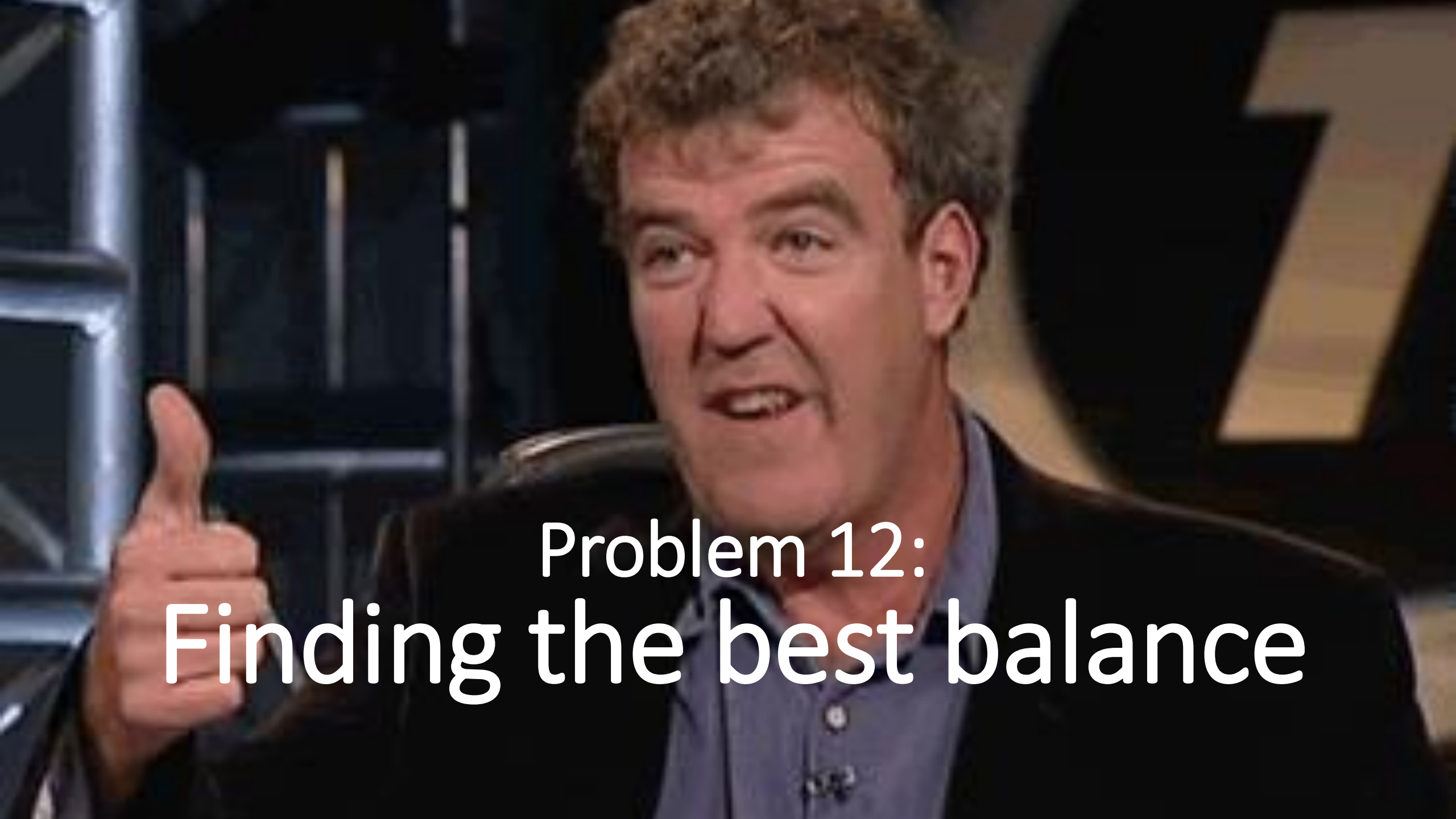
Recovery

The only possible recovery is from the database by running the following SQL query:

```
INSERT INTO
SELECT id, true, true, "system/"
FROM
WHERE name='admin';
```

Additional Information

See the screenshots attached.



