CyberLogitec

VIETNAM

Test Techniques

Quality Control Training Programs

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eusu

Remind

Mindset

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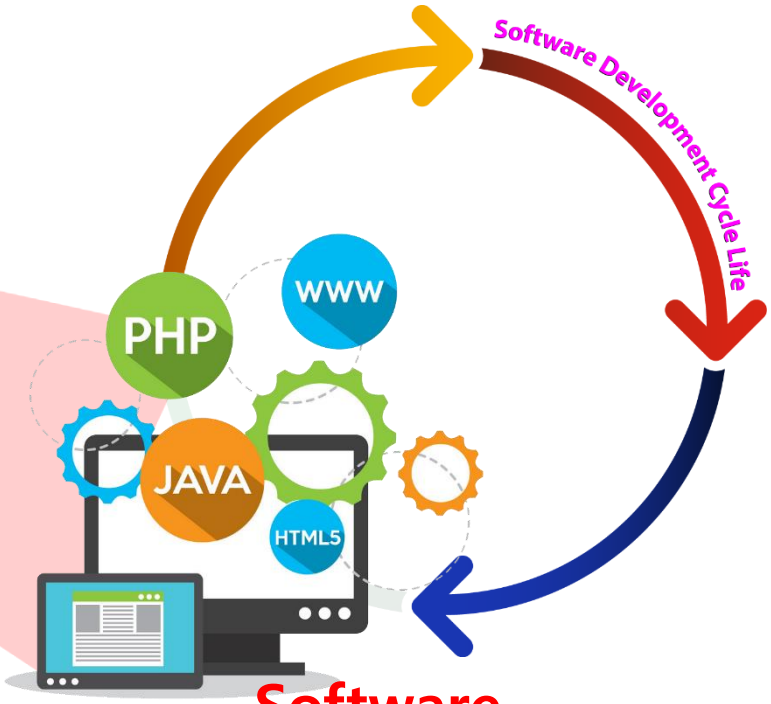
Tester

Business Domain

Technical Skill

Testing Knowledge

- Test Principles
- Test Process
- Test Levels
- Test Types
- Test Requirement
- Test Case Design
- Test Techniques
- Software Errors (bugs)
- Test Management



Software

Situation

Sign Up

Username:

Email:

Password:

Password Again:

I agree with the term of services

Register

Already a member? Login here

Requirement:

Length of **Username**: 6-20 characters

Length of **Password**: 6-10 characters

Outline

Lession 05

5.1 What is Equivalence Partitioning?

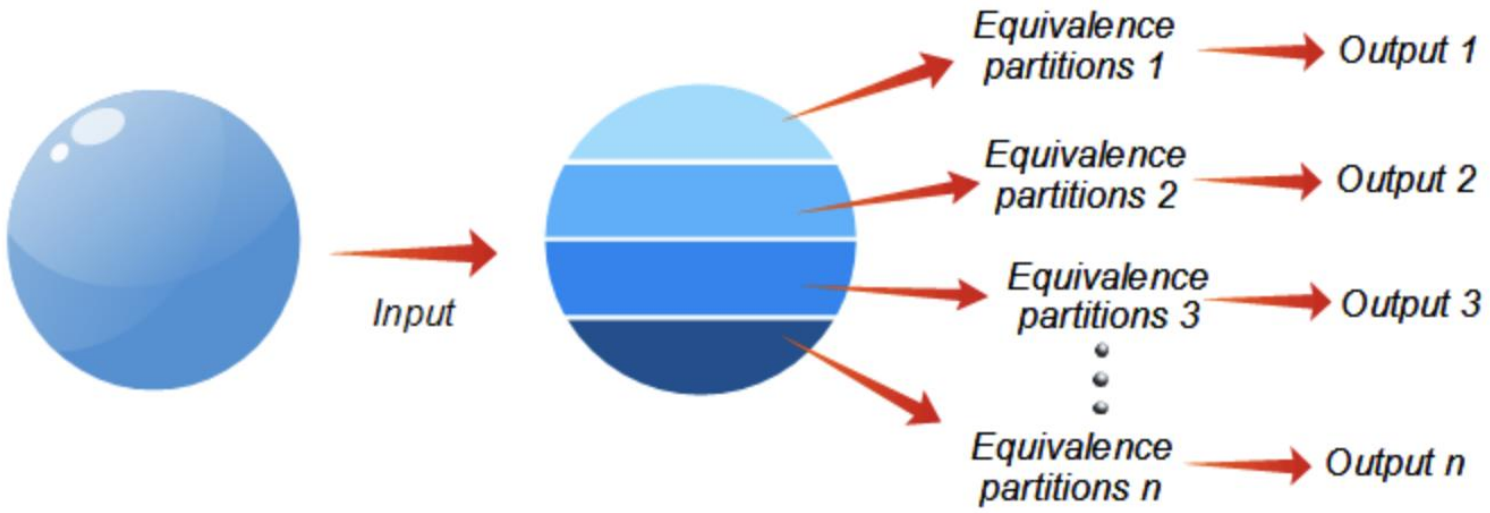
5.2 Example

5.3 What is Boundary Value Analysis?

5.4 Example

What is Equivalence Partitioning

- Equivalence Partitioning is a type of Black Box Testing technique.
- Equivalence Partitioning applies to all levels of software testing.
- Equivalence Partitioning divides the input data into equivalent partitions.
- Equivalence Partitioning reduces the number of test case.
- You can apply this technique, where there is a range in the input field.



