

Software Systems Verification and Validation

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Software Systems Verification and Validation

"Tell me and I forget, teach me and I may remember, involve me and I learn."

(Benjamin Franklin)

(Next)/Today Lecture

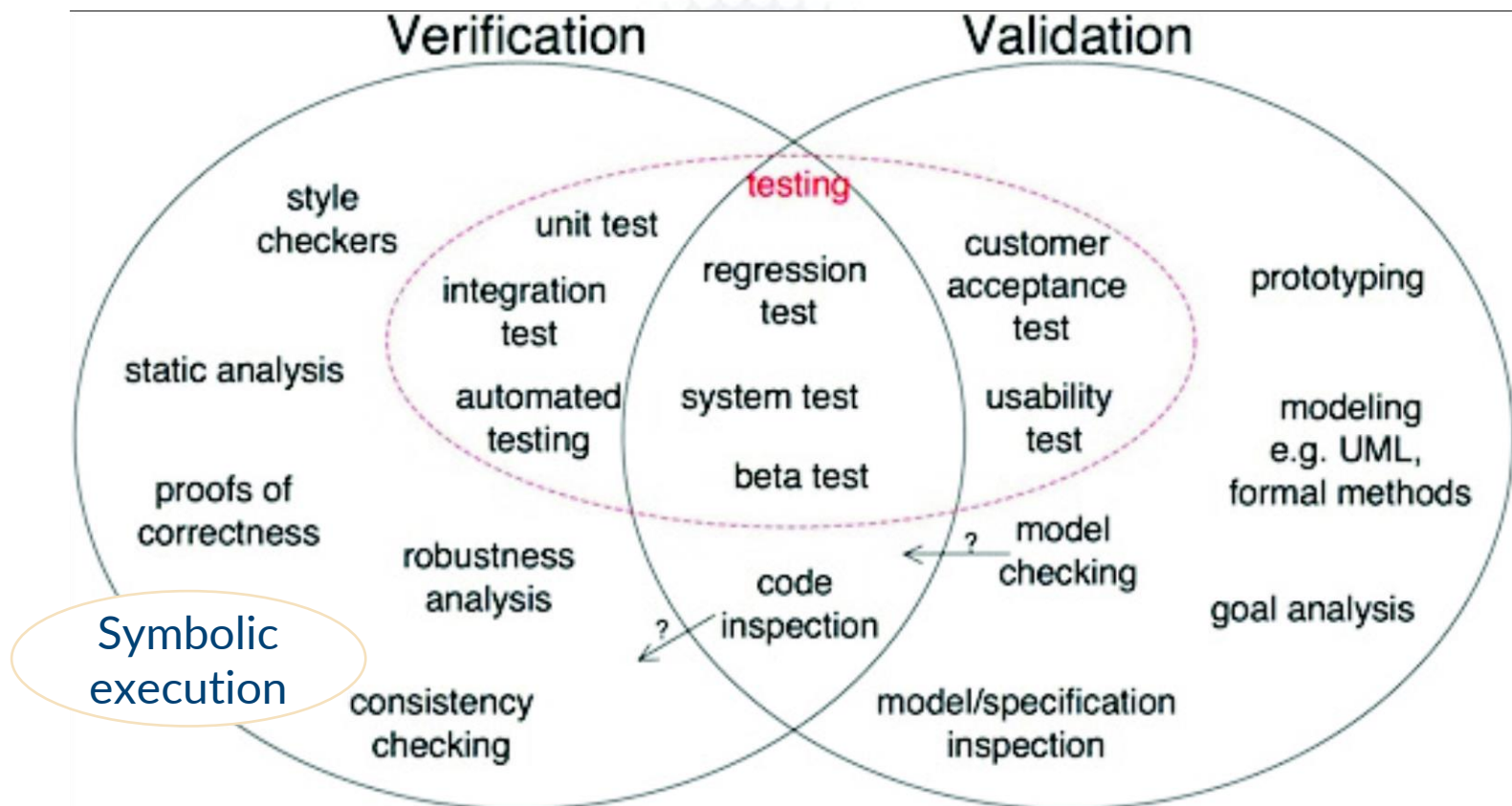
- Agile testing
- Exploratory testing



Outline

- Agile Testing
 - Video presentations – 10 minutes
- Exploratory testing
 - Definition
 - About
 - Video presentations and links
 - Session Based Test Management [SBTM]
 - About
 - Ready for rent?
 - 5 min. - about
 - 25 min. activity
 - 10 min. debriefing
 - 10 min. - questionnaire

What we will learn!



