

# Gamification in Software Testing

## Learning about Testing in a FUN way

Claudiu Draghia  
BrainForIT.com



**A** CHALLENGE  
ACCEPTED  
VERSION 3.0

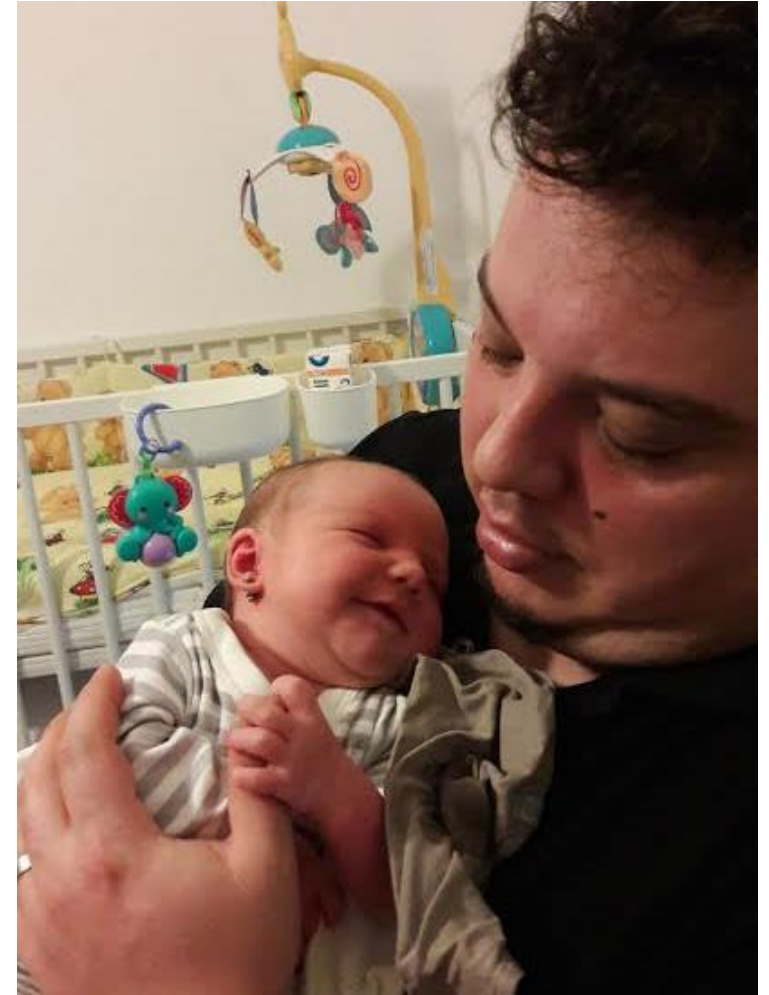
# About me

- **I started testing in 2004**



- **Worked @ Capgemini**

- **BrainForIT.com**



# Gamification in Software Testing

Why is **Learning about Testing** important?

Claudiu Draghia

**Every time you test you have to be prepared.**

**Where can you practice testing?**

**While you are testing you are learning.**

**Learn**

72:00



**PRACTICE**



**TESTING**



€



# Gamification in Software Testing

Why **Learning** has to be **FUN**?

Claudiu Draghia

BrainForIt.com

If it's not fun...it's hard to do

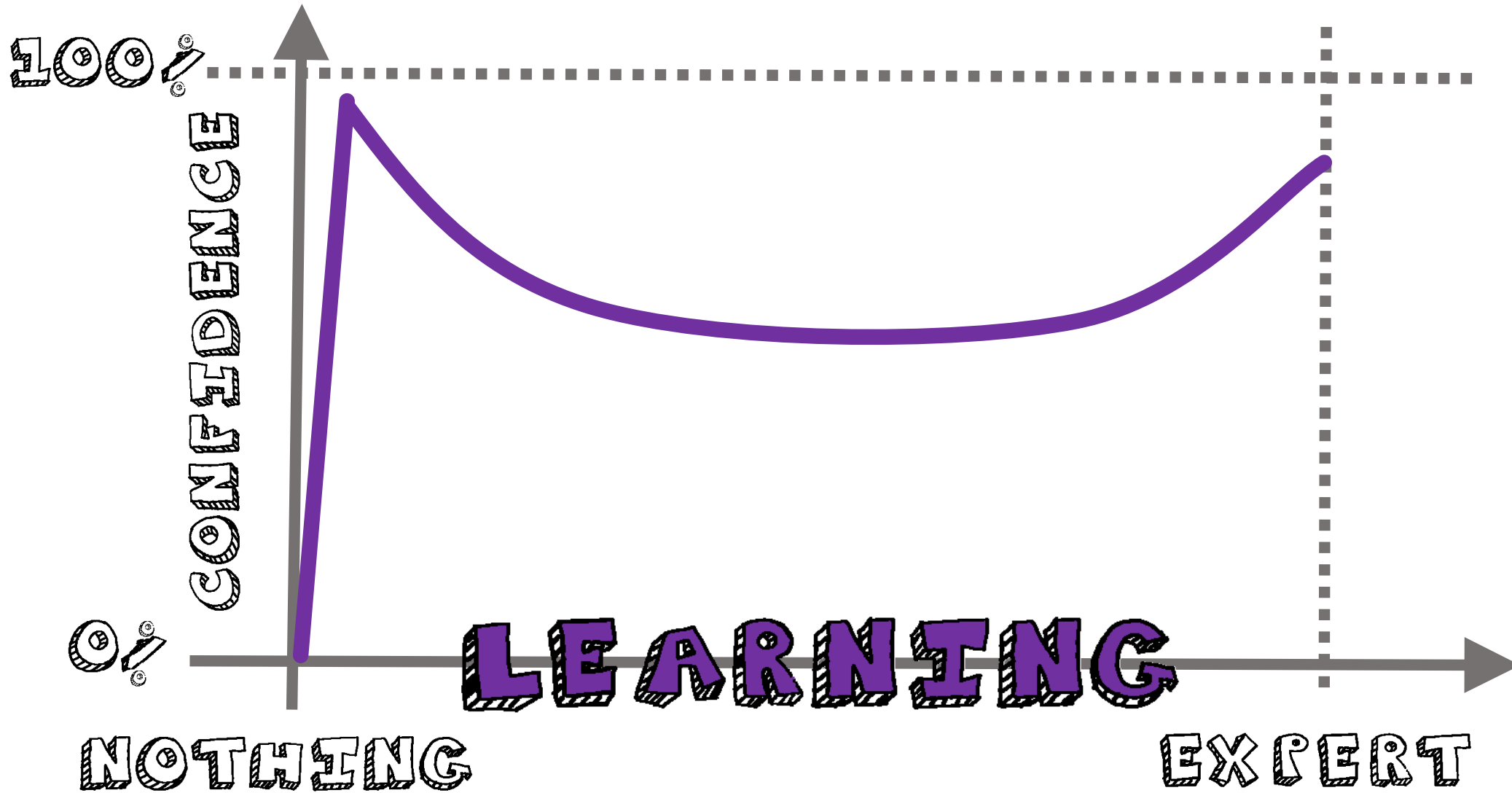
**SCHOOL**

~~MEMORIZING USELESS INFORMATION~~

**NOT LEARNING**

CHALLENGE  
ACCEPTED  
VERSION 3.0

# The Dunning-Kruger effect



# **Gamification** in Software Testing

Learning about Testing in a **FUN** way

Claudiu Draghia

**Is the application of  
game-design elements and  
game principles  
in non-game contexts**



# Why are games better than life?

- **World saving mission**
- **Perfectly match with your skill**
- **No sitting around**
- **Inspiring story**
- **Constant and instant feedback**
- **Rules**

### Testing Challenges

- > Hall of fame
- > Challenge #1
- > Completed by...
- > Challenge #2
- > Challenge #4
- > Challenge #5
- > Challenge #6
- > Challenge #7
- > Other Challengers
- > Contact & Feedback
- > The Testing Map

If you have a testing challenge idea, we can build it together.  
Send me your idea

Cannot find a test? Tell me what you have found and I will guide you towards the other testers!

What's behind the challenges?

Testing Challenge #1 - web testing

**What to do**  
Identify all the test required for the scenario below. Based on the data you input in the First Name field the tests will be evaluated.

**What not to test for**  
Different browsers, extremely big requests, "hasty words", browser zoom in and out. Do not use automation tools. The server will cut access at over 30 requests per second per IP.

**Specification**  
The user has to fill in the required data in order to get access, as a standard user in forum. Only the First Name field can be tested right now. The field has a max.length of 30.

