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Accion INNOVATION SUMMIT 2023

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Sofitel Dubai
The Palm Jumeirah
Dubai

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An Approach for Automation of Quantitative User Testing

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Summary

- Providing various metrics to measure Psychological Complexity in UX Design through ***Automation***
- Pathology Reports to measure Quantitative Psychological complexity

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Technical Architect, Nexial

Dhana comes with 16 years of experience in various technologies like Java, AWS, Nodejs, Python, Boomi, Nexial and others.

He is currently heading the teams which work on QA Automation, Integration platforms and Product development.

Table of Contents

Quantitative Metrics for Psychological Complexity

Use cases

Demonstration with examples

Reports for each of the Metrics

Underlying Technology

Q and A

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Quantitative Metrics for Psychological Complexity

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	Quantitative Metrics			
Pathology (Group of Metrics)	**Consistency**	**Responsiveness**	**Accessibility**	**Effort**
Definition	**Tasks** that achieve similar outcomes need to have similar **actions**.	Time that the user has to wait for system responses while performing a **task**.	Users should be able to perform all **actions** required to complete a **task**, irrespective of their limitations.	Number of **actions** and time taken by users to complete a **task**.
Metrics	TBD	System Delay Network Calls	Internationalization Compliance WCAG Compliance	User Actions Count User Actions Time

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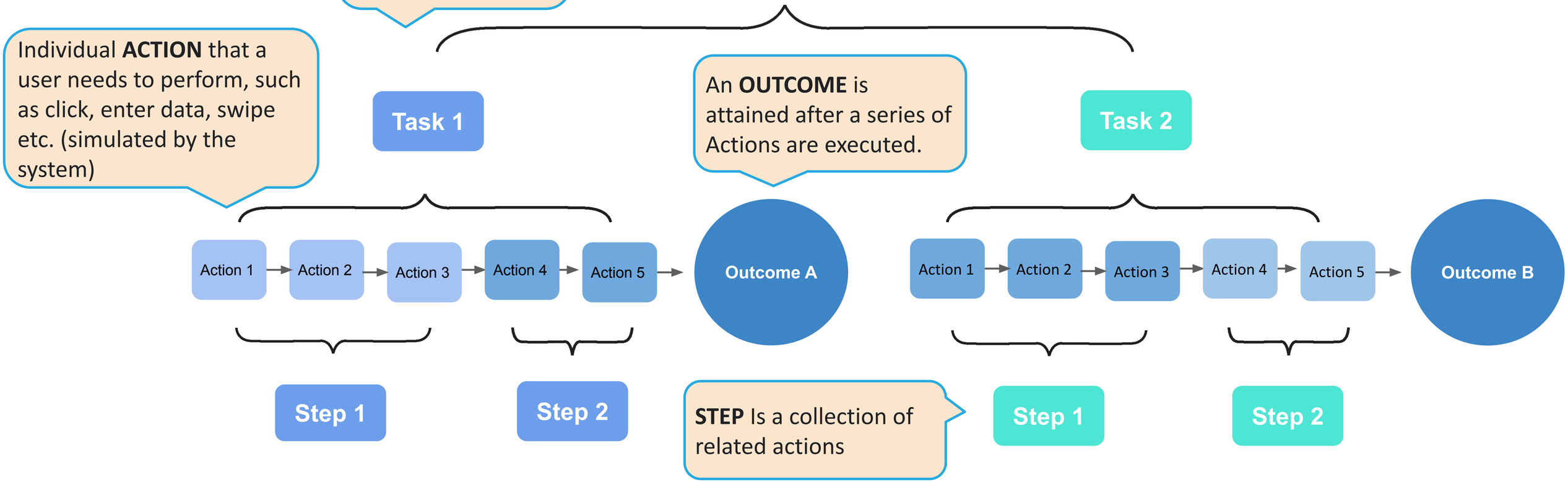
Terminology

SCENARIO is a collection of related tasks

TASK is a set of actions user needs to perform to attain an outcome.