How to do Equivalence Partitioning

Determine Equivalent Partitions

The **valid** equivalent partition

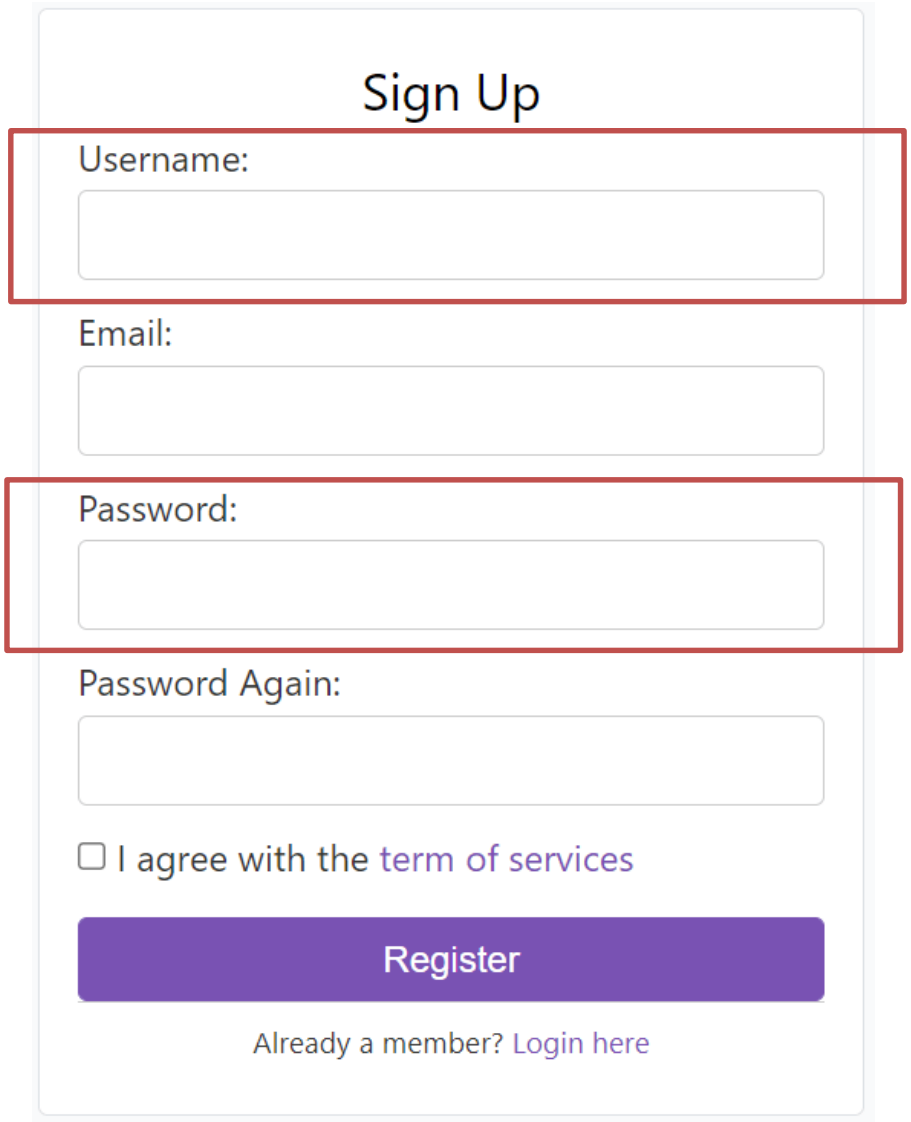
The **invalid** equivalent partition

Design Test Cases

Input only one value in each equivalent partition

Design test case for each invalid equivalent partition

Example



Requirement:

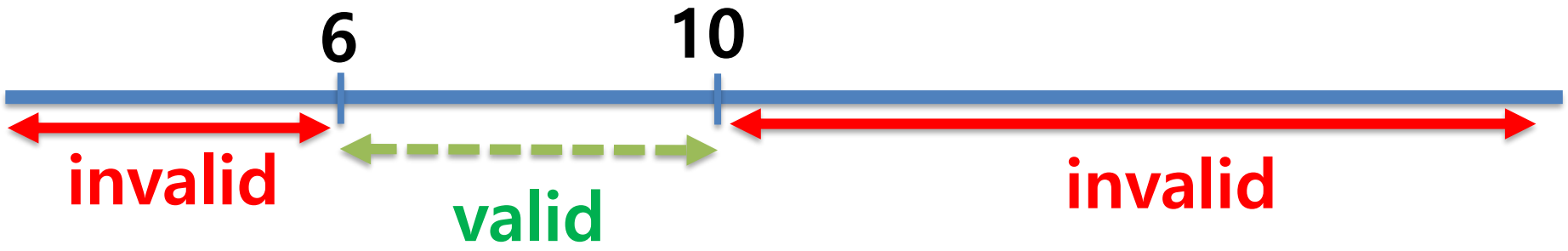
Length of **Username**: 6-20 characters

Length of **Password**: 6-10 characters

How to do Equivalence Partitioning

Length of **Username**: 6-20 characters

Length of **Password**: 6-10 characters



Example

Determine Equivalent Partitions

The **valid** equivalent partition

	Length of **Username**: 6-20 characters	Length of **Password**: 6-10 characters
Partition 1:	Input value: 6 – 20 characters	Input value: 6 – 10 characters

The **invalid** equivalent partition

	Length of **Username**: 6-20 characters	Length of **Password**: 6-10 characters
Partition 2:	Input value: < 6 characters	Input value: < 6 characters
Partition 3:	Input value: > 20 characters	Input value: > 10 characters
Partition 4:	Input value: null	Input value: null

Example

Design Test Cases:

The **valid** equivalent partition

TC-001: Input valid length: Username [6-20] & Password [6-10]

→ **Login successfully**

The **invalid** equivalent partition

TC-002: Input invalid length: Username (−∞,6) & Password [6-10]

TC-003: Input invalid length: Username (6, ∞) & Password [6-10]

TC-004: Input invalid length: Username = null & Password [6-10]

TC-005: Input valid length: Username [6-20] & Password (-∞,6)

TC-006: Input valid length: Username [6-20] & Password (6, ∞)

