

# Testing methods



**Testing Techniques**

- What is testing?
- Why we test?
- Testing methods

**Why TESTING?**

- Challenge ourselves to keep progressing
- Increase the power of my thinking
- Gain focus & direction
- Increase my energy

**Questions?**

- ```

graph TD
    Root[What is testing?] --- B1[What is testing?]
    Root --- B2[Why we test?]
    Root --- B3[Testing methods]
    Root --- B4[Test configuration]
    
    B1 --- B1_1[Challenging and checking program]
    B1 --- B1_2[Ensuring that system works for you]
    
    B2 --- B2_1[Challenging and checking program]
    B2 --- B2_2[Ensuring that system works for you]
    
    B3 --- B3_1[Challenging and checking program]
    B3 --- B3_2[Ensuring that system works for you]
    
    B4 --- B4_1[Challenging and checking program]
    B4 --- B4_2[Ensuring that system works for you]
    
    B1 --- I1[Image of a person thinking]
    B2 --- I2[Image of a person thinking]
    B3 --- I3[Image of a person thinking]
    B4 --- I4[Image of a person thinking]
  
```

**What is testing?**

  - Challenging and checking program
  - Ensuring that system works for you

**Why we test?**

  - Challenging and checking program
  - Ensuring that system works for you

**Testing methods**

  - Challenging and checking program
  - Ensuring that system works for you

**Test configuration**

  - Challenging and checking program
  - Ensuring that system works for you

Discipline on Bush, expanded

## Questions?



- what is testing?
- Why we test?
- Testing methods

### what is testing?

The process of exercising software to verify that it satisfies specified requirements of end user and to detect errors



### Misconceptions

It is possible to completely test a product



### Why testing?

- Challenge to release a bug-free product;
- Ensuring that system is ready for use;



Lets face it:  
No one want  
To lose money!



## what is testing?

The process of exercising software to verify that it satisfies specified requirements of end user and to detect errors





# Why testing?

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# Misconceptions

It is possible to completely test a product



# Testing Techniques

Automated vs Manual



Degree of Component's Isolation



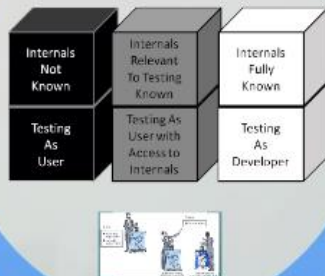
Level of product knowledge



Alpha and Beta



The box approach



Positive and Negative





# Alpha and Beta

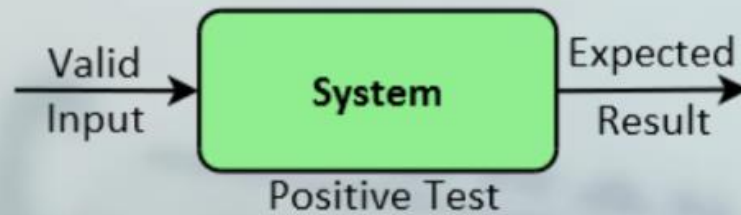
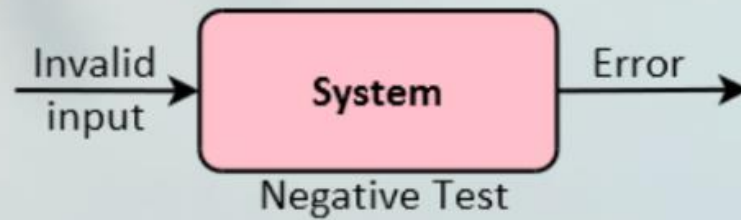
During Development