**Confirmation message**  
Thank you Gheorghe, from Norway.  
A message will be sent shortly to your e-mail address: me@whatyouknow.com with your password.  
Your username is Gheorghe\_.

Country

Norway

Email

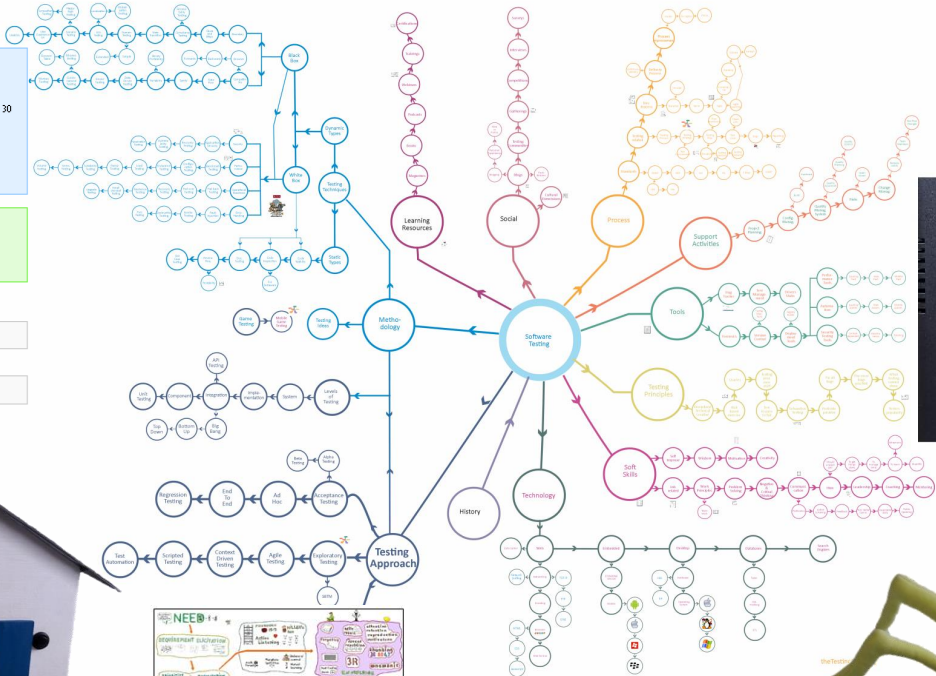
me@whatyouknow.com

First Name\*

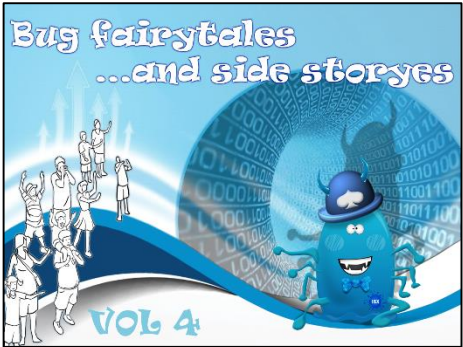
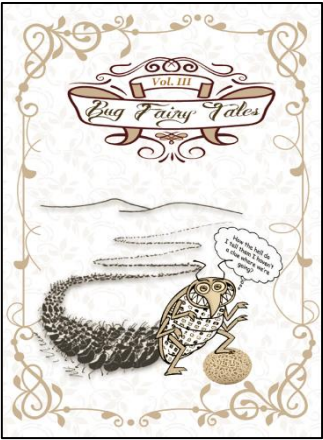
Last Name

Gheorghe

Submit

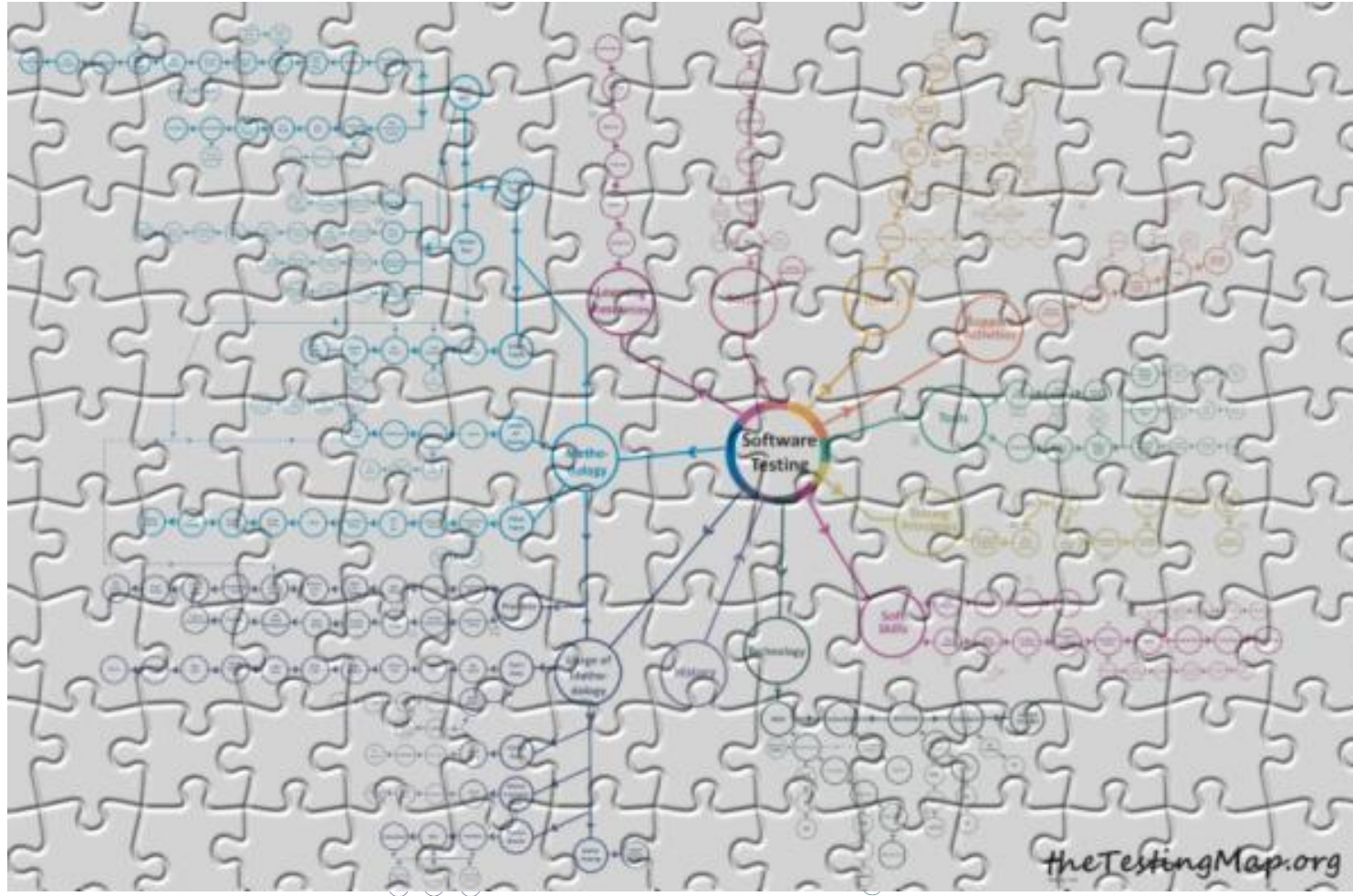


|                    |                    |                    |                     |
|--------------------|--------------------|--------------------|---------------------|
| Grooming           | Planning1          |                    | Daily SCRUM         |
| Backlog Refinement | Planning2          |                    |                     |
| Review             | Working Hours      | Planning Poker     | Sub Tasks           |
| Retest             | Story Points       |                    | Sub Bugs            |
|                    | Open Issue         |                    |                     |
| Spine Start Date   | RISK               |                    |                     |
| Spine End Date     |                    |                    |                     |
| BUG                |                    |                    |                     |
| User Story         |                    |                    |                     |
| Support Team       |                    |                    |                     |
| DATABAG            |                    |                    |                     |
| RECIPE             |                    |                    |                     |
| Test Automation    | Continuous Testing |                    |                     |
| Testability        | Test Case RCA      | Unit Test Mnemonic | Selenium Heuristics |