Problem 12:
Finding the best balance

Doctors don’t want patients to tell them their diagnosis

Distinguish:

1. Facts

What is ACTUALLY happening.

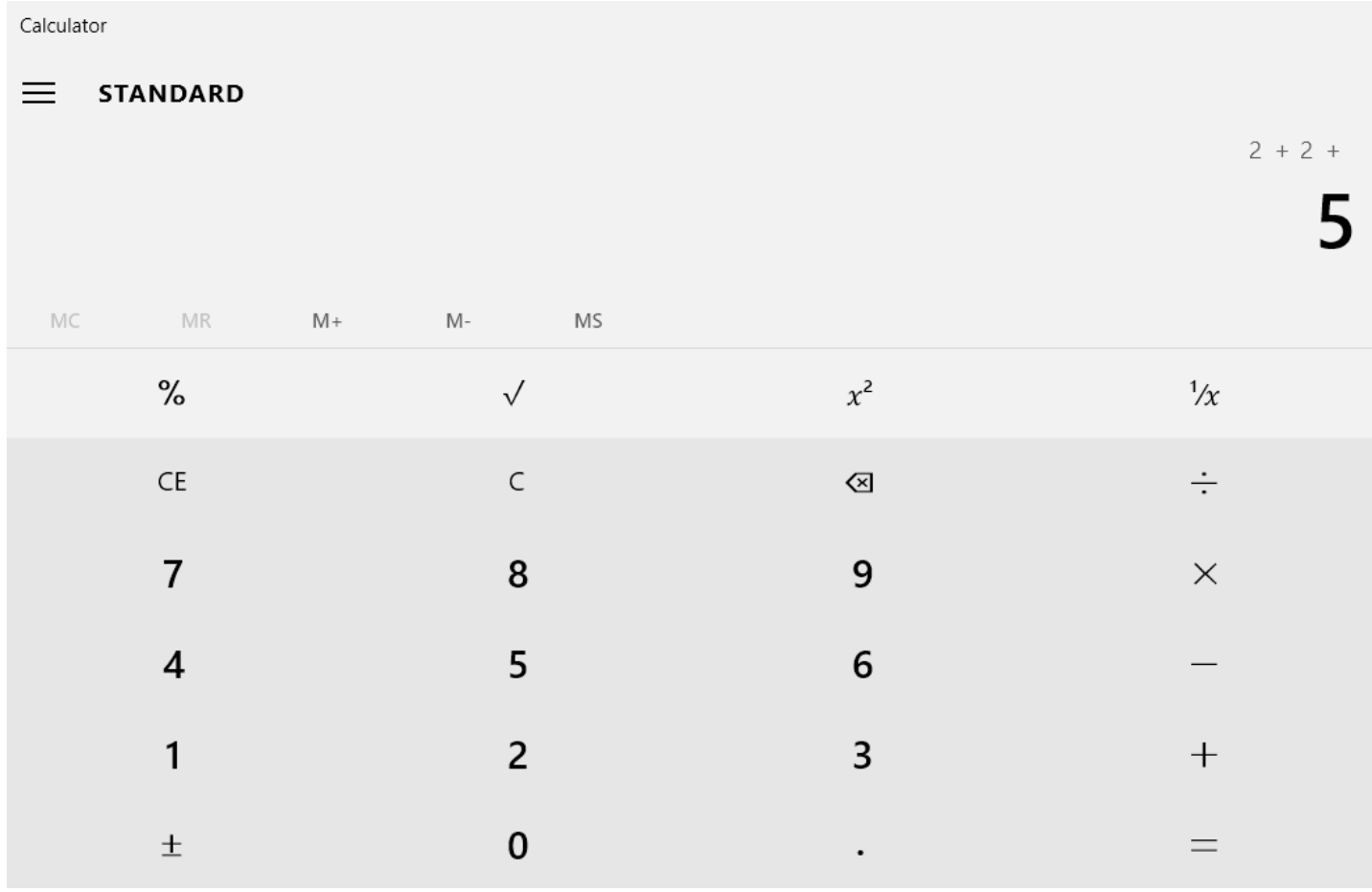
2. Observations

What YOU THINK is happening.

