

# Software Systems Verification and Validation

Assoc. Prof. Andreea Vescan

Babeş-Bolyai University  
Cluj-Napoca  
2020-2021

Lecture 12:  
Concepts SSVV  
Exam Structure

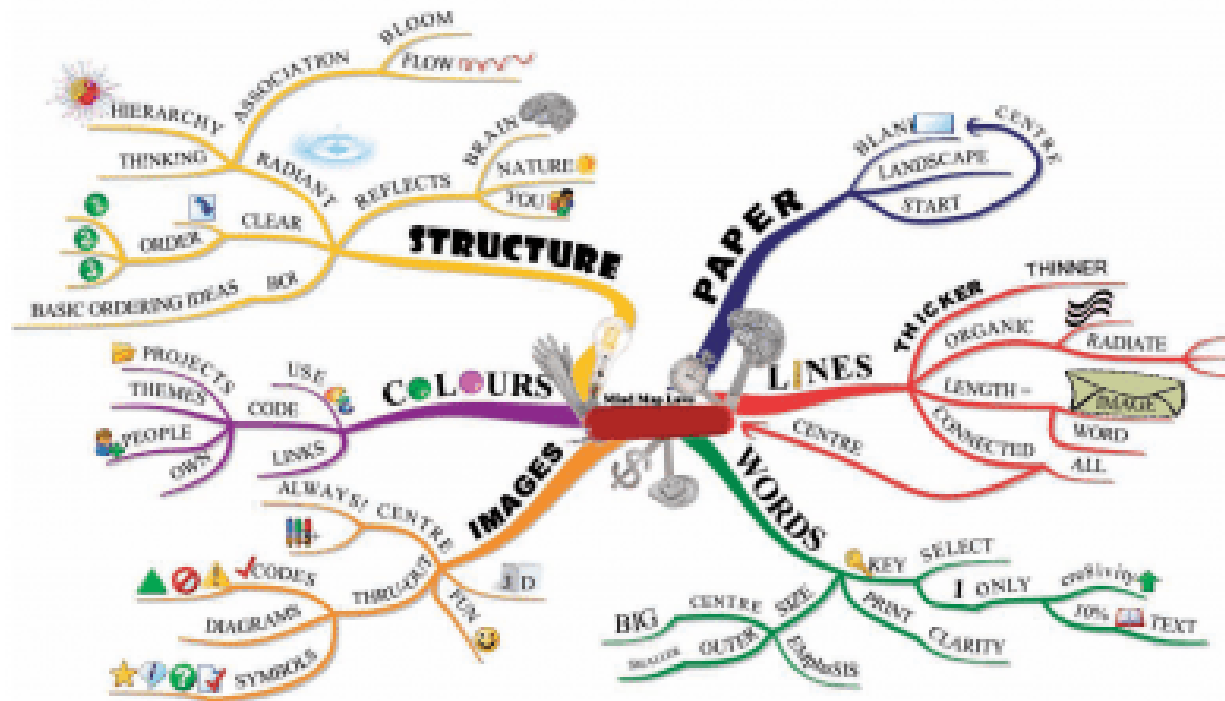
Surprise!