Individual **ACTION** that a user needs to perform, such as click, enter data, swipe etc. (simulated by the system)

An **OUTCOME** is attained after a series of Actions are executed.



STEP Is a collection of related actions

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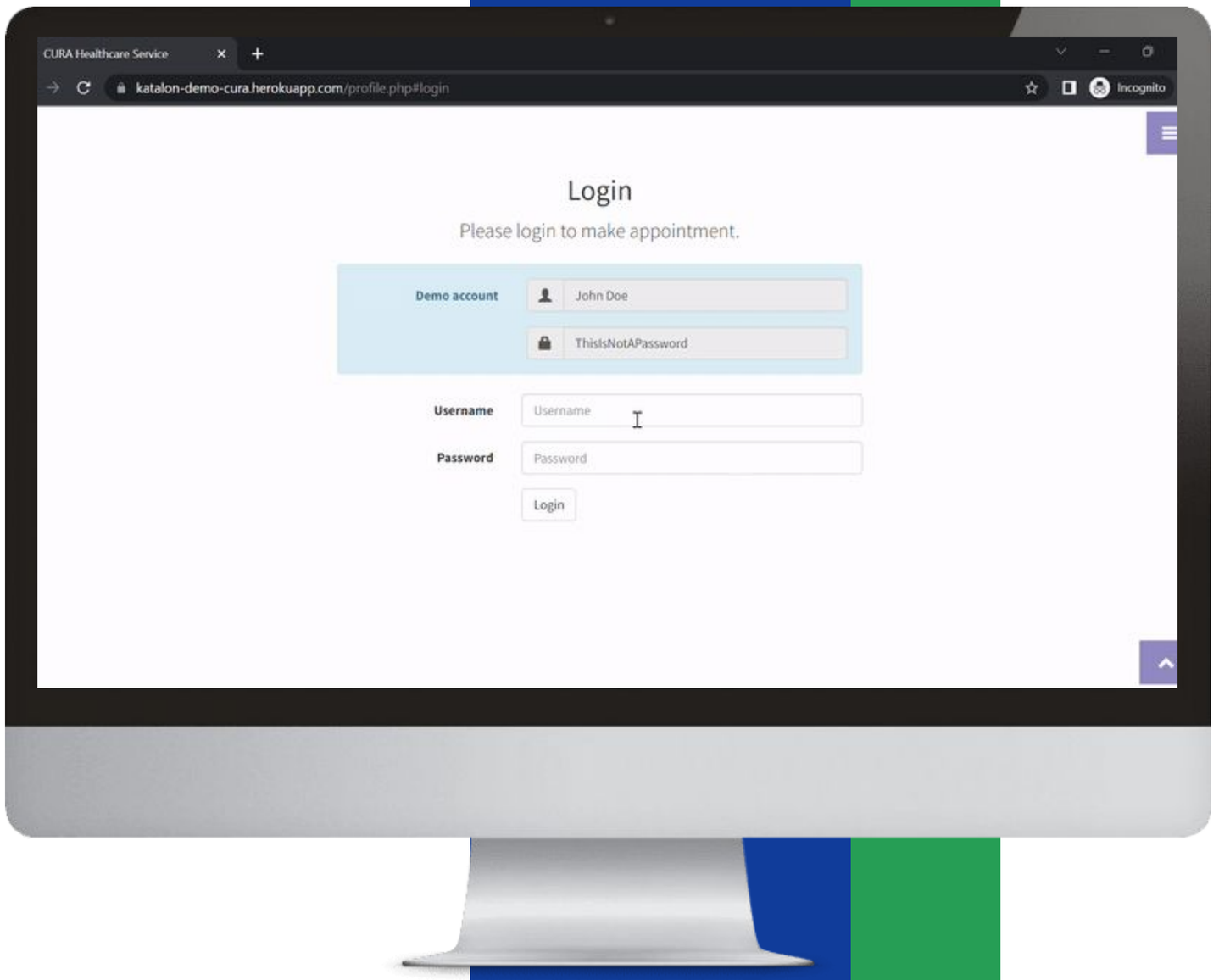
Medicare Appointment Use Case