Problem 13:

Formatting your reports

Windows Calculator: 2+2=5



Description

Go to Windows Calculator, type 2, enter plus, insert 2 and then press = and see that the result is 5, then i tried 3+3, 1+1, 4+4, 2+3, 3+2, 8+6 the last 3 worked.

Add headings and sections

Steps to reproduce

Go to Windows Calculator, type 2, enter plus, insert 2 and then press = and see that the result is 5

Expected result

2+2=4

Actual result

2+2=5

Other

I tried 3+3, 1+1, 4+4, 2+3, 3+2, 8+6, and only the last 3 worked.

Bullet and numbers in front of items

Steps to reproduce

1. Go to Windows Calculator,
2. Type 2
3. Enter plus
4. Insert 2
5. Press =

Expected result

2+2=4

Actual result

2+2=5

Other

I also tried:

- 3+3,
- 1+1,
- 4+4,
- 2+3,
- 3+2,
- 8+6,

and only the last 3 worked.

If the order of items is important, use a numbered list.
Otherwise, use a bulleted list.

Minify and be consistent

Steps to Reproduce

1. Go to Windows Calculator
2. In the editbox, type 2+2
3. Press Enter.

Expected Result

2+2=4

Actual Result

2+2=5

Other

I tried:

- 1+1, 2+2, 3+3, 4+4 - incorrect result
- 2+3, 3+2, 8+6 - correct result

Observation: Wrong result produced only when using two equal numbers.

Use **bold**, *italic* and `monospaced`

Steps to Reproduce

1. Go to **Windows Calculator**.
2. In the editbox, type

```
2+2
```

3. Press **ENTER**.

Expected Result

2+2=4

Actual Result

2+2=5

Other

I tried:

- 1+1, 2+2, 3+3, 4+4 - incorrect result
- 2+3, 3+2, 8+6 - correct result

***Observation**: Wrong result produced only when using two equal numbers.*

Use traffic lights logic

GREEN – for good things

RED – for bad things

Just compare now…

Go to Windows Calculator, type 2, enter plus, insert 2 and then press = and see that the result is 5, then i tried 3+3, 1+1, 4+4, 2+3, 3+2, 8+6 the last 3 worked.

Steps to Reproduce

1. Go to **Windows Calculator**.
2. In the editbox, type

```
2+2
```

3. Press **ENTER**.

Expected Result

2+2=4

Actual Result

2+2=5

Other

I tried:

- 1+1, 2+2, 3+3, 4+4 - incorrect result
- 2+3, 3+2, 8+6 - correct result

***Observation**: Wrong result produced only when using two equal numbers.*

Bug fix tested and verification failed on http://[redacted].com/, website version 1.3.0 using **Mozilla Firefox 9**.