at Customer End



## Positive and Negative

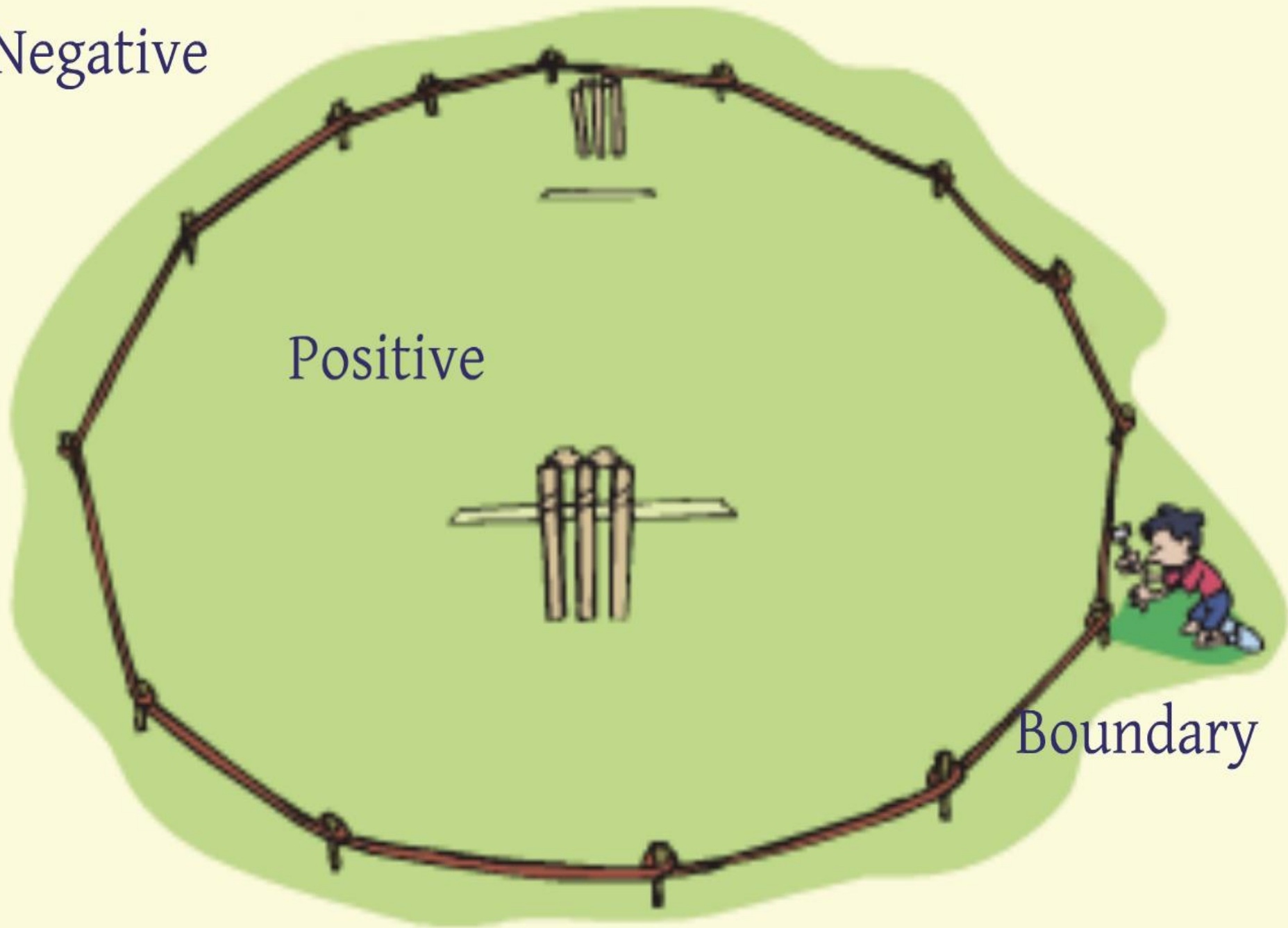




Negative

Positive

Boundary



## Automated vs Manual



Manual

0%



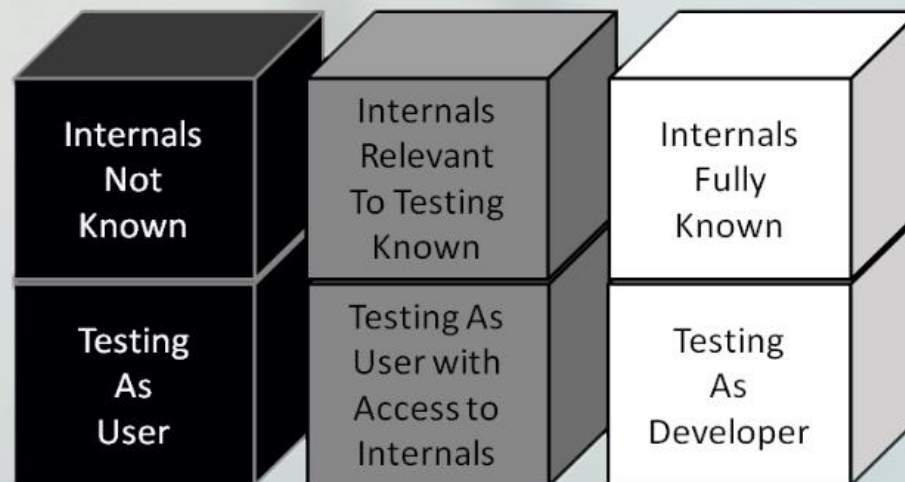
Automated

100%



Hybrid

# The box approach





## Inputs

- Put in two magic coins
- Tap with magic wand



## Outputs

- Pull out rabbit.



Black box testing  
Does the trick work?



Clear box testing  
How does the trick work?



DON'T DEFINE  
YOUR WORLD IN  
BLACK AND WHITE

BECAUSE THERE IS  
SO MUCH HIDING  
AMONGST THE  
GREYS

# Level of product knowledge

## Monkey

Always Remember!



We can hire a trained monkey to Do Your Job!



## Exploratory

It is an approach to software testing that is concisely described as simultaneous learning, test design and test execution

## Ad Hoc (Intuitive)

Ad-Hoc testing is not structured





Monkey

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# Exploratory

It is an approach to software testing that is concisely described as simultaneous learning, test design and test execution



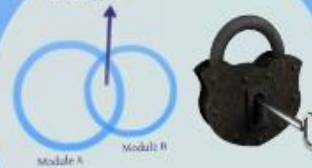
# Degree of component's isolation

## unit testing



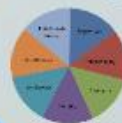
Developer tests if individual units of source code are fit for use