TC-007: Input valid length: Username [6-20] & Password = null

→ **warning displays**

Outline

Lession 05

5.1 What is Equivalence Partitioning?

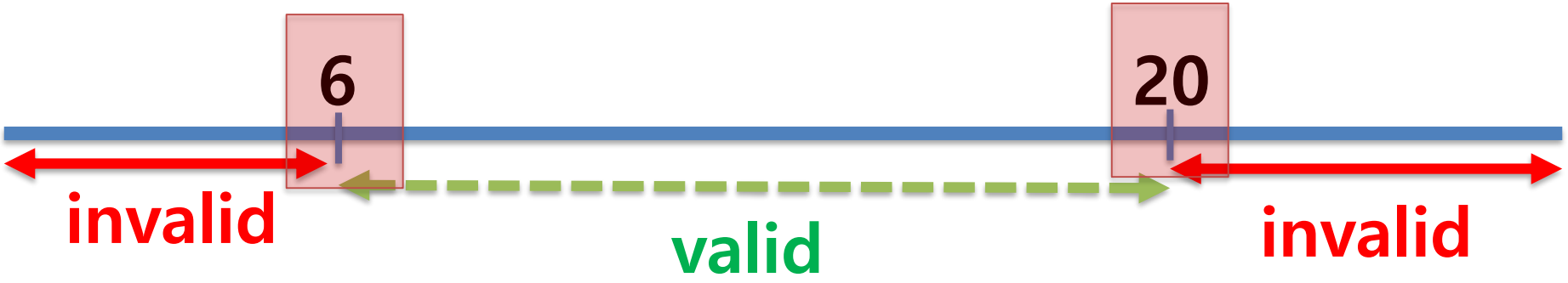
5.2 Example

5.3 What is Boundary Value Analysis?

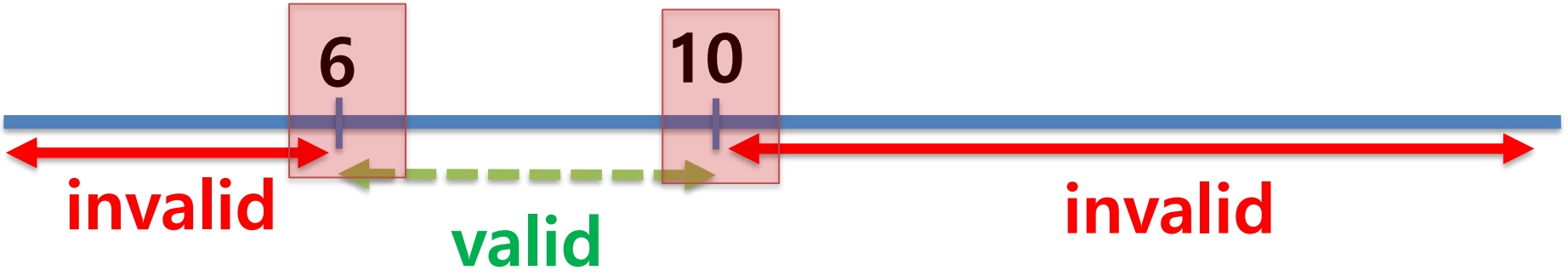
5.4 Example

Situation

Length of **Username**: 6-20 characters



Length of **Password**: 6-10 characters