QA Failed

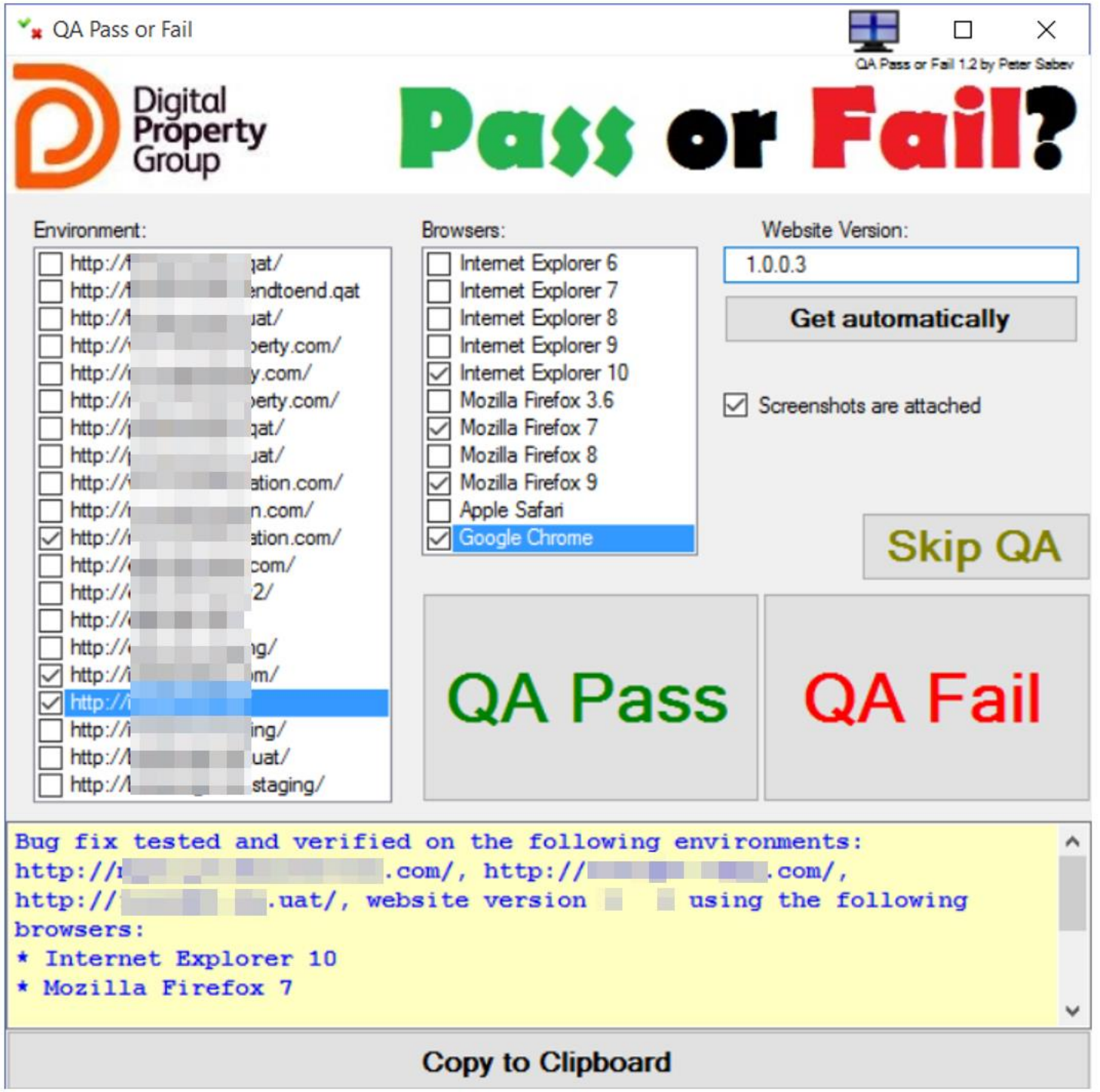
Bug fix tested and verified on the following environments: http://[redacted].com/, http://[redacted].com/, http://[redacted].uat/, website version 1.3.1 using the following browsers:

- Internet Explorer 10
- Mozilla Firefox 7
- Mozilla Firefox 9
- Google Chrome

QA Passed

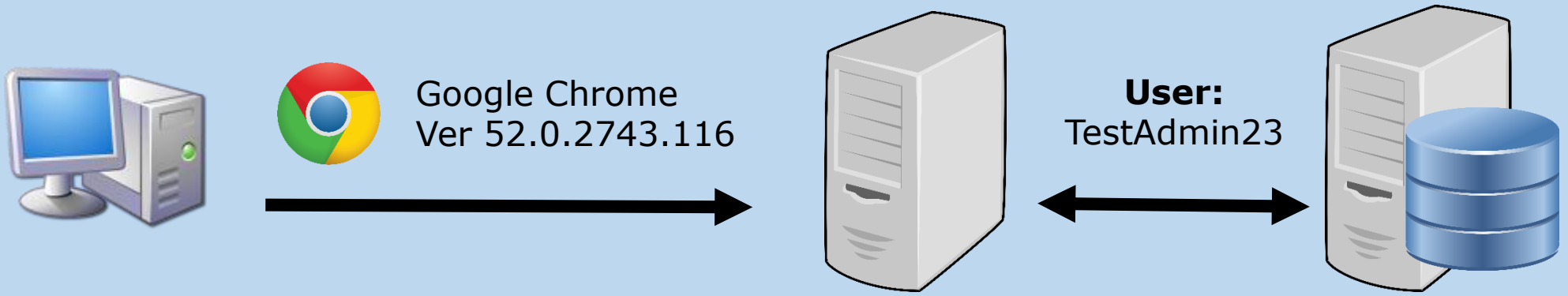
Even Stamps!!!