## Integration testing



Integrate components together to perform a complete system

## System testing



## acceptance testing



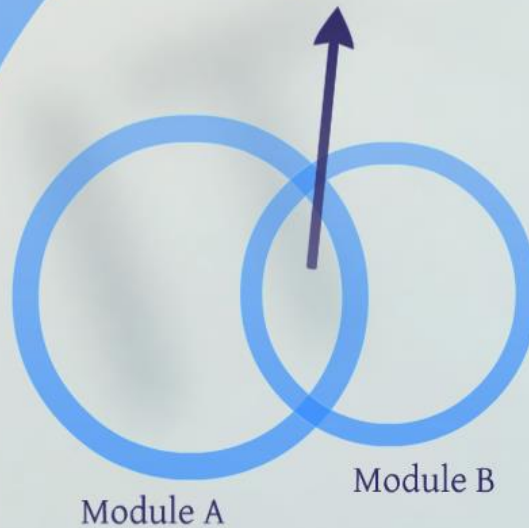
# Unit testing



Developer tests if  
individual units of  
source code  
are fit for use



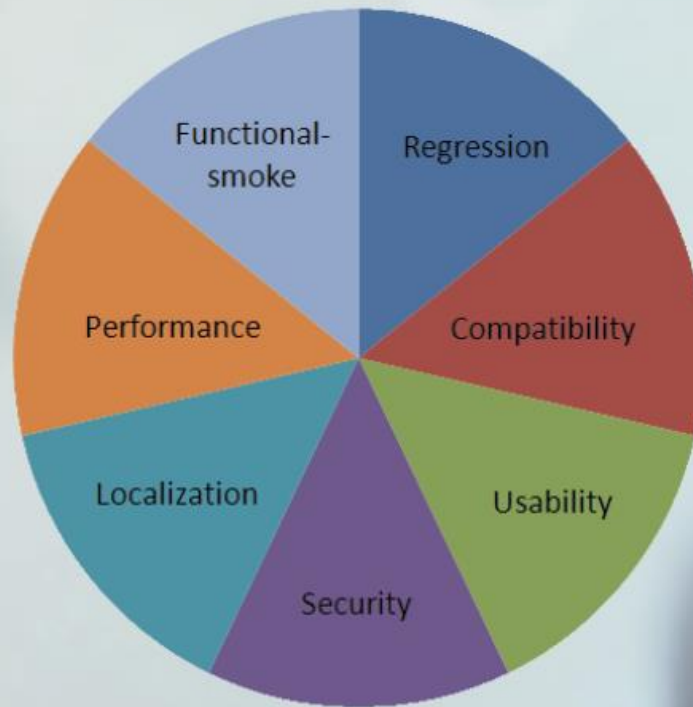
# Integration testing



Integrate components together to  
perform a complete system

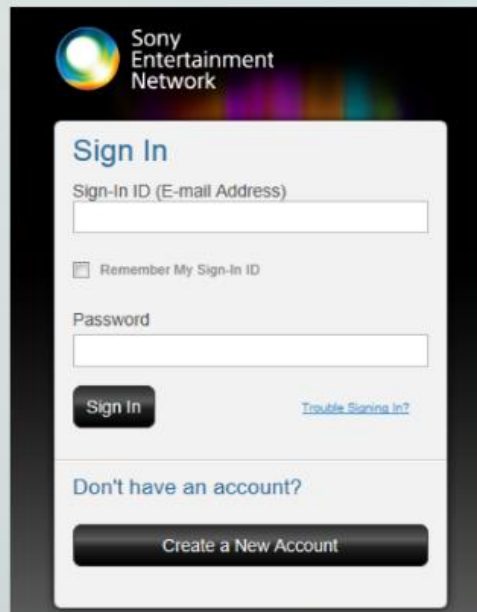


# System testing



# Smoke/functional

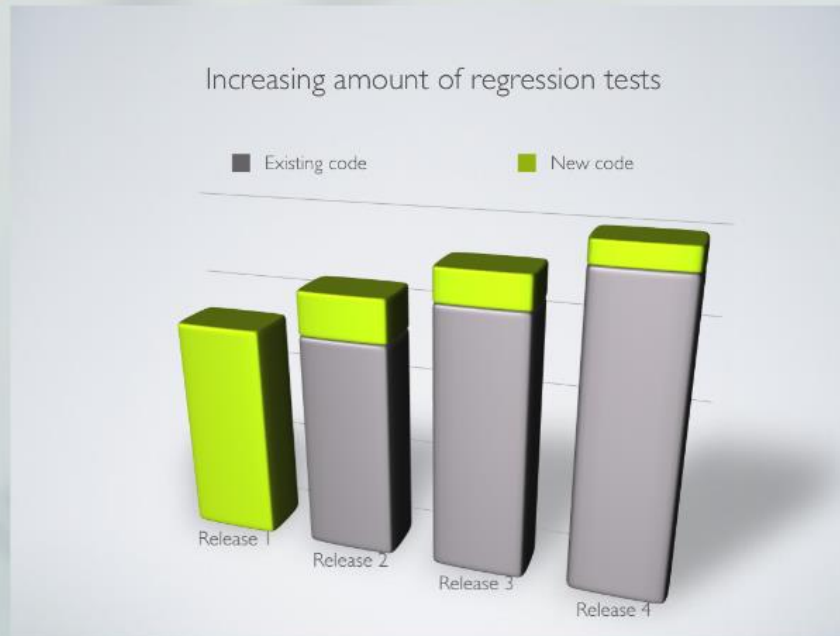
Functional Testing describes what the system does



The image shows a screenshot of the Sony Entertainment Network sign-in page. At the top left is the Sony Entertainment Network logo. Below it, the text "Sign In" is displayed. There are two input fields: "Sign-In ID (E-mail Address)" and "Password". Below the first field is a checkbox labeled "Remember My Sign-In ID". Below the second field is a "Sign In" button. To the right of the button is a link that says "Trouble Signing In?". Below the sign-in section is a link that says "Don't have an account?". At the bottom is a button that says "Create a New Account".