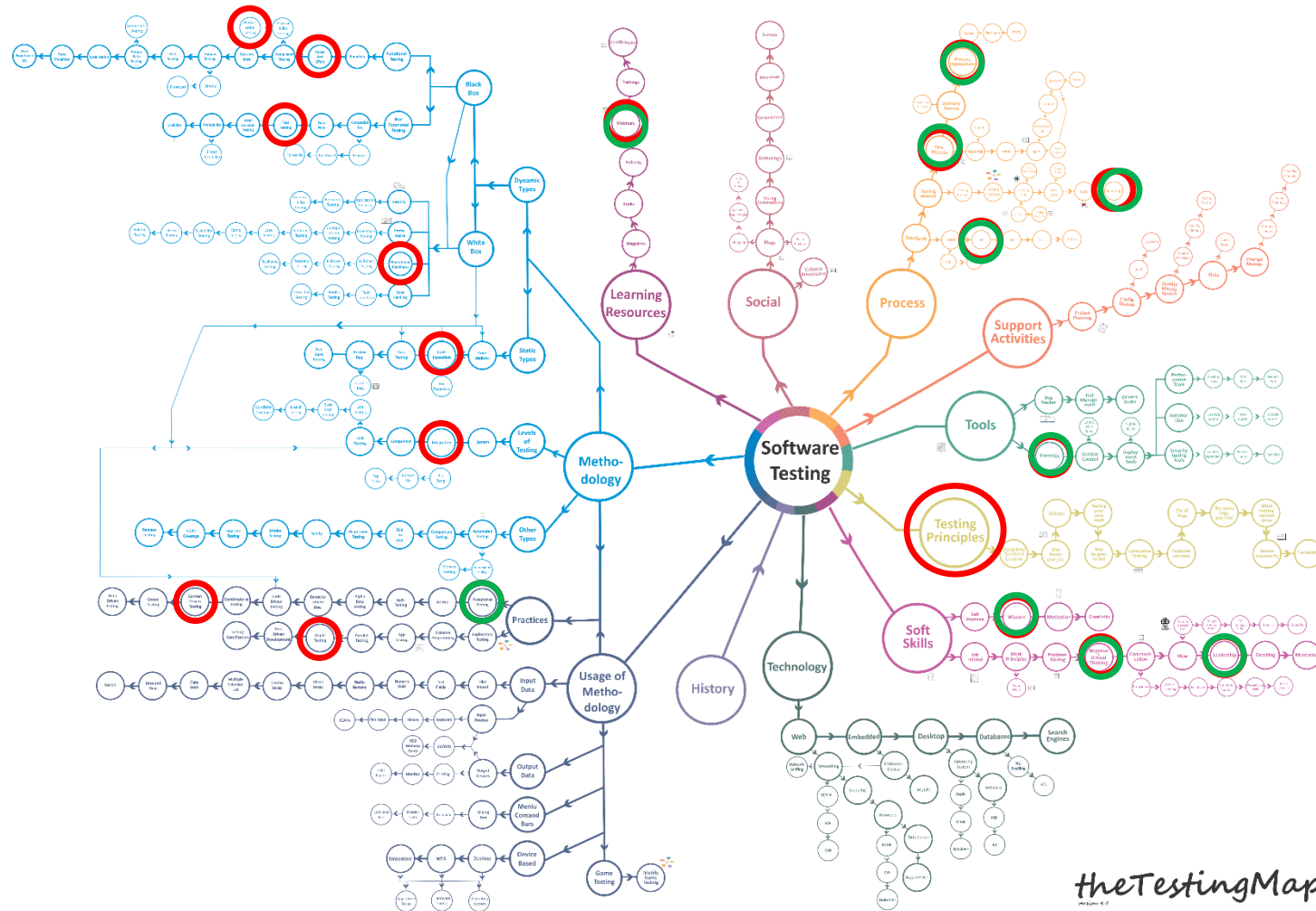


# Make a puzzle out of it



 Time how much it  
takes to make the map

# Learn what you do not know



theTestingMap.org

**Get a big print**

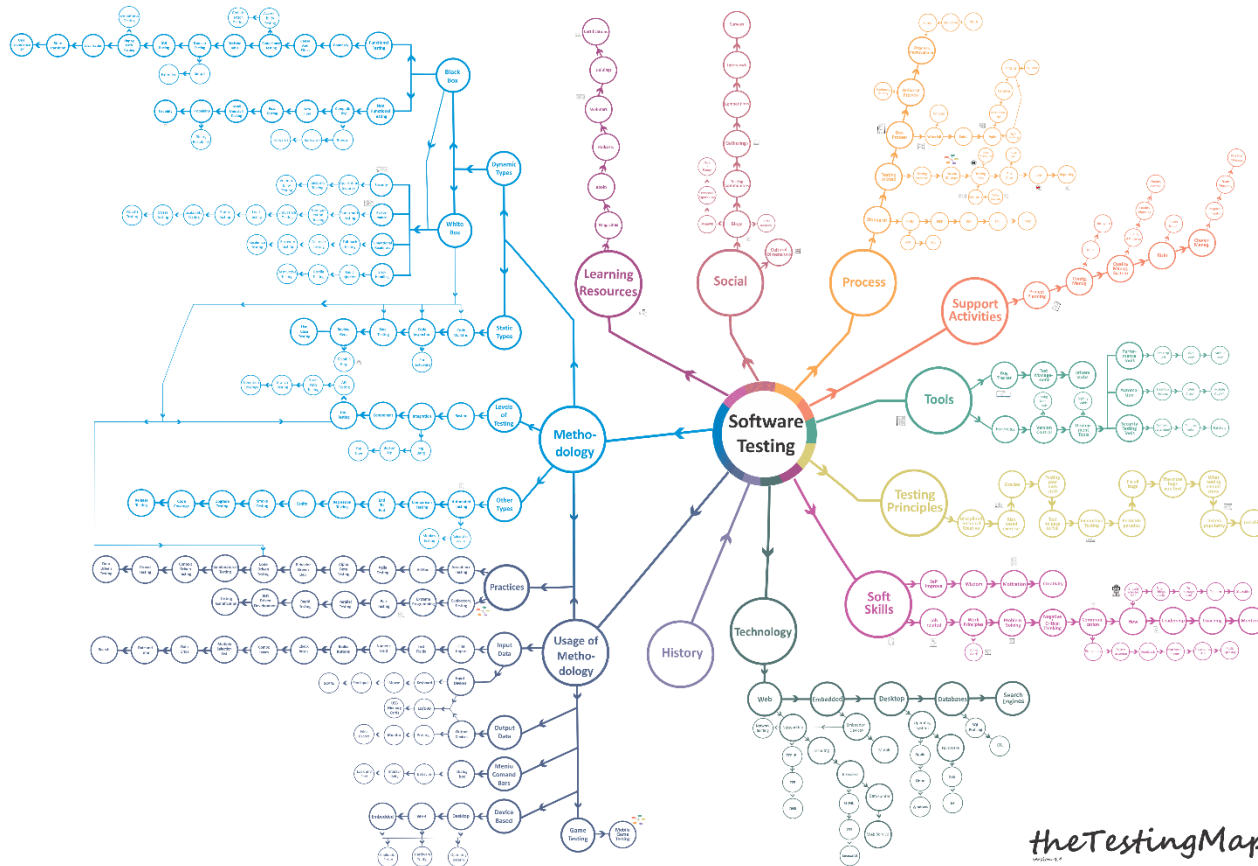
**Mark what you need  
to learn**

**Learn about each ○**

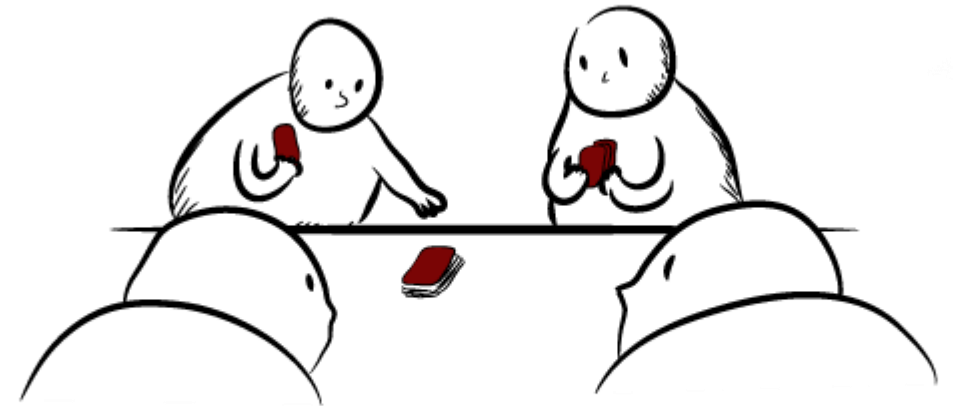
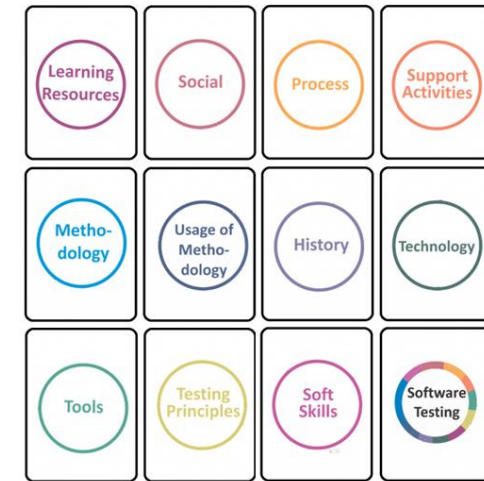
**Give yourself a reward  
once you have  
*reached a goal***

