

# Introduction to Software Testing

WHAT IS TESTING AND WHY DO WE TEST?





# Exercise: Definition of Testing

- *Take a few minutes and write your own definition of software testing*



# Testing – definitions

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  - **Hetzel, 1973**
- *”Testing is the process of exercising a system by manual or automatic means to verify that it satisfies **specified requirements** or to identify differences **between actual and expected results**”*
  - **IEEE 610.12, 1990**



# Testing – definitions (cont.)

- *”Testing is a process of **planning, preparation** and execution to establish the **characteristics** of a software product and to determine the difference between the actual and required status”*
  - ***Pol and Van Veenendal, 1996***



# Testing – definitions (cont.)

- *”Testing is a process of planning, preparation and execution to establish the characteristics of a software product and to determine the difference between the actual and required status”*

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- *”Testing: the process of exercising software to verify that it satisfies specified requirements and to detect errors”*

- ***BS7925-1, 1998***



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**Level 4:** Testing is a mental discipline that helps all IT professionals develop higher quality software.

***”Program testing can be used to show the presence of bugs, but never to show their absence”***

Edsger Dijkstra



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- Also, it is suggested that a high **organizational awareness** and **maturity** of testing is claimed to contribute to the **prevention of defects** and **reduction of software risk**.