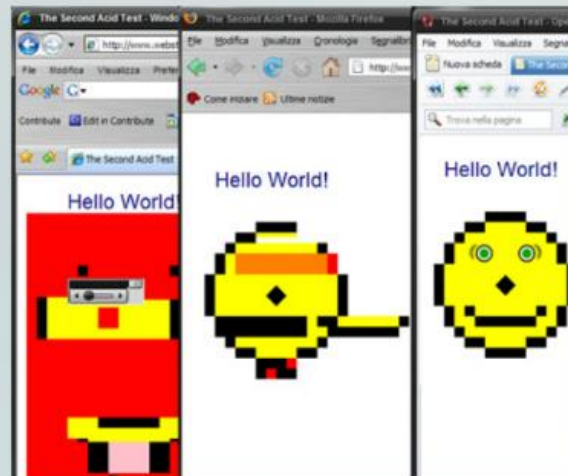
Smoke testing is preliminary testing

# Regression



# Compatibility

evaluate the application's compatibility with the computing environment





# Usability



# Security

process to determine that an information system protects data and maintains functionality as intended



# Localization

Because every country's language, culture, currency, taxes and standards are different





# Performance

## Load/stability

Determine a system's behavior under both normal and anticipated peak load conditions



## Configuration



## Stress





# Load/stability

Determine a system's behavior under both normal and anticipated peak load conditions



stress



# Configuration

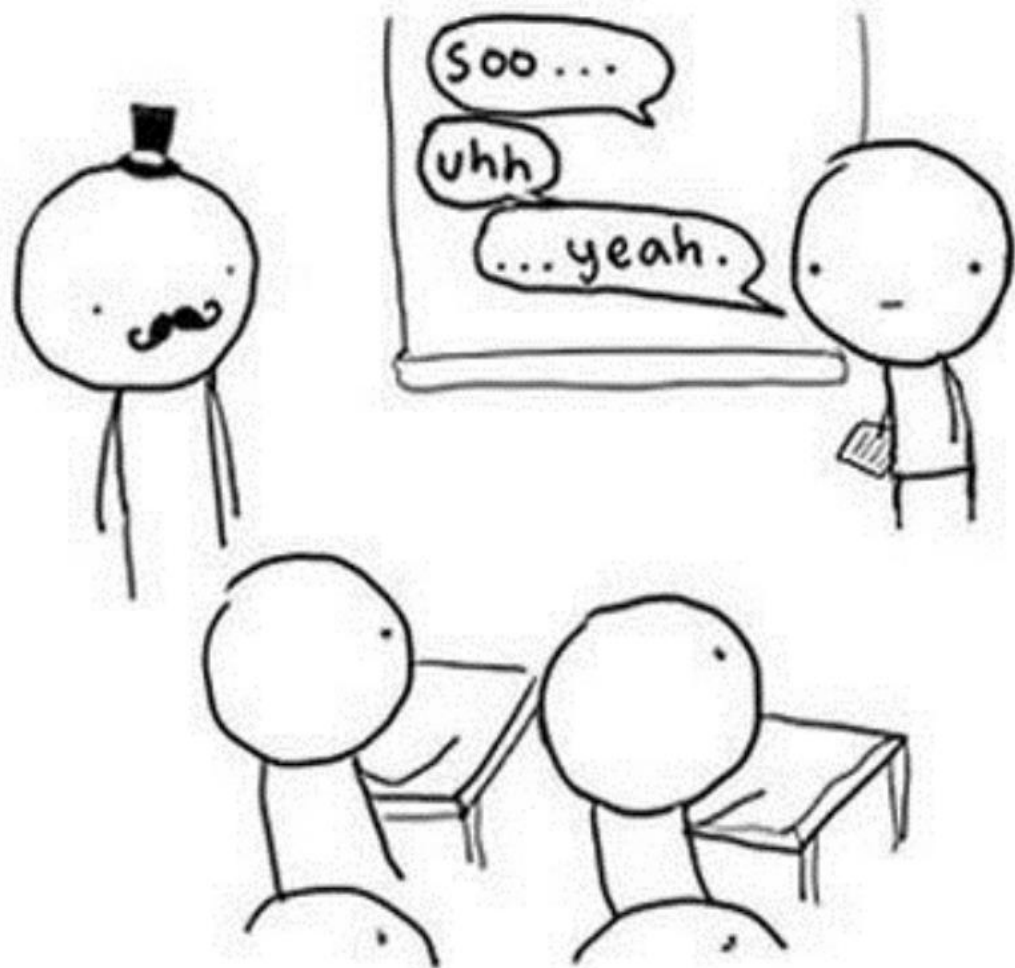


## Acceptance testing





this is how we finish a presentation:



# Questions?