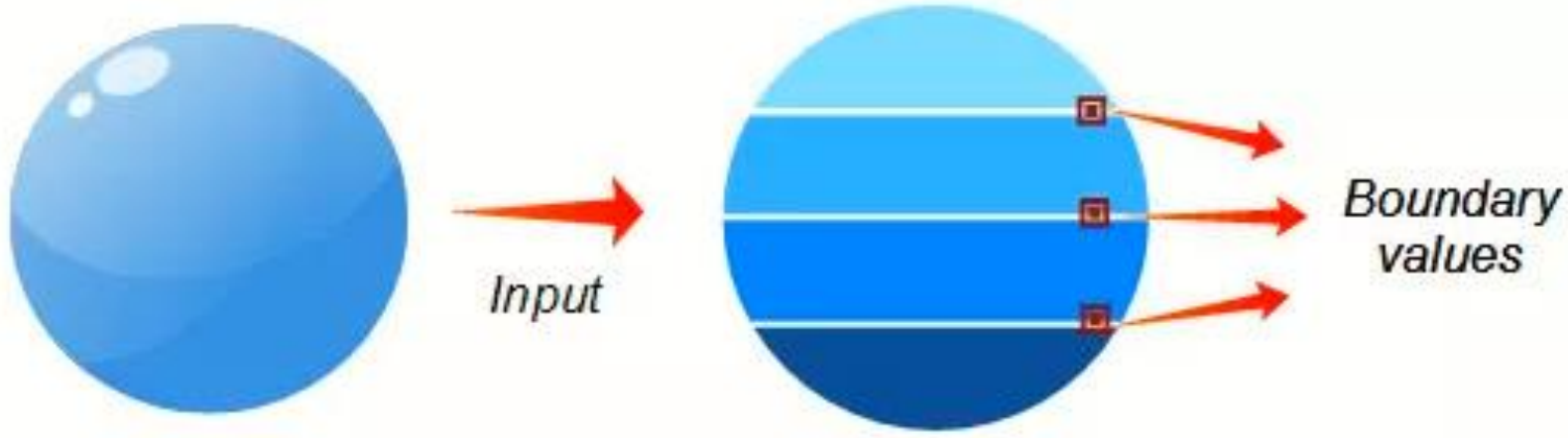


What is Boundary Value Analysis

Boundary Value Analysis (BVA) is an extension of equivalence partitioning.

But can only be used when the partition is ordered, consisting of numeric or sequential data.

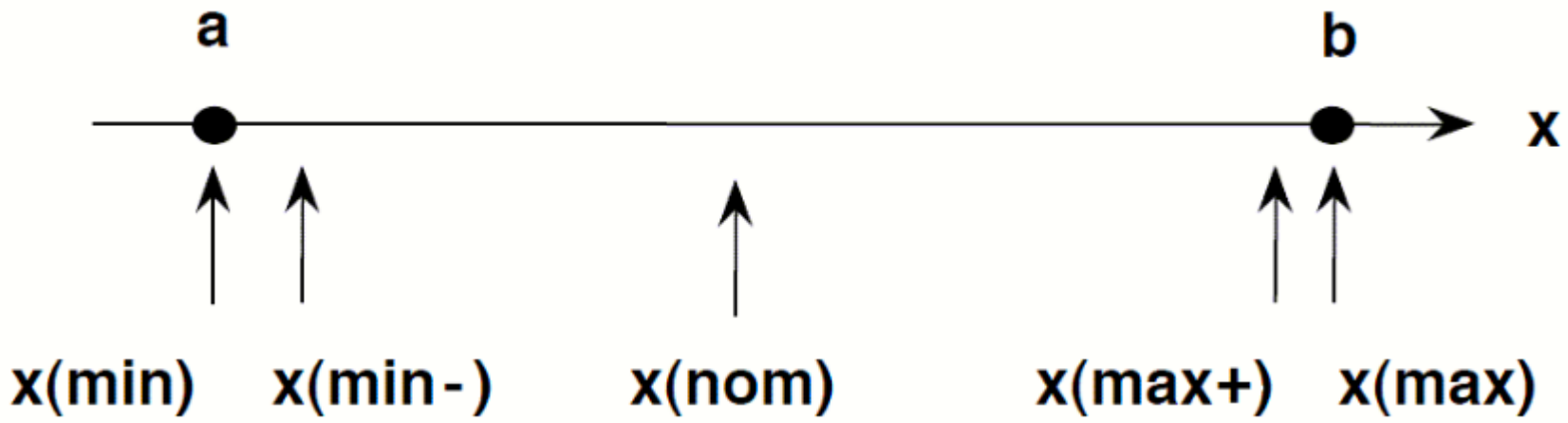
The minimum and maximum values (or first and last values) of a partition are its boundary values