Outline

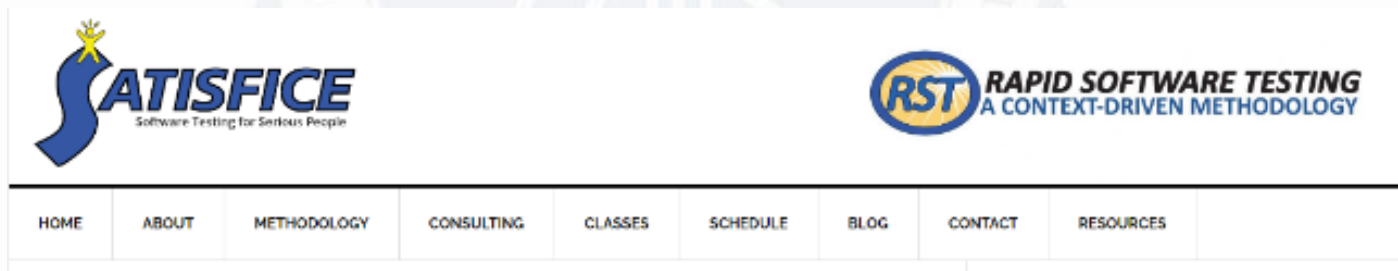
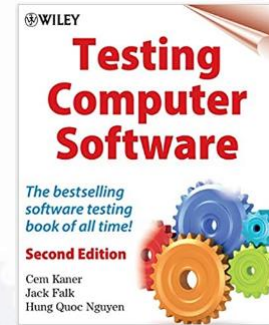
- Agile Testing
 - Video presentations – 10 minutes
- Video presentations (from 2019)
 - Created by a team
 - Each video ~ 5 minutes
 - Audio + written + visual
 - Send by email the link for your video – 1 day before the presentation
- Team 1
- Team 2 - 3:44 – Agile testing - quadrants
- Team 3 - 5:27 – Agile testing - methods
- Team 4

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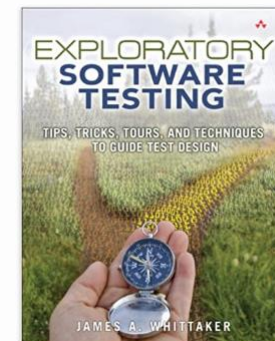
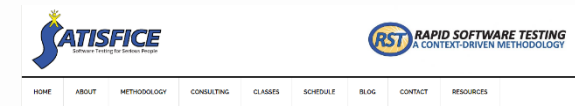
Exploratory testing – Definition(s)

- History of definitions of Exploratory testing
 - <https://www.satisfice.com/blog/archives/1504>
- James Bach, Test consultant and founder of Satisfice Inc., helps understand Exploratory testing in an exclusive interview.
 - https://www.youtube.com/watch?v=I-ltEKt_N_s&ab_channel=MindtreeLtd.



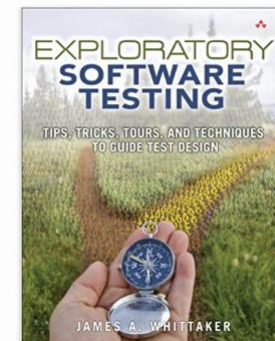
Exploratory testing – About

- James Bach, Test consultant and founder of Satisfice Inc., helps understand Exploratory testing in an exclusive interview. (6 min. video)
 - https://www.youtube.com/watch?v=I-ltEKt_N_s&ab_channel=MindtreeLtd.
- Elisabeth Hendrickson
 - An explanation of the Who, What, When, Why, and How of exploratory testing. (total 40 min.) Seconds 25"-2min10",
Experiential Learning 35"40" (1 minute)
 - https://www.youtube.com/watch?v=9FKY1ls0lgs&ab_channel=ElisabethHendrickson
- James Whittaker
 - Large-scale Exploratory Testing: Let's Take a Tour (total 47 min.)
 - https://www.youtube.com/watch?v=fNkYz1hB7r0&ab_channel=TechWellHappenings
- Maaret Pyhajarvi
 - https://www.youtube.com/watch?v=yXupa6Gtt3E&ab_channel=BrowserStack
 - Min. 34min (34'40") to 37 min