An example to explain the Terminology



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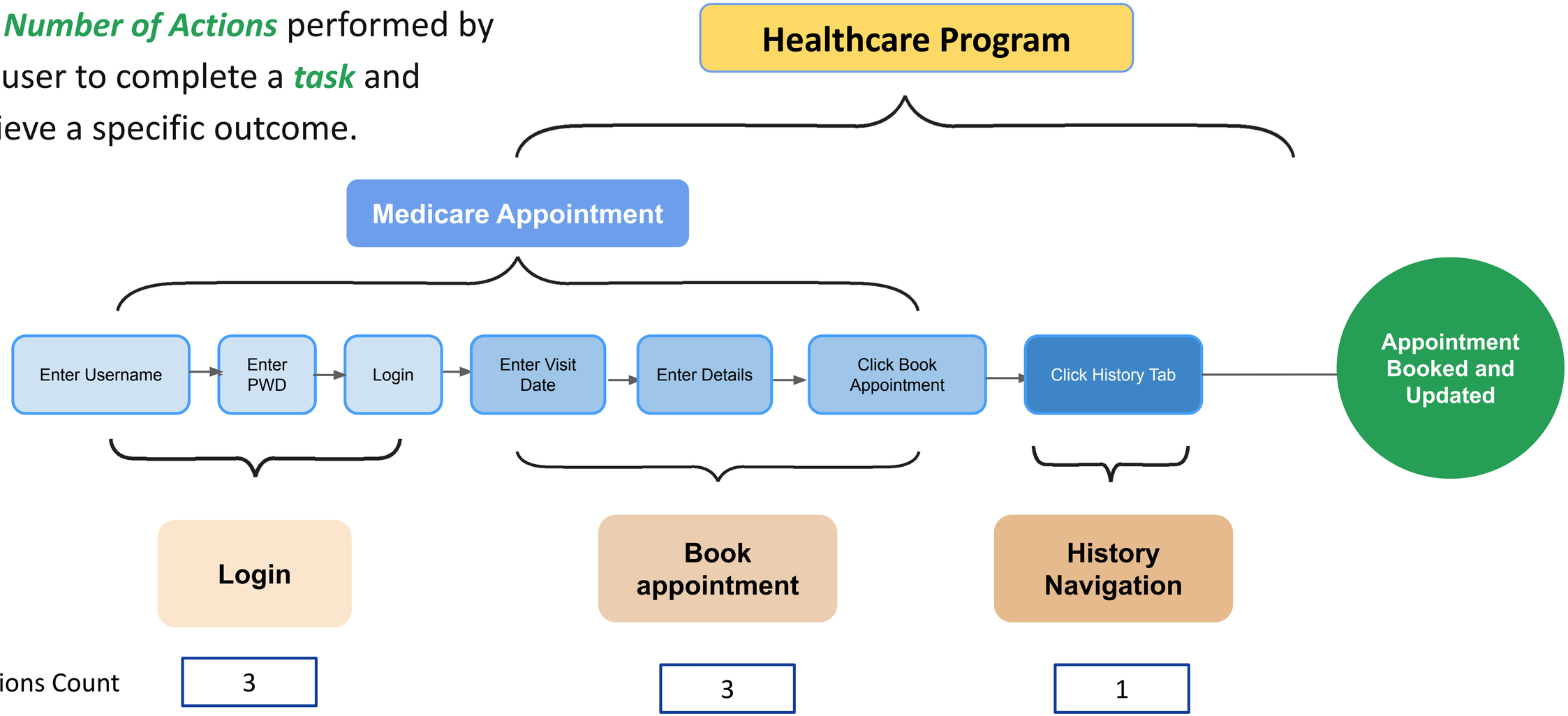
User Actions Count

The Number of Actions performed by the user to complete a ***task*** and achieve a specific outcome.