Even app?


QA Pass or Fail
QA Pass or Fail 1.2 by Peter Sabev
Digital Property Group
Pass or Fail?
Environment:
Browsers:
Internet Explorer 6
Internet Explorer 7
Internet Explorer 8
Internet Explorer 9
Internet Explorer 10
Mozilla Firefox 3.6
Mozilla Firefox 7
Mozilla Firefox 8
Mozilla Firefox 9
Apple Safari
Google Chrome
Website Version:
1.0.0.3
Get automatically
Screenshots are attached
Skip QA
QA Pass
QA Fail
Bug fix tested and verified on the following environments:
http://[redacted].com/, http://[redacted].com/,
http://[redacted].uat/, website version [redacted] using the following
browsers:
* Internet Explorer 10
* Mozilla Firefox 7
Copy to Clipboard

If you are good in HTML…

Tested on the following environment:



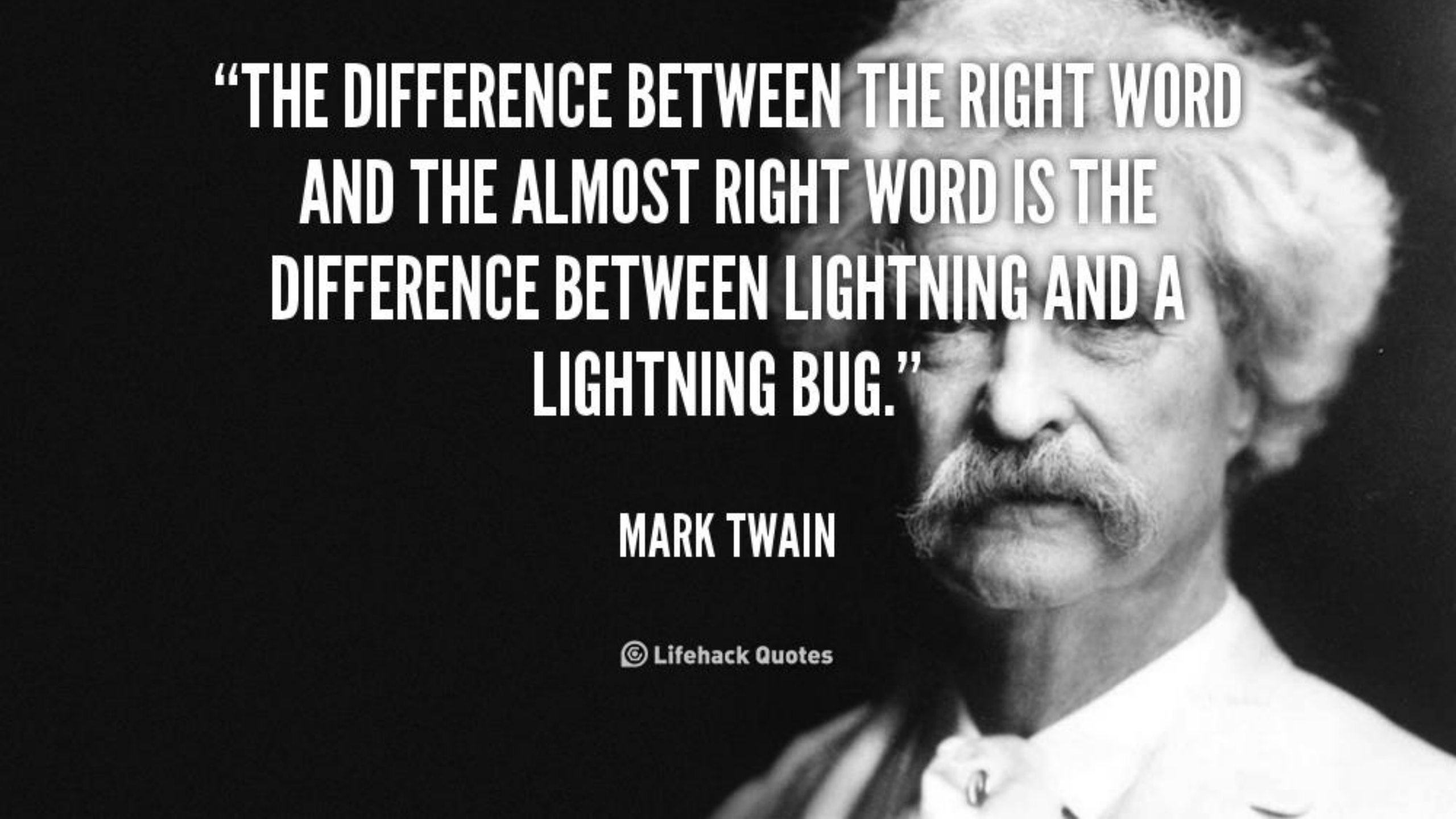
192.168.12.23
CPU: Intel Xeon E5-2670
RAM: 8 GB
OS: Windows 7 64-bit