# Share your knowledge

**Make a set of cards  
with some topics**



theTestingMap.org



# Take away

- Use puzzles and cards to learn
- Track your progress and reward yourself for achieving goals

# What do you do as a tester?

- Testing has to be deliberate act
- Important also for your team and stakeholders
- I made a quiz [TestersDo.brainforit.com](https://TestersDo.brainforit.com)
- 46 questions (version 1)

# The quiz [TestersDo.brainforit.com](https://TestersDo.brainforit.com)

- Based on your answers you would get
  - **Scoring**

Results for the things that you do (33.5 out of 44 / 76%)

- **Detailed results**



GOOD JOB !!!

WHY



ALARMS



WARNINGS

WHAT CAN YOU DO

# Let's take one questions



**As a tester:**

# Answering the quiz as a team

**Please enter a nickname and number of testers that want to take the quiz...**

Once you click START you will have 30 minutes to complete the questions.  
Each question has to be answered by each tester.

**Nickname**

**Number of Testers**



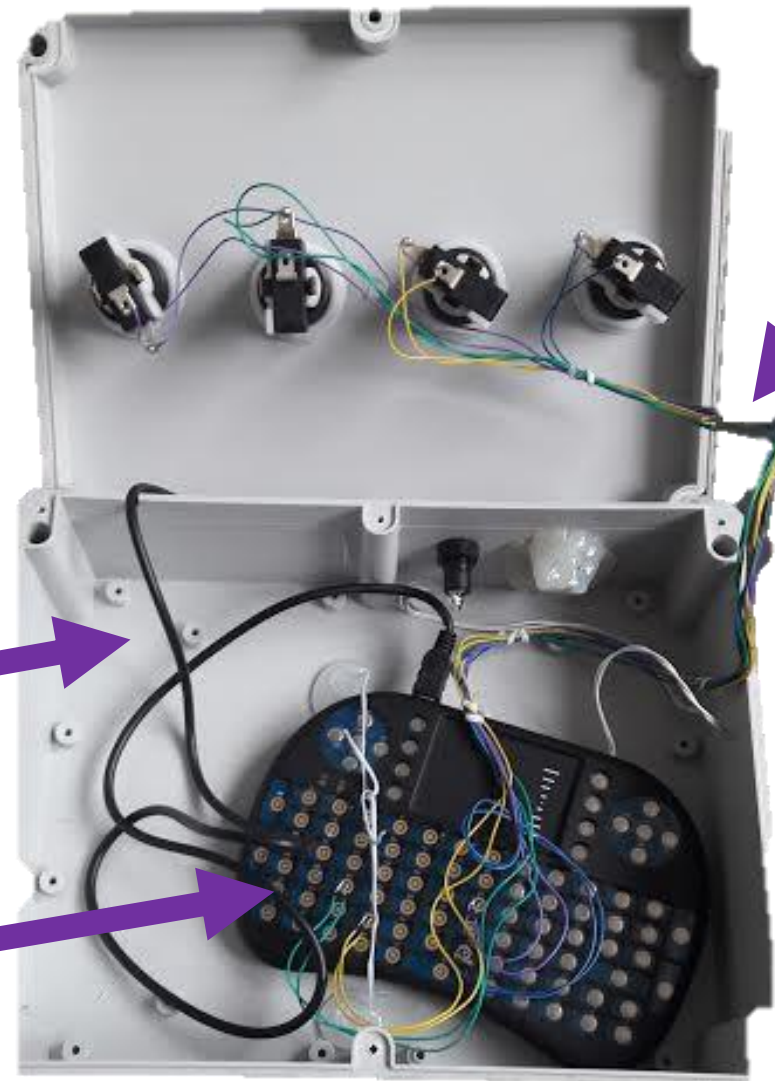
**START**

# Answering the quiz as a team



Charging  
cable

Removed  
buttons



Button  
connection

# Take away

- Use puzzles and cards to learn
- Track your progress and reward yourself for achieving goals
- If something is boring add a flavor to it
- Don't be afraid to make stuff

# Testing Challenges



**Testing Challenges**

- > Hall of fame
- > Challenge #1
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- > Challenge #2
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- > Other Challenges
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If you have a testing challenge idea, we can build it together.  
[Send me your idea](#)

Cannot find answers?  
Tell me when you have found and I will guide you towards the others  
[Request Hint](#)

Who's behind the challenges?

## Testing Challenge #1 - web testing

### What to do

Identify all the test required for the scenario bellow. Based on the data you input in the First Name field the tests will be evaluated.

### What not to test for

Different browsers, extremely big requests, "hasty words", browser zoom in and out. Do not use automation tools. The server will cut access at over 30 requests per second per IP.

### Specification

The user has to fill in the required data in order to get access, as a standard user in forum.

Only the First Name field can be tested right now. The field has a max length of 30.

### Confirmation message

Thank you **Gheorghe**, from **Norway**.

A message will be sent shortly to your e-mail address: **me@whatyouknow.com** with your password.

Your username is **Gheorghe\_**.

### Country

### Email

### First Name\*

### Last Name

Checks found: **0** out of 18

<http://testingchallenges.thetestingmap.org/>

# What happens if you finish them all?



**Testing Challenges**

- > Hall of fame
- > Challenge #1
- > Challenge #2
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- > The Testing Map

If you have a testing challenge idea, we can build it together.  
[Send me your idea](#)

Cannot find all tests?  
Tell me what you have found and I will guide you towards the others  
[Request Hint](#)

Who's behind the challenges?

Challenges completed: 1,991

Testers that completed the challenges: 1,219

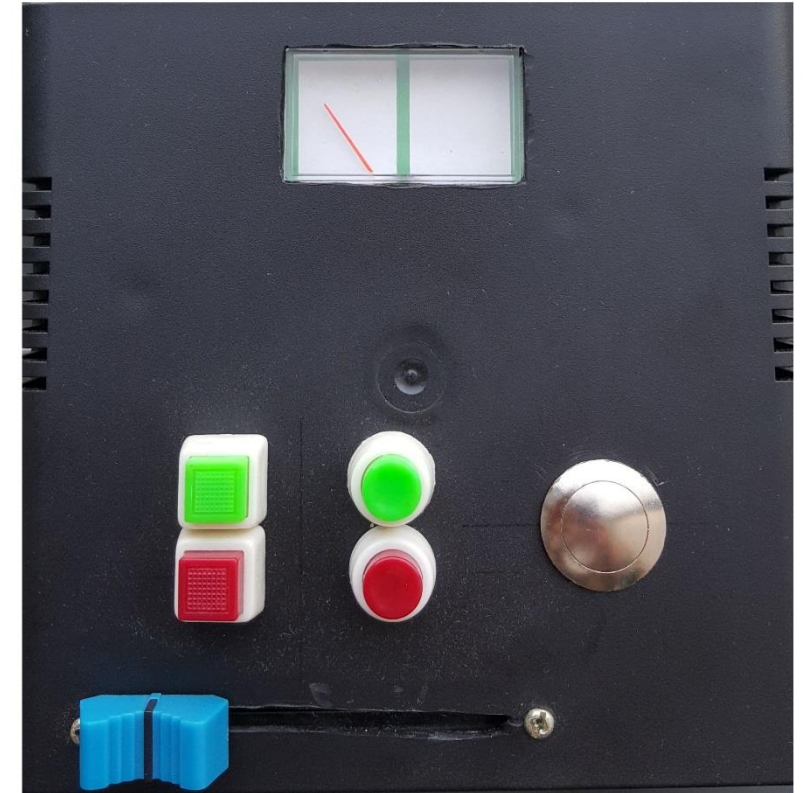
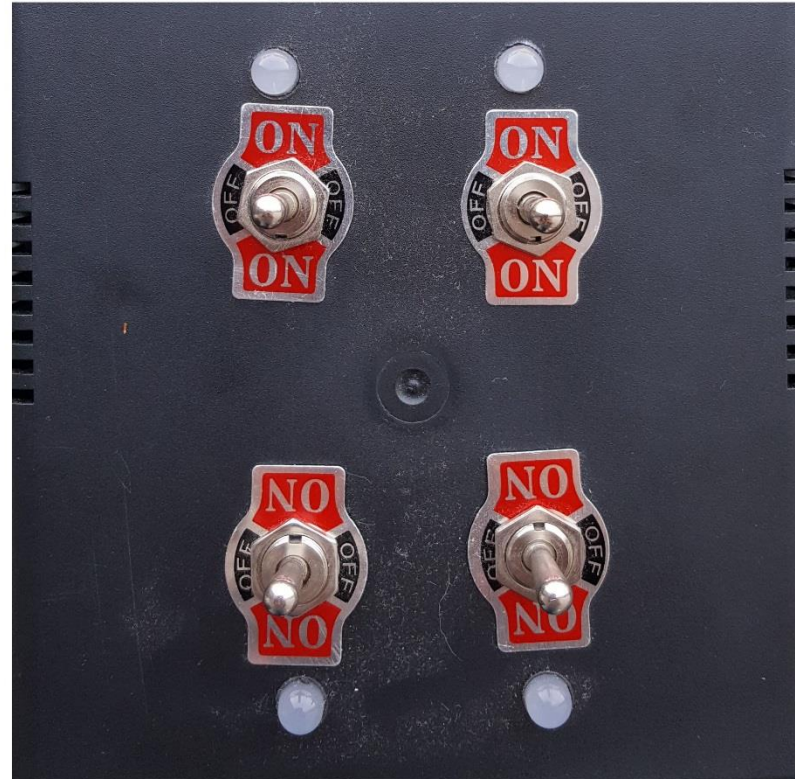
Testers that completed all the challenges:

1. Shmuel Gershon
2. Vladimir Kirichenko
3. Arta812
4. Kseniya Krashenitsa
5. Roman Tevs
6. ko4evnik\_
7. AgroRoza
8. Art
9. VS\_Geenio
10. APHD
11. JC Mann
12. gonsi
13. Volha Leshchanka
14. Marcin Chumieja
15. Enikey
16. Timofei Bogolubov
17. Oleksii Mynko
18. Silviu Titirca
19. Tanyama
20. Mihai Hurduc
21. Andrada Banica
22. Cristi Neagu
23. Adrian Turcu
24. Stoica George
25. Jirka Zajiček
26. Yaroslav Novak
27. Artemy Osipov
28. ForteQA
29. Alex Kokhanchuk
30. vodka
31. SzP
32. p1ka2So

# Take away

- Use puzzles and cards to learn
- Track your progress and reward yourself for achieving goals
- If something is boring add a flavor to it
- Don't be afraid to make stuff
- Imagine *if situations* and create something with them

# How about some real black box testing?



# Building a black box

# IDEA



# Inside a black box

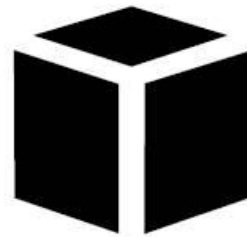


Arduino

Clock

Battery

Vibration



# Black Box Testing Month

**Everyone can participate but if you are a tester you have better odds.**

Whoever scores the most point, until the end of August,  
wins the challenge and the award.

## How to get the points:

Solve as many testing challenges from  
<http://testingchallenges.thetestingmap.org/>  
for each challenges solved you receive: **1 POINT**



Find what is the algorithm for each game from the black boxes.  
There is a total of 10 games. Each games values: **1 POINT**



*(You can get the boxes from Dana or Claudiu)*

**The scores will be revealed at the end of the August.  
Get as many points as you can to make sure you will be the first one.**

# Take away

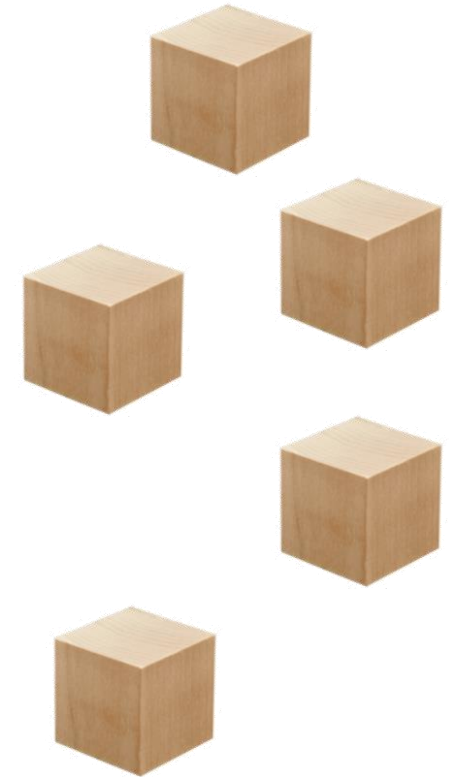
- Use puzzles and cards to learn
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- If something is boring add a flavor to it
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# Create dices quickly

|                                                                                   |                                                                                    |                                                                                                        |                                                                                     |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Grooming<br>Backlog<br>Refinement                                                 | Planning 1<br>Planning 2                                                           |                       | Daily<br>SCRUM                                                                      |
| Review<br>Retro                                                                   | Working<br>Hours<br>Story<br>Points                                                | Planning<br>Poker<br> | Sub Tasks<br>Sub Bugs                                                               |
|  | Open Issue<br>RISK                                                                 | JIRA<br>Z-PHYR                                                                                         | DOD<br>DOR                                                                          |
| Sprint<br>Start Date<br>Sprint<br>End Date                                        | Incident<br>Problem<br>SR                                                          | Fix Version<br>Release Model                                                                           | Sprint Backlog<br>Product Backlog                                                   |
| BUG<br>EPIC<br>User Story<br>Support Item                                         | RFC<br>eRFC<br>Stand. RFC                                                          | SES<br>1+ line                                                                                         | CAB<br>SLA Report                                                                   |
| DATABAG<br>RECIPE                                                                 |  |                      |   |
| Test<br>Automation<br>Automated<br>Testing                                        | Continuous<br>Testing                                                              | Iterative<br>Incremental                                                                               |  |
| Testability                                                                       | Test Case<br>RCA                                                                   | Unit Test<br>Mnemonic                                                                                  | Selenium<br>Heuristics                                                              |

Adhesive  
paper



# Enhance dices 2.0



# Take away

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- Imagine *if situations* and create something with them
- *if situations* can be simulated using dices

# About bugs



# Take away

- Use puzzles and cards to learn
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- If something is boring add a flavor to it
- Don't be afraid to make stuff
- Imagine *if situations* and create something with them
- *if situations* can be simulated using dices
- Always learn from your mistakes in a fun way

# About bugs



confidentiality

on repudiation



availability

**CIA<sub>n</sub>**

integrity

The security bug

Can you guess what bug this is?

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- Always learn from your mistakes in a fun way
- Use what ever mnemonics or visualization