# Surprises!

- Experiment: Mindmapping

## How to Mind Map®



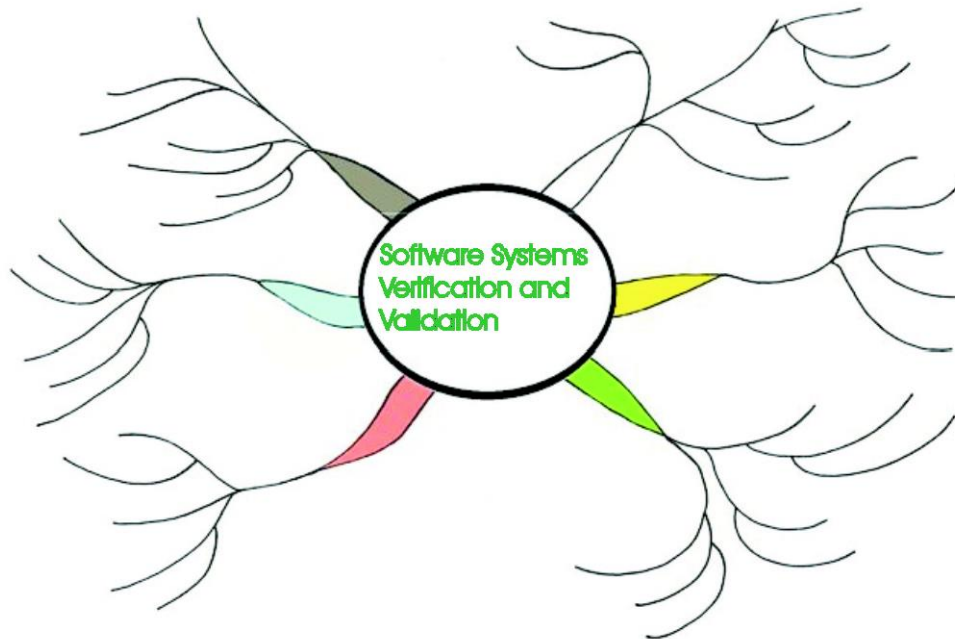
### Quick Start Guide

#### 7 Steps to Better Thinking

1. Set your purpose/goal.
2. Start in the **CENTRE** of blank paper turned sideways.
3. Quickly sketch an **IMAGE** of your focus in the centre.
4. Use at least 3 **COLOURS**, for emphasis, structure, texture, creativity.
5. Draw curved lines, radiating from centre (thick to thin) **CONNECTING** main branches to central image & at each level.
6. Use 1 key word or image per line for more power and flexibility in thinking.
7. Use images throughout as a picture paints a 1,000 words.

# Surprises!

- Experiment: Mindmapping  
“Software System Verification and Validation” in the next 5 minutes!



© Paul Foreman <http://www.mindmapinspiration.com>

- Earn: 25 XP in Lecture 12  
(if the second mindmap is created)

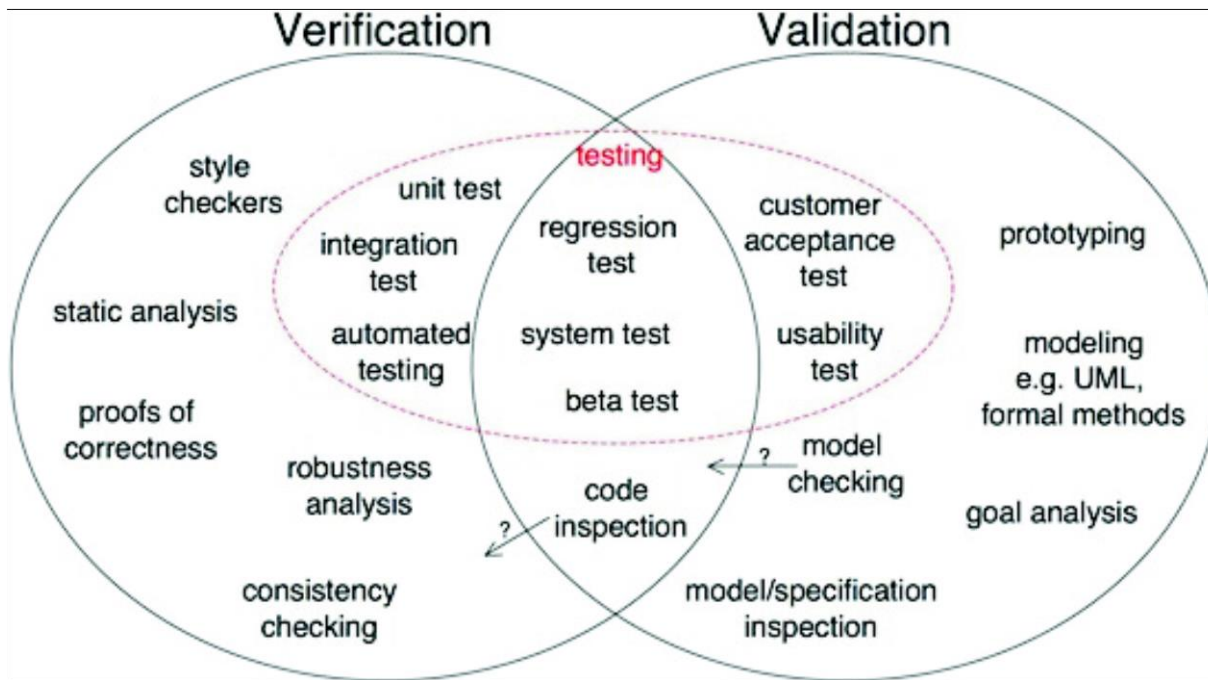
Add in canvas, under  
Bonus\_Lecture1\_12\_Mindmap