192.168.12.240
Version: 1.0.4-rc3
SDK: 1.0.0
Apache: 2.0.63
PHP: 5.2.9
OS: Ubuntu 14.04.1 LTS

192.168.12.223
DB: MySQL 5.0.92
Records: 283
Users: 3
Submissions: 4322
Last submission: A12.xml

Problem 14:

Dealing with it fast and easy


“THE DIFFERENCE BETWEEN THE RIGHT WORD AND THE ALMOST RIGHT WORD IS THE DIFFERENCE BETWEEN LIGHTNING AND A LIGHTNING BUG.”
MARK TWAIN
© Lifehack Quotes

Use present tense

1. Click “Send” button.
2. Note that asterisks determine mandatory

1. Be assured you clicked “Send” button.
2. Asterisks will determine mandatory fields.

Use consistent abbreviations and parallel sentence structure.

Win10 **Home** should have **blue** icon
Win10 **Pro** should have **purple** icon.

Win10 Home should have **blue** icon, however, the icon for **Windows 10 Professional** is **purple.**

order matters

people carving pumpkins

pumpkins carving people

If a sentence has one condition, place the condition before the action.

If the disk is full, delete the file.

Delete the file if the disk is full.

Avoid including a long series of items in a sentence. Use a list or table instead.

Test the following features:

- Create text
- Edit text
- Format text

Test creating text, editing text and formatting text.

Avoid vague or ambiguous pronominal references.

When you delete an item from the table, the system deletes all values that are assigned to this item.

When you delete an item from the table, all of its assigned values are deleted.

Whose values? Table’s or system’s ones?

If possible, avoid noun strings, that is, a series of nouns that modify one another.

Check the port signals from the device adapter card.

Check the device adapter card port signals.

Avoid redundancies.

Introduction

Outcome

Because

To

Initial introduction

Final outcome

The reason is because

In order to

Avoid imprecise statements. If you cannot make a concrete statement because of exceptions, then list these exceptions.

usually, often, virtually, apparently, in some ways, to a certain extent, for all intends and purposes, in general, generally, in some respects, for the most part, occasionally, most often, as a rule, probably

Problem 15:
Practice Together

PEER REVIEW

Peer review is the evaluation of work by one or more people of similar competence to the producers of the work (**peers**).

Try crowdtesting…

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MAXIMISING DIGITAL PERFORMANCE

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Global
App Testing

test IO

APPLAUSE

User Testing

userfeel
REMOTE USABILITY TESTING

Ką darai – daryk gerai!

Questions?

Just ask:
right now, right here!

now

sli.do

#testcon2019

there

here

TestCon

“Ask me anything” corner

later

Peter Sabev
CEO, Fast Lane Soft Ltd.
p.sabev@fastlanesoft.com

FastLane Soft