# Schools of testing

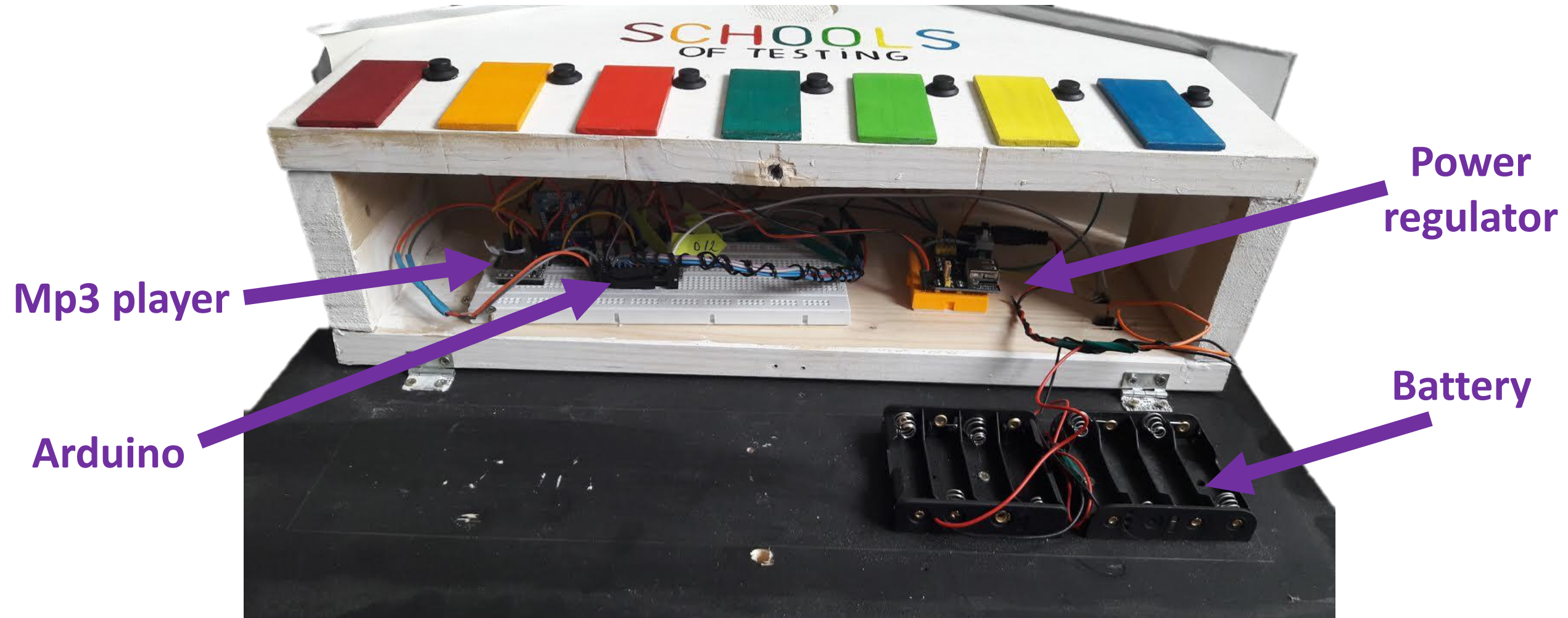
Motion sensor



Speaker



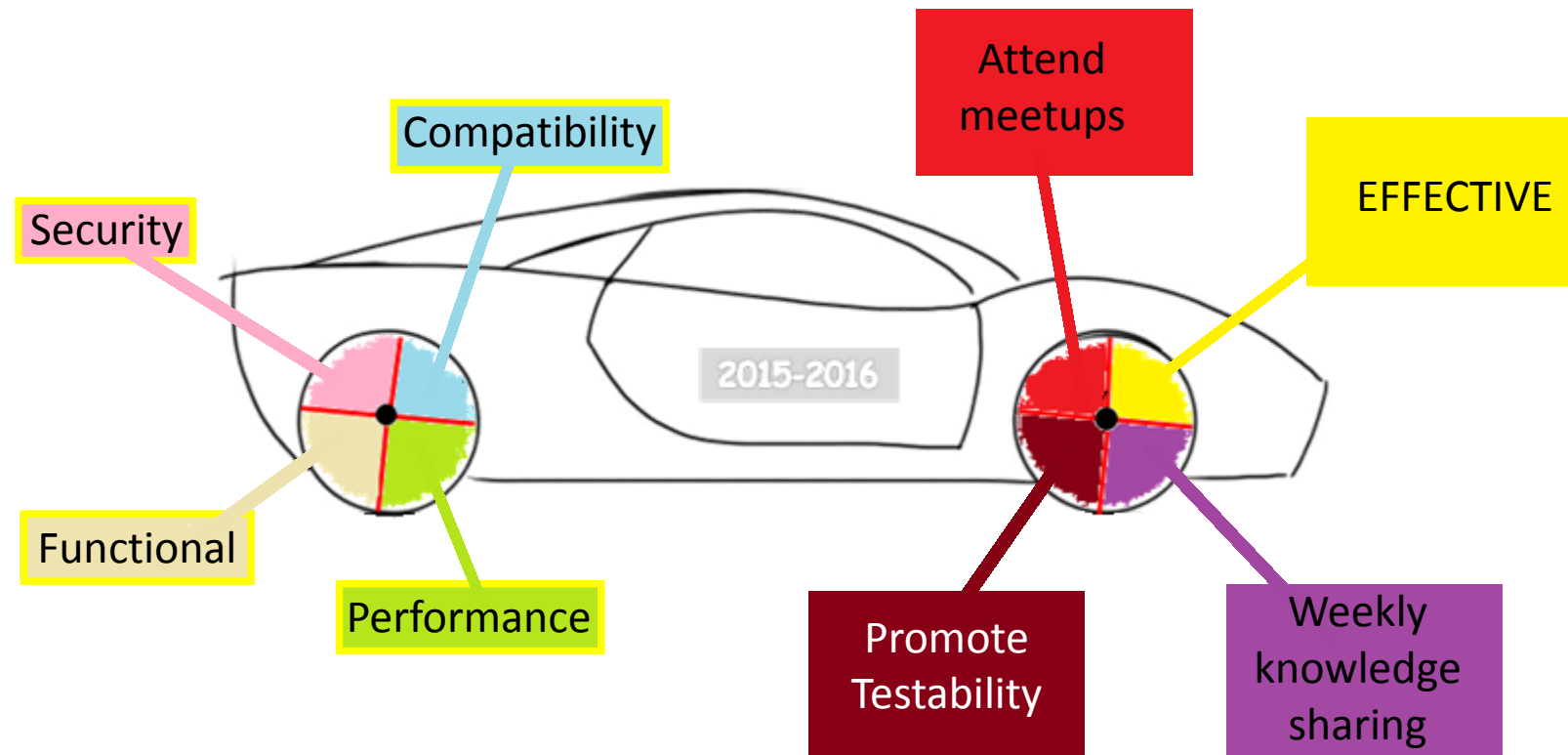
# Inside Schools of testing



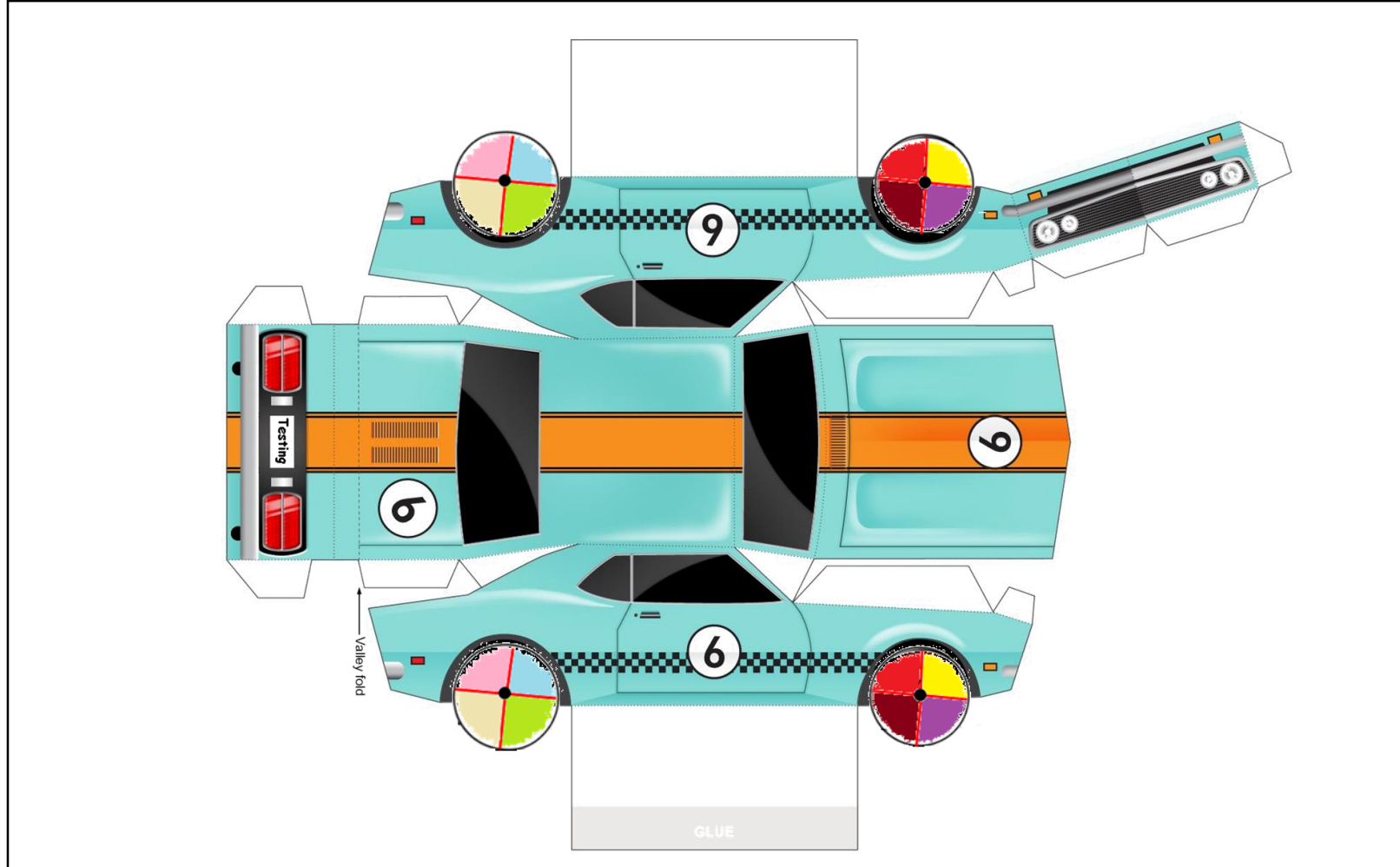
# Take away

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- Learning has to be available and attractive