Exploratory testing – Video presentations and links

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 - https://www.youtube.com/watch?v=I-ltEKt_N_s&ab_channel=MindtreeLtd.
- Elisabeth Hendrickson
 - An explanation of the Who, What, When, Why, and How of exploratory testing. (40 min.)
 - https://www.youtube.com/watch?v=9FKY1ls0lgs&ab_channel=ElisabethHendrickson
- James Whittaker
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 - (44 min.)



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Session Based Test Management [SBTM]

- A method [SBTM] for measuring and managing exploratory testing.
- <http://www.satisfice.com/sbtm/>
- <http://www.satisfice.com/articles/sbtm.pdf>
- An approach to testing with:
 - No test cases
 - No expected results
 - No pass/fails metrics
- Testing on a project is divided up into focused “sessions” of exploratory testing.
- A test session
 - A dedicated and uninterrupted period of exploratory testing.
 - Focused on a set objectives defined in a “charter”
 - Generates notes and lightweight reporting on the testing carried out.
 - The testing task is expected to change and evolve.
- **Exploratory testing**
 - **Is not random**
 - **Is creative and requires intelligent thoughts.**

Session Based Test Management [SBTM]

- **Planning**
 - Charter: a single sentence that sets the scope of the testing
 - What you will test
 - How you plan to test it
 - The information you hope to provide.
 - That scope should be achieved in 90 minutes.
 - Charter are basis of estimation and coverage.
- **Testing**
 - A dedicated and uninterrupted period of testing (no meetings, no email)
 - Use testing experience or instinct; use your domain knowledge
 - Test scenarios could be ok, but not pre-scripted steps
 - Use the software, observe it and be alert of new questions or test ideas
 - Encourage thinking beyond specific features or tasks in isolation.
 - Fully imagine and describe users of the software
- **Note taking/ Reporting**
 - Not just pass/fail count: What you did. Why you did it. What you saw. What questions and ideas you had. Any frustrations/blocks.

Session Based Test Management [SBTM]

- Jonathan Bach – course on Session Bases Test Management
- Example:
 - Applied: Sanity and Survey Testing Focus Writer.
 - Software: Focus Writer.
- **Computed metrics**

Test

Bug

Setup

OffCharter

Note

Question

NextTime

Data

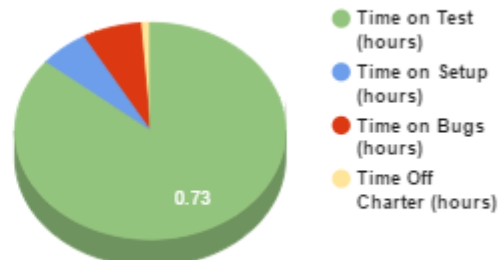
Session end.Duration		52	▼
Number of bugs		4	▼
Time on Test (mins)		44	▼
Time on Setup (mins)		3	▼
Time on Bugs (mins)		3	
Time Off Charter (mins)		1	
Number of questions		5	
Number of ideas for next time		2	
Session Tester	alexandra.casapu@altom.ro		
Session Charter	Perform Sanity Testing and Survey Testing for FocusWriter		
Planned session time (mins)		60	
Environment Info	Windows, Product Version: FocusWriter 1.6.2, Mac OSX version 1.6.2, on MacOSX Sierra		
Area	Menus		
Current Active Tag	Test		
Time remaining (mins):		9	
Session start	SESSION ENDED		

Session Based Test Management [SBTM]