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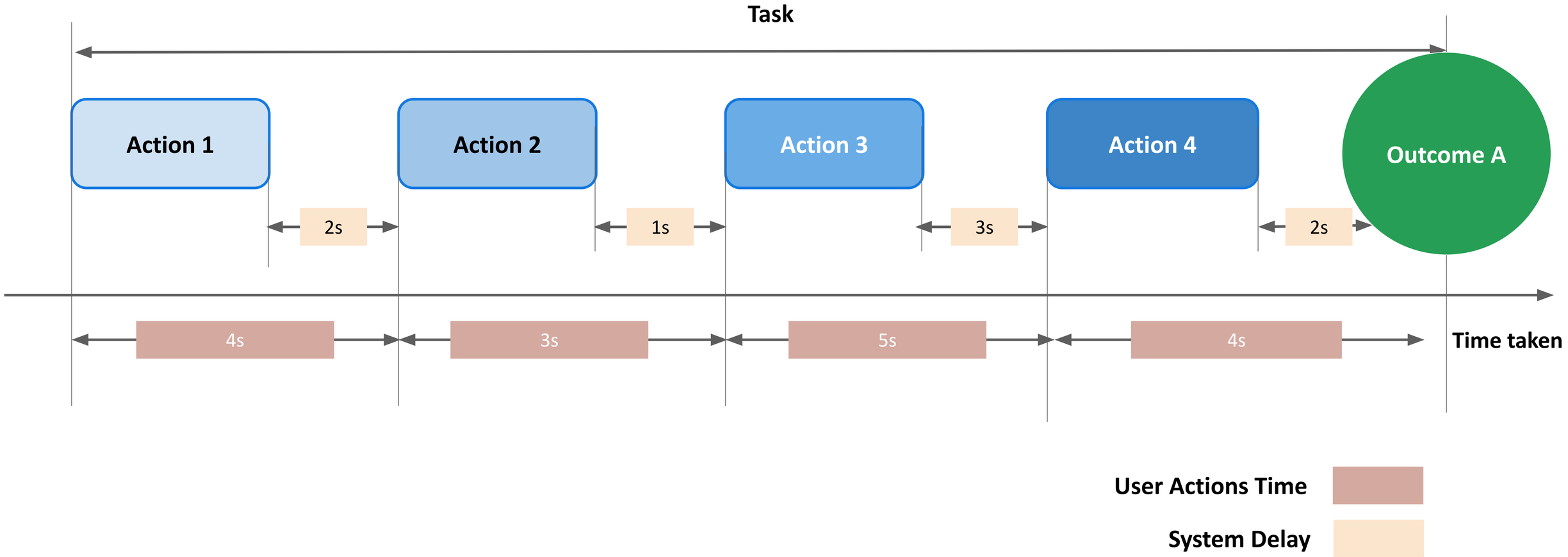
User Actions Time & System Delay

User Actions Time: Time taken to execute the action which includes the response time.

System Delay: Total amount of time that the user has to wait for responses from the system so as to complete the entire task