# Defining a strategy



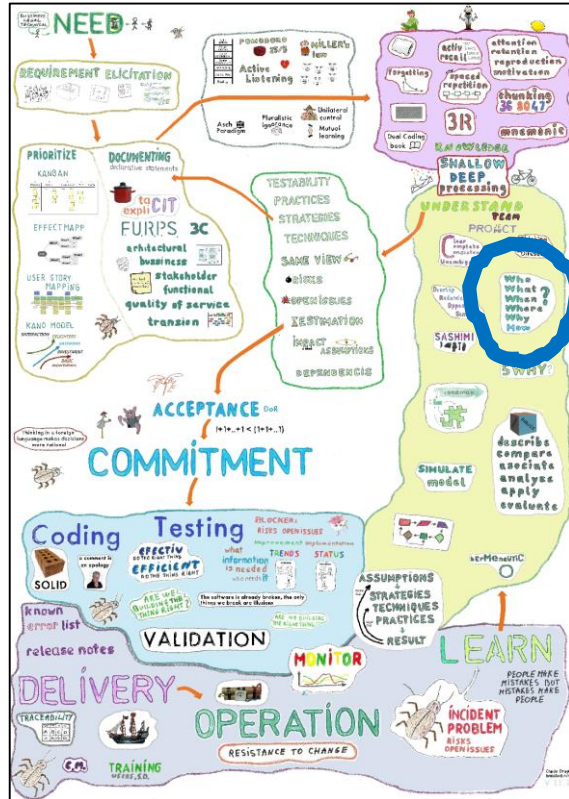
# Defining a strategy



# Take away

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- Learning has to be available and attractive
- One part of learning is repetition

# Review Requirements



Who  
What?  
When?  
Where?  
Why?  
How?

Who wants this implemented (stakeholders)?  
What does this feature need to do?  
Why is it needed?  
How will the feature be used?  
Who benefits from it?  
What must happen before?(prerequisites)  
Who does not benefit from it?  
What roles, what buyers?  
General availability?  
How will it impact existing functionalities/users/events?  
What parts of the system are affected?  
When will the feature be used?  
How will we deploy it?  
What process/flow will trigger the usage of the feature?  
When we will deliver it?  
What are the risks?  
When will we implement it?  
Why are we implementing this?  
How will it impact the system?  
What are the open issues?  
When should we start development/testing/UAT?  
How will we implement it?  
What standards should we use?  
What are the constraints?  
What should we implement?  
Who can work on it?  
What is required to do it?  
When the testing will start? (create test cases, test execution)  
Why do we need to test?  
How will we test it?  
What are my assumptions?  
How can we test it fast?  
What kinds of tests could easily cover multiple functionalities?  
What tests will have the best high-risk-coverage to time-required ratio?  
What is required to do it? (code, deployment)  
When will we start the development?  
How will we implement this?  
What are my assumptions?  
How can we develop it fast?  
What changes will there be in the existing functionality?  
What other things should be tested?  
Who needs training?  
What kinds of problems would could cause?  
When should we do the training?  
Why do we need to monitor?  
How will we monitor it on production?  
What kinds of incidents we could get?  
What kind of training is required?  
What can be automated?

**1**

How will we implement this?  
How will the feature be used?  
What process/flow will trigger the usage of the feature?  
When will the feature be used?  
What is required to do it?  
What kinds of incidents we could get?  
What kinds of tests could easily cover multiple functionalities?  
What are my assumptions?

**2**

How will it impact the system?  
What kind of training is required?  
How will we deploy it?  
What parts of the system are affected?  
How will we test it?  
What are the constraints?  
Who can work on it?  
Who wants this implemented (stakeholders)?

**3**

How can we develop it fast?  
Who needs training?  
General availability?  
What does this feature need to do?  
What are my assumptions?  
When we will deliver it?  
What standards should we use?  
Who does not benefit from it?

**5**

What tests will have the best high-risk-coverage to time-required ratio?  
What roles, what buyers?  
What is required to do it? (code, deployment)  
What should we implement?  
What are the open issues?  
Why do we need to test?  
When should we start development/testing/UAT?  
What kinds of problems would could cause?

**8**

What must happen before?(prerequisites)  
What are the risks?  
Who benefits from it?  
What other things should be tested?  
When will we implement it?  
When will we start the development?  
How can we test it fast?  
How will it impact existing functionalities/users/events?

**13**

How will we implement it?  
How will we monitor it on production?  
Why do we need to monitor?  
What changes will there be in the existing functionality?  
Why is it needed?  
When should we do the training?  
When the testing will start? (create test cases, test execution)  
Why are we implementing this?

# Review Requirements



Who  
What?  
When  
Where  
Why  
How

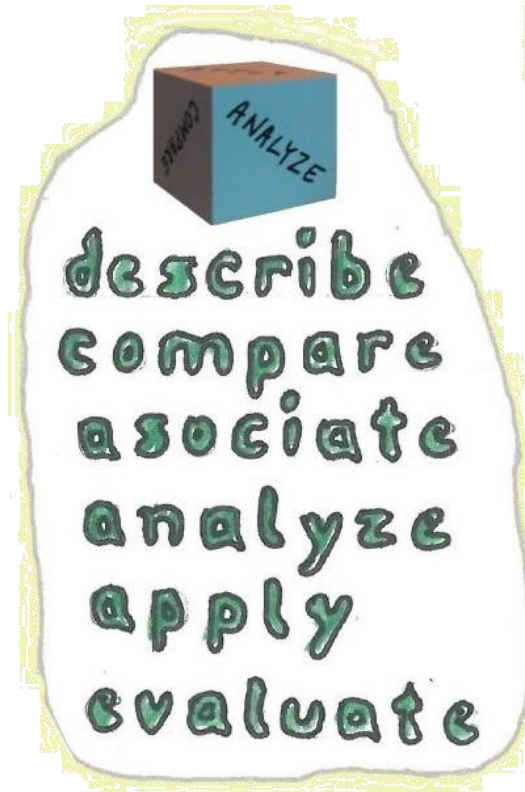
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What kinds of incidents we could get?  
What kind of training is required?  
What can be automated?