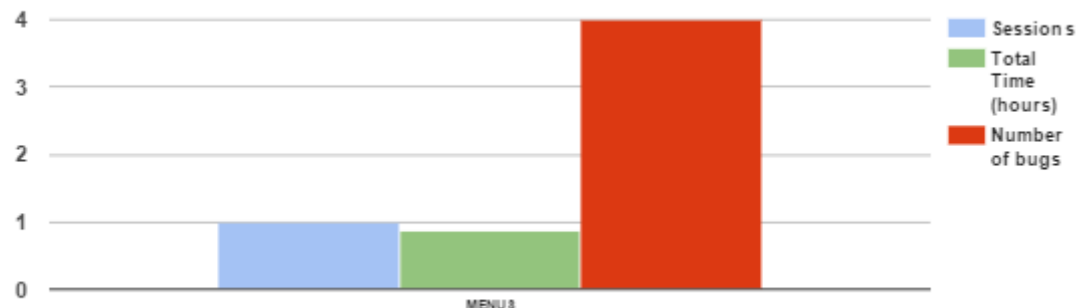
- Jonathan Bach – course on Session Based Test Management [RapidSoftwareTestingCourse_Altom]
- Example:
 - Applied: Sanity and Survey Testing Focus Writer.
 - Software: Focus Writer.

Overall Summary	
Total Sessions	1
Total Time (hours)	0.87
Total Bugs	4
Time on Test (hours)	0.73
Time on Setup (hours)	0.05
Time on Bugs (hours)	0.06
Time Off Charter (hours)	0.01
Total Questions	5
Total Next Time Ideas	2

Test/Bugs/Setup/OffCharter

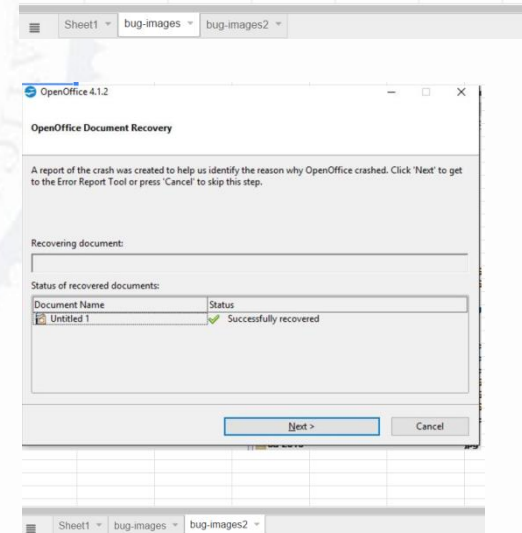
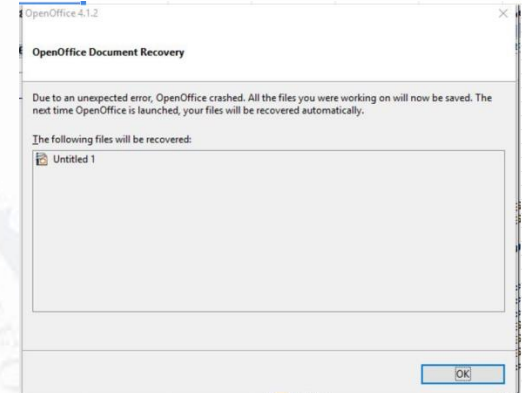


Testing Summary by Area



Session Based Test Management [SBTM]

- Tabara de testare 2016
- Example:
 - Software: OpenOfficeImpress.
- **Computed metrics**

[illegible]

Session Based Test Management [SBTM]

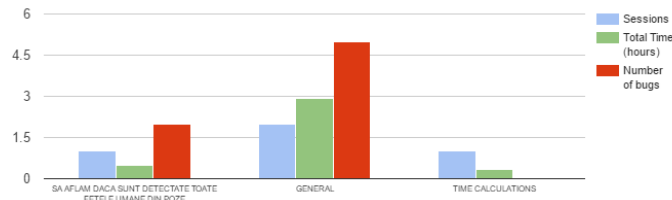
- Use SBTM for an open source application
 - **Suggestion:** Use SBTM for your Bachelor Thesis.
- SBTM template available here:
 - <https://altom.com/version-2-1-of-the-sbtm-session-template-was-released/>
 - **Use your gmail account.**
- Instructions how to use the template
 - <https://altom.com/sbtm-with-itester-and-google-drive/>

Exploratory Testing Summary Report

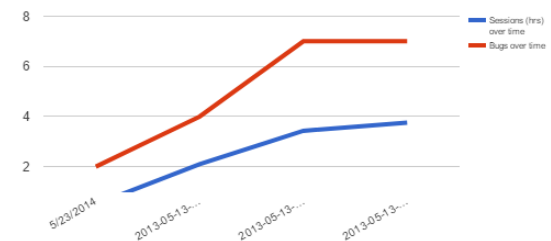
Test/Bugs/Setup/OffCharter



Testing Summary by Area



Sessions and Bugs Over Time



Session Based Test Management [SBTM]