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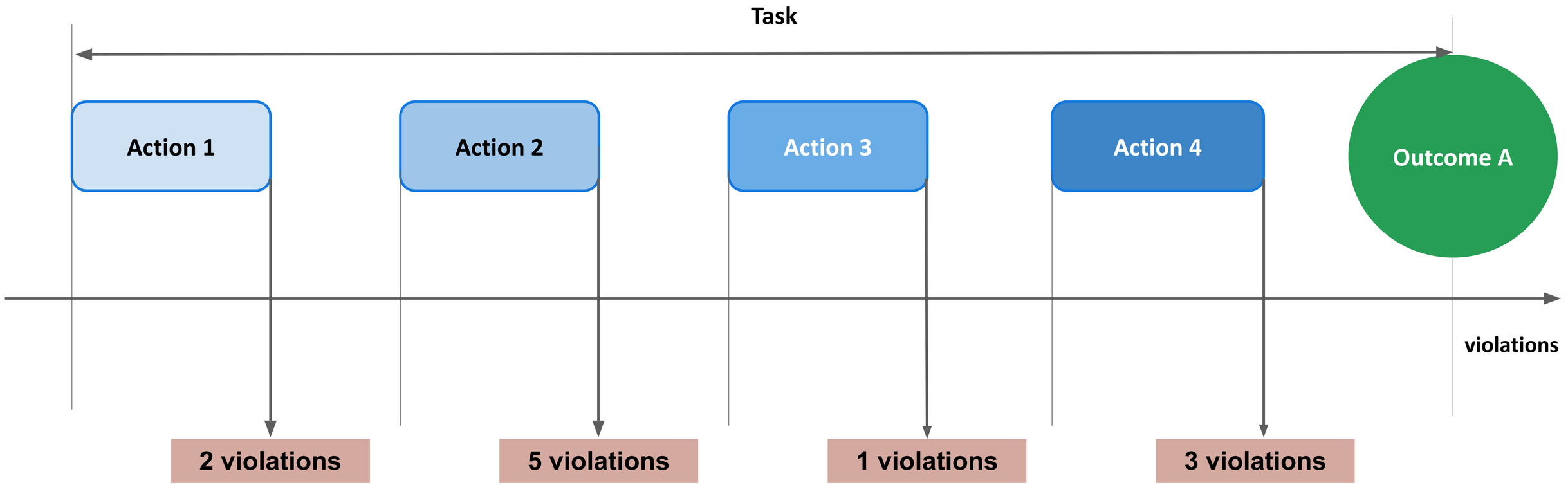
WCAG Compliance

Definition: Count of Accessibility violations in the Web application as specified by the ***Web Content Accessibility Guidelines***.