**REVIEW  
Meeting**

**Everyone extracts a  
question and will answer  
it through the review**

# Review Requirements



**REVIEW  
Meeting**

**Use the dice for reviewing  
your understanding**

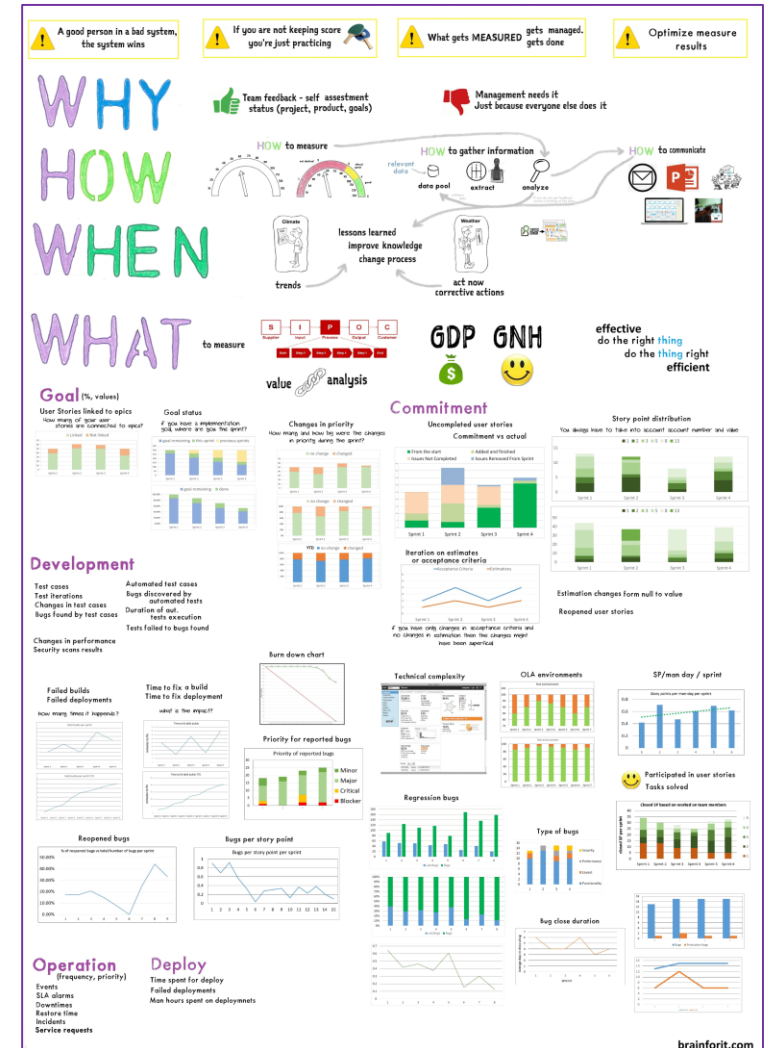
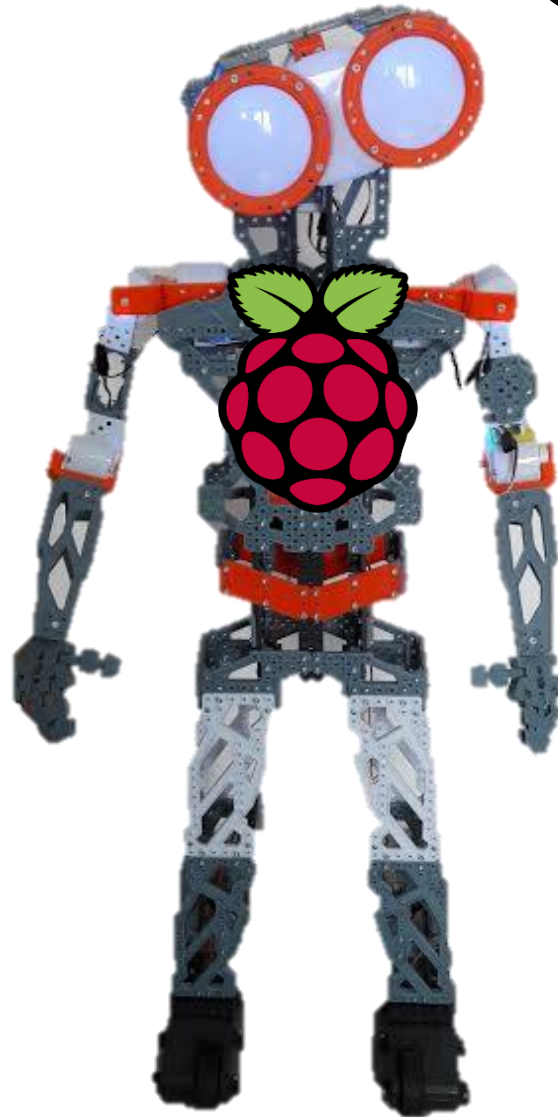
# Take away

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- If something is boring add a flavor to it
- Don't be afraid to make stuff
- Imagine *if situations* and create something with them
- *if situations* can be simulated using dices
- Always learn from your mistakes in a fun way
- Use what ever mnemonics or visualization
- Learning has to be available and attractive
- One part of learning is repetition

# Take away

While you are working on creating gamification activities you develop a better knowledge and understanding.

# Next BIG PROJECT QA Robot



# What do I use these for?



- > Hall of fame
- > Challenge #1
- > Completed by...
- > Challenge #2
- > Challenge #3
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If you have a testing challenge idea, we can build it together.

Cannot find all tests? Tell me what you have found and I will guide you towards the others

## Testing Challenge #1 - web testing

### What to do

Identify all the test required for the scenario below. Based on the data you input in the First Name field on the website.

### What not to test for

Different browsers, extremely big requests, "hasty words", browser zoom in and out. Do not use automation tools requests per second per IP.

### Specification

The user has to fill in the required data in order to get access, as a standard user in forum.

Only the First Name field can be tested right now. The field has a max-length of 30.

### Confirmation message

Thank you **Gheorghe**, from **Norway**.

A message will be sent shortly to your e-mail address: **me@whatyouknow.com** with your password.

Your username is **Gheorghe\_**.

Country

Norway

Email

me@whatyouknow.com

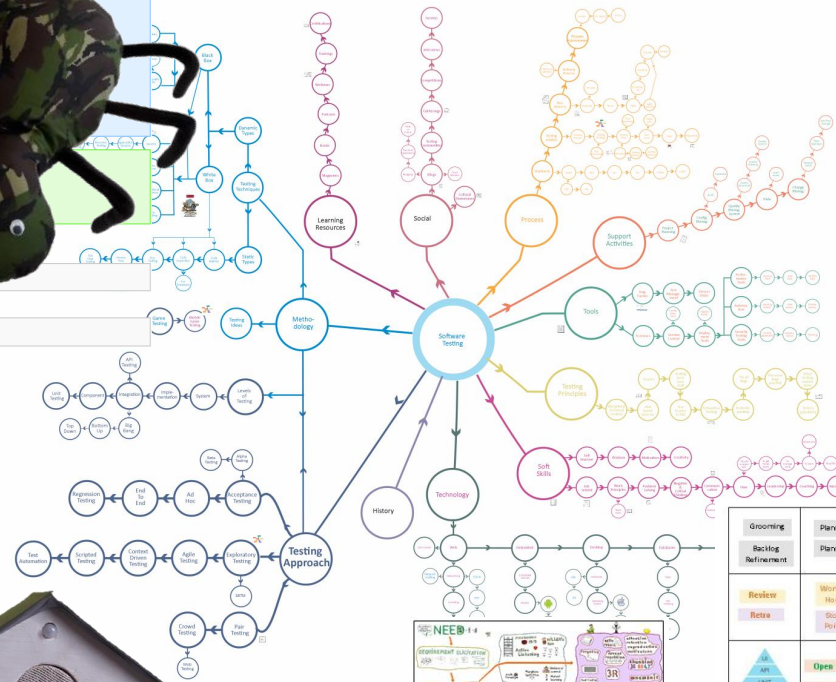
First Name\*

Last Name

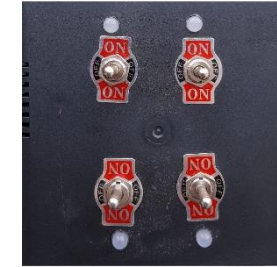
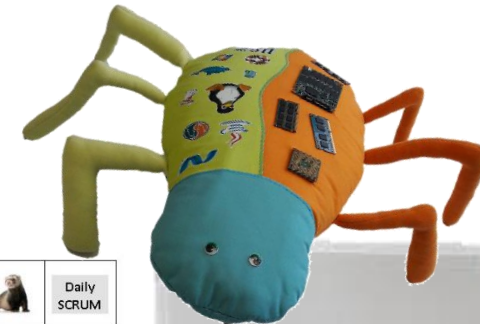
Gheorghe

Submit

Checks found: 0 out of 18



|                    |               |                |             |
|--------------------|---------------|----------------|-------------|
| Grooming           | Planning1     | Planning2      | Daily SCRUM |
| Backlog Refinement |               |                |             |
| Review             | Working Hours | Planning Poker | Sub Tasks   |
| Retire             | Story Points  |                | Sub Bugs    |
| API Test           | Open Issue    |                |             |
| Spine Start Date   | Include       |                |             |
| Spine End Date     |               |                |             |
| BUG                |               |                |             |
| User Story         |               |                |             |
| Support Issues     |               |                |             |
| DATABAG            |               |                |             |
| RECIPE             |               |                |             |
| Test Automation    |               |                |             |
| Automated Testing  |               |                |             |
| Testability        | Test Case     | Unit Test      | Selenium    |
|                    | RCA           | Mnemonic       | Heuristics  |



# 3 Closing words

MAKE IT

FUN

**Thank you!**

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ANY

QA QUESTIONS?