- **Demo: Session Testing**
- **Mission: Ready For Rent?**
 - 5 min. - about
 - **25 min. activity**
 - **10 min. results + voting**
 - 10 min. debriefing
 - 10 min. – questionnaire
- **Debriefing: PROOF**
 - **Past + Results + Outlook + Obstacles + Feeling**



- Bonus points = votes
 - I: 25 XP
 - II: 15 XP
 - III: 5 XP

[illegible]

Debriefing = P R O O F

Past Result Outlook Obstacles Feeling

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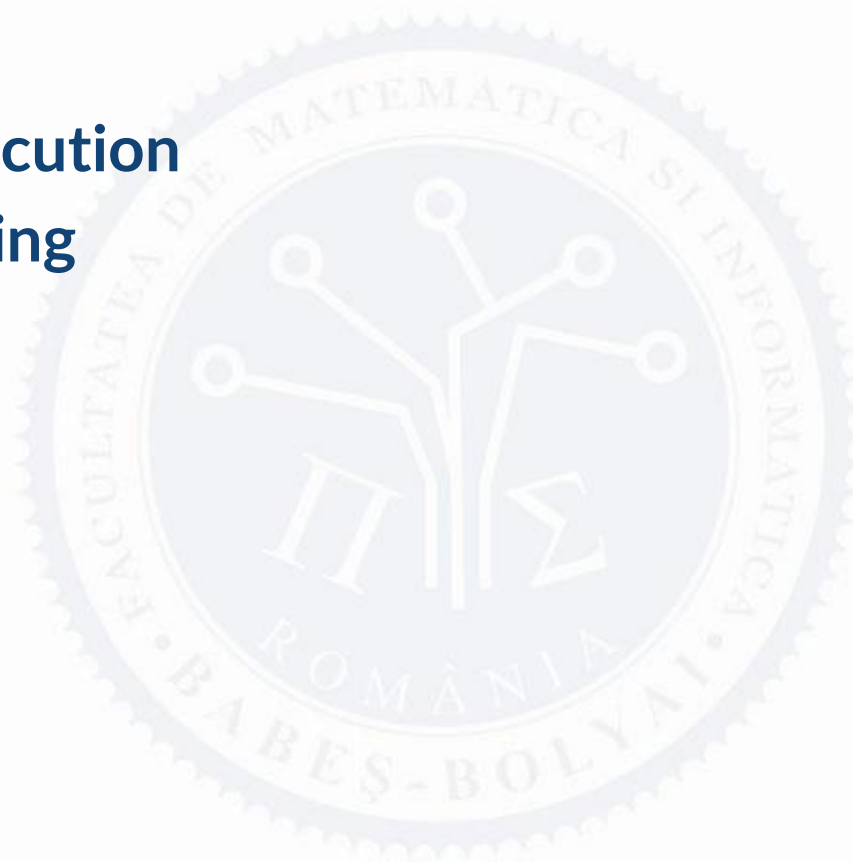


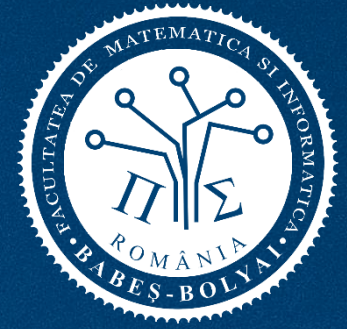
References

- Lisa Crispin, Janet Gregory, **Agile Testing: A Practical Guide for Testers and Agile Teams (Addison-Wesley Signature)**, Addison-Wesley Professional; 1 edition (January 9, 2009)
- Janet Gregory, Lisa Crispin, **More Agile Testing: Learning Journeys for the Whole Team (Addison-Wesley Signature Series (Cohn))**, Addison-Wesley Professional; 1 edition (October 16, 2014)
- [SBTM] Jonathan Bach, **Session Based Test Management**,
<http://www.satisfice.com/sbtm/>
<http://www.satisfice.com/articles/sbtm.pdf>

Next Lecture

- **Symbolic execution**
- **Model checking**
- **(Correctness)**





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