What is Boundary Value Analysis

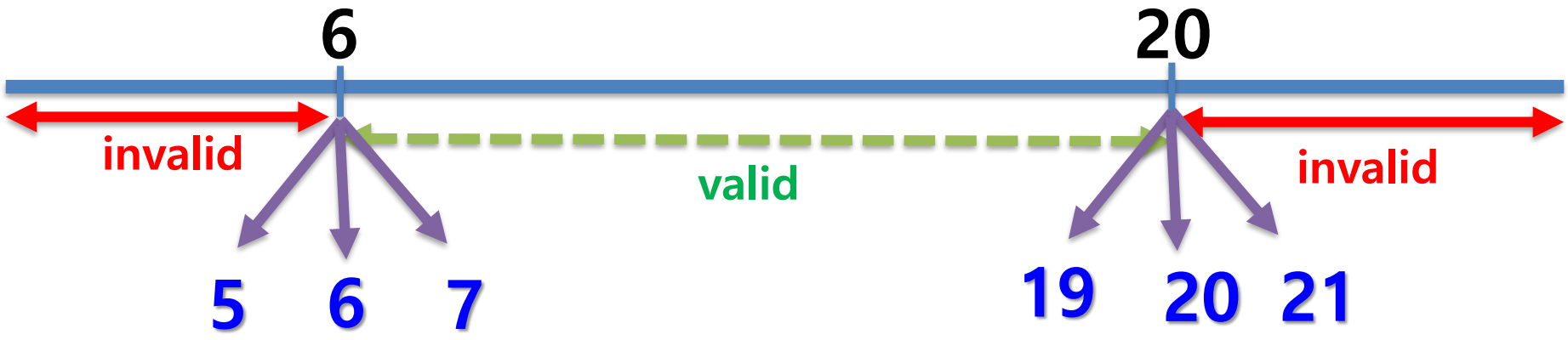
The basic idea in normal boundary value testing is to select input variable values at their:

- Minimum
- Just above the minimum
- A nominal value
- Just below the maximum
- Maximum

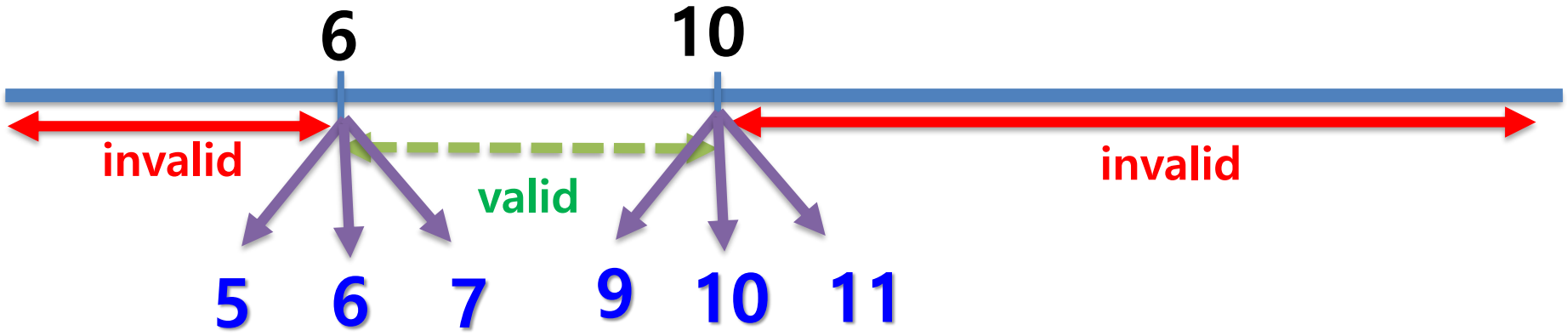


How to do Boundary Value Analysis

Length of **Username**: 6-20 characters



Length of **Password**: 6-10 characters



Advantage & Disadvantage

Advantage

Save time designing test cases and performing tests.

Focus on where the error occurs

Disadvantage

Only effective in cases where the number of input variables are independent of each other and each argument has a finite range of values.

Thank You

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