# SSVV

## SSVV concepts

# Sales paradigm - SSVV

## What you will learn!



- <http://www.easterbrook.ca/steve/2010/11/the-difference-between-verification-and-validation/>

# SSVV\_Quiz\_Seminars

- 6 seminars \* 25 XP = 150XP (added for Seminars until reaching 600XP)
- 6 minutes

# Grading

## Gamifying Education

	Heroic Quests (quizzes)	Side Quests (Lab projects)	Social Quests (Seminars +Video Presentation)	Epic Quests (Final exam)	XP intervals	Grade
Normal session	300 XP	900XP Each Lab [100,200] XP (in-class 25XP/50XP+ take-home 75XP/150XP)	600 XP Each Sem 100XP (in-class 25XP + Quiz 75 XP)	Up to 1500 XP	[1400,1500]	5
					[1501,1800]	6
					[1801,2100]	7
					[2101,2400]	8
					[2401,2700]	9
Retake session	Points obtained in the didactic activity period (labs and seminar and bonus activity cannot be redone in the normal/retake session)			Up to 1500XP	Over 2700	10

**Final exam – you must come (be present) to final exam in order to compute the grade!**

- Bonus points = 300 XP (1p) = Lecture activities
  - 300 XP – activities during lectures or take-home for next lecture
- Bonus points = 600 XP = Research activity
  - Research paper: See available topics in Canvas ( 3 topics by each teacher)
  - Team: 1 teacher + 2 students
  - Paper submitted to journal for review (before 21 May 2021)
  - **Remark: If you are interested in this activity, the deadline for enrollment (email to teacher) is 19 March 2021, h 20:00 (week 4).**
- **Bonus points = 300 XP (1p) = Educational Research study – The link to quizzes will be available in Canvas!**
  - **2 Belgian researchers - collaborative research project between University in Namur (Belgium) and Babes-Bolyai University in Romania**
  - **1 pre-test quiz (10 minutes) + 6 post-test quizzes (each 5-10 minutes) + post-test-global (30 minutes) + interview (optional)**
  - **Responses to these questionnaires will be anonymized at the end of the collection.**
  - **Your professors also participate in the study and will not have access to the data collected before they are anonymized.**



# SSVV exam

- 300 XP – General feedback survey- (add your name in canvas under Assignment, GeneralFeedback)
- 1200 XP = 900 XP TakeHomeExam + 300 XP InClassExam
- TakeHomeExam
  - The exercises will be provided on 24 May 2021 on canvas.
  - The solutions of the take home exam must be uploaded in canvas by the day of the exam, 8:00am.
    - Assignment EXAM\_Take-Home-A-IndividualWork
    - Assignment EXAM\_Take-Home-B-TeamWork
    - Assignment EXAM\_Take-Home-C-TeamWork
- Structure
  - several individual exam questions that should be written by HAND==300 xp
    - Take-Home-A-IndividualWork.pdf
  - 1 team exercise – implementation = 300 xp
    - Take-Home-B-TeamWork.zip
  - 1 team exercise - implementation = 300xp
    - Take-Home-C-TeamWork.zip
- InClassExam = fixed structure
- Prepare ID card to present before the exam, video camera on.
- The quiz is done on Teams on the day of the exam with your group.
- Limited time: 2minutes\*10questions=20minutes
- All students must take the quiz to be considered “present” at the exam.
- 2 Multiple choice questions + 2 True/False questions + 2 Fill-In questions + 2 Connect/Match questions
- 2 open questions

# Heart

<https://jamboard.google.com/d/1eTadLFUAu7HhyvmrczEaTI1joNvk6k0Q0CP3HW9yqNE/edit?usp=sharing>

In the territory of our hearts, we are going to encounter feelings, emotions, and memories that, if we pay attention to them, can tell us a lot about ourselves.

Combine the feelings and landforms listed to form phrases that you will represent on the map.

<https://www.noi-orizonturi.ro/2020/04/17/hearta-inimi-emotile-sentimentele-si-traiile-din-viata-noastra/>

mountain, plain, hill, hill, sea, creek, river, lake, cave, waterfall, alley, bridge, intersection

joy, fear, anger, love, forgiveness, sadness, joy, courage



Mountains of Courage, Plain of Friendship, Hills of Wish, Sea of Love, Fear Forest, Island of Sadness, Grotto of Fury, Hope Creek

SSVV



Thank You!