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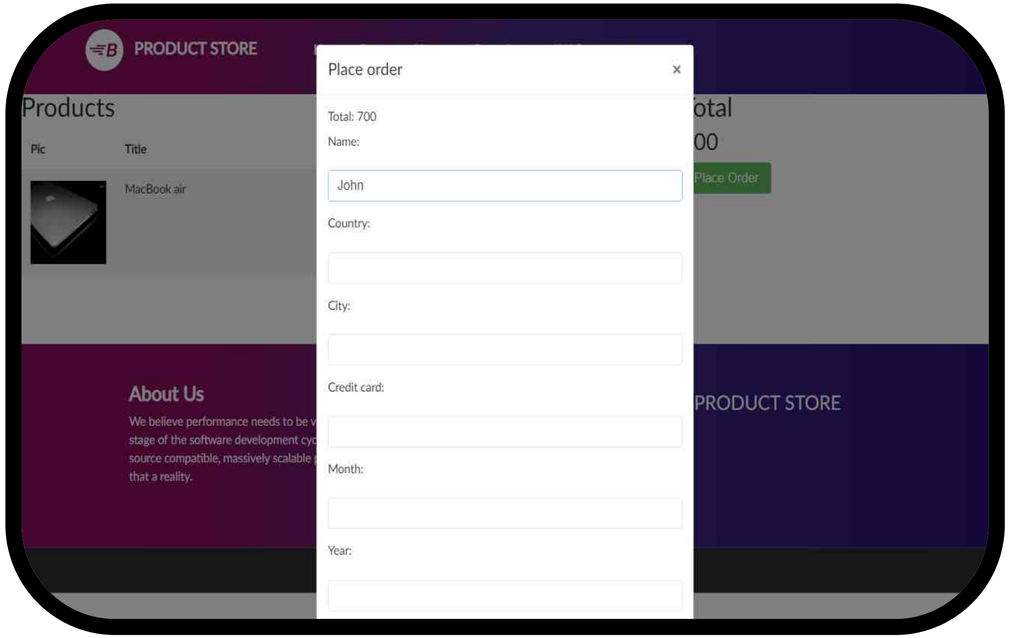
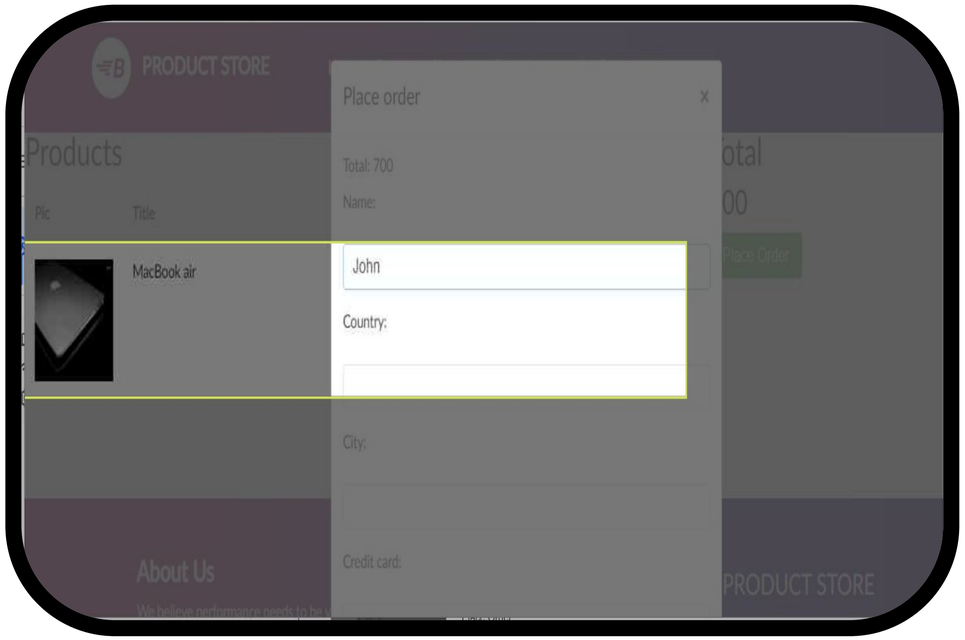
WCAG Continuation…

Description of issue: Low-contrast text is difficult or impossible for many users to read





Element:

```
<tr class="success">
```

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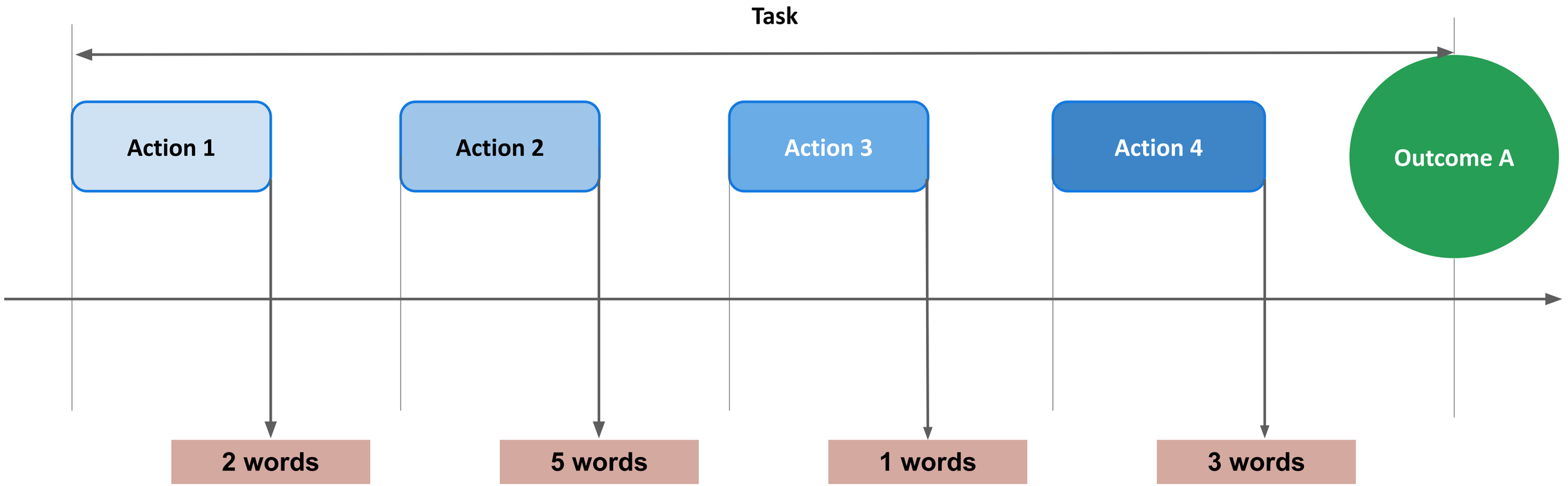
I18N Compliance

Definition: ***Count*** of mismatching words which are not part of the Target language selected by the user.



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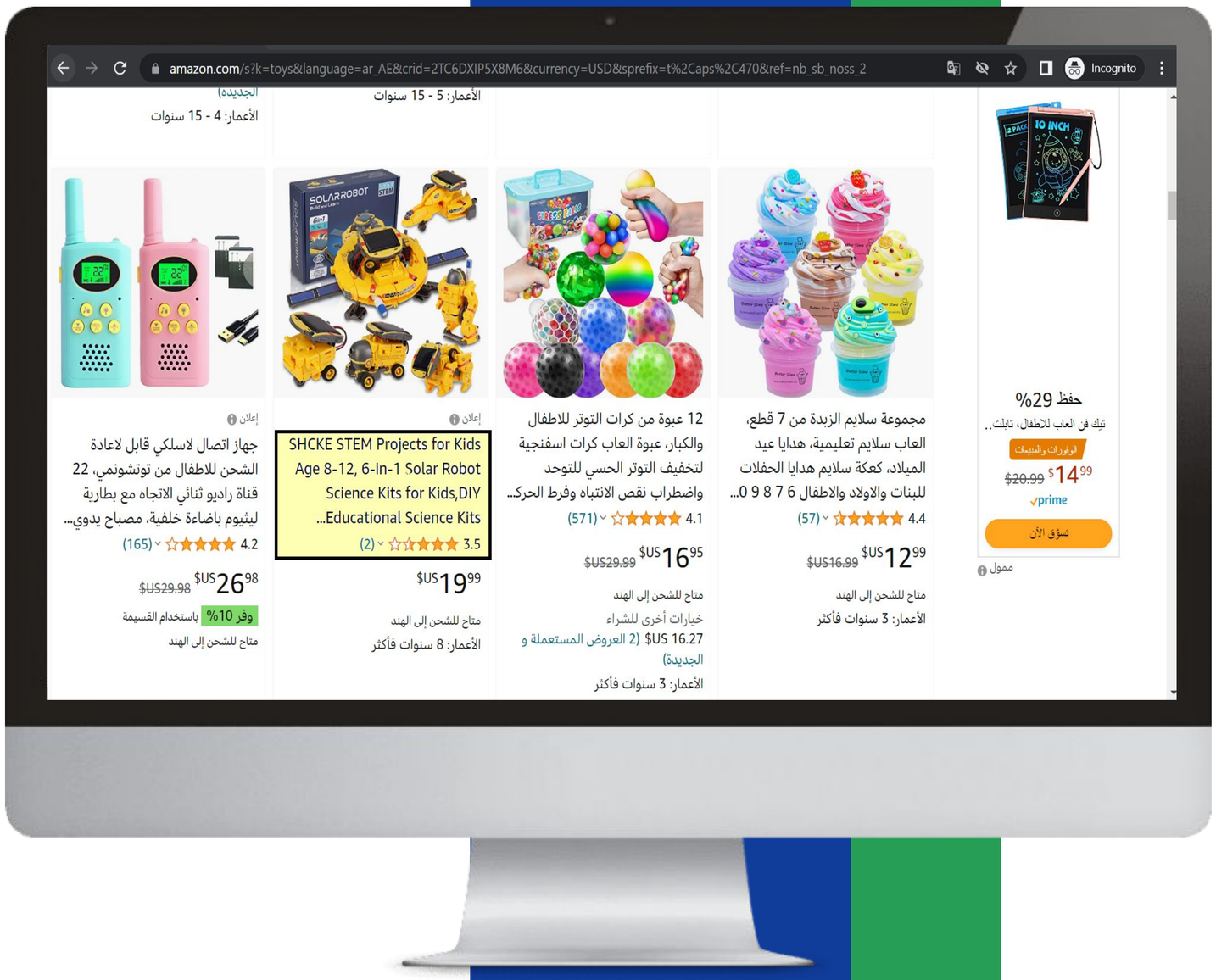
Internationalization (Continued…)

Dynamic Content: Identify the mismatched words in the Dynamic content (data displayed) along with the static content.



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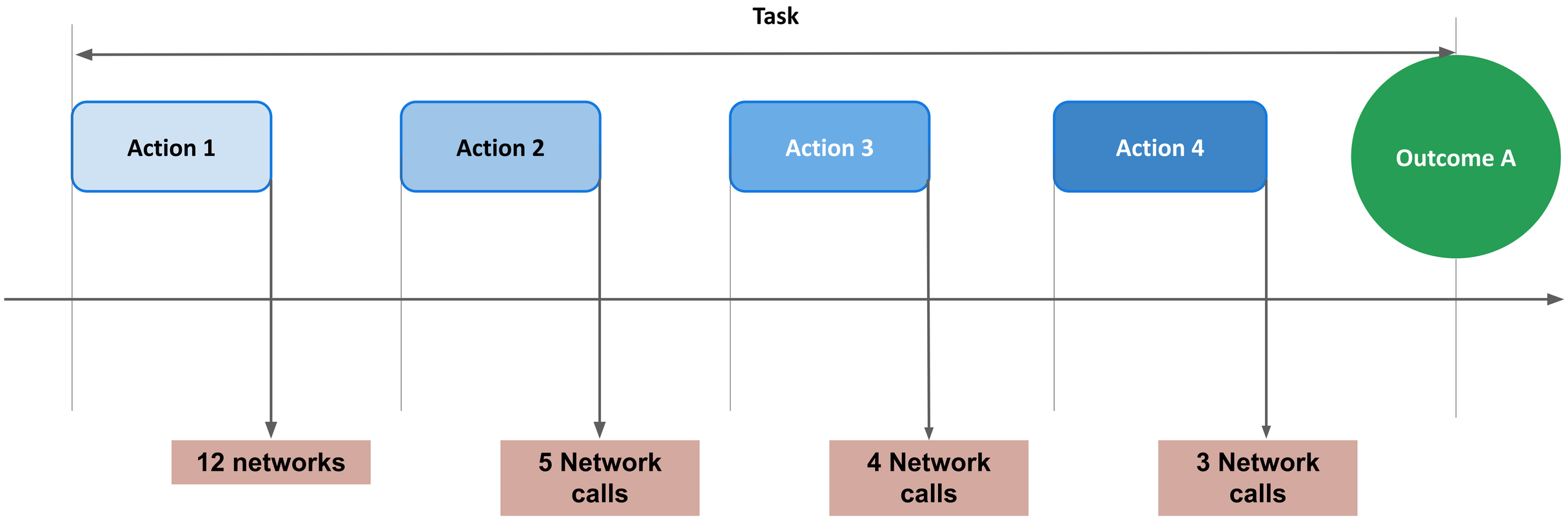
Network Load

Definition: ***Count*** of Network calls required between actions so as to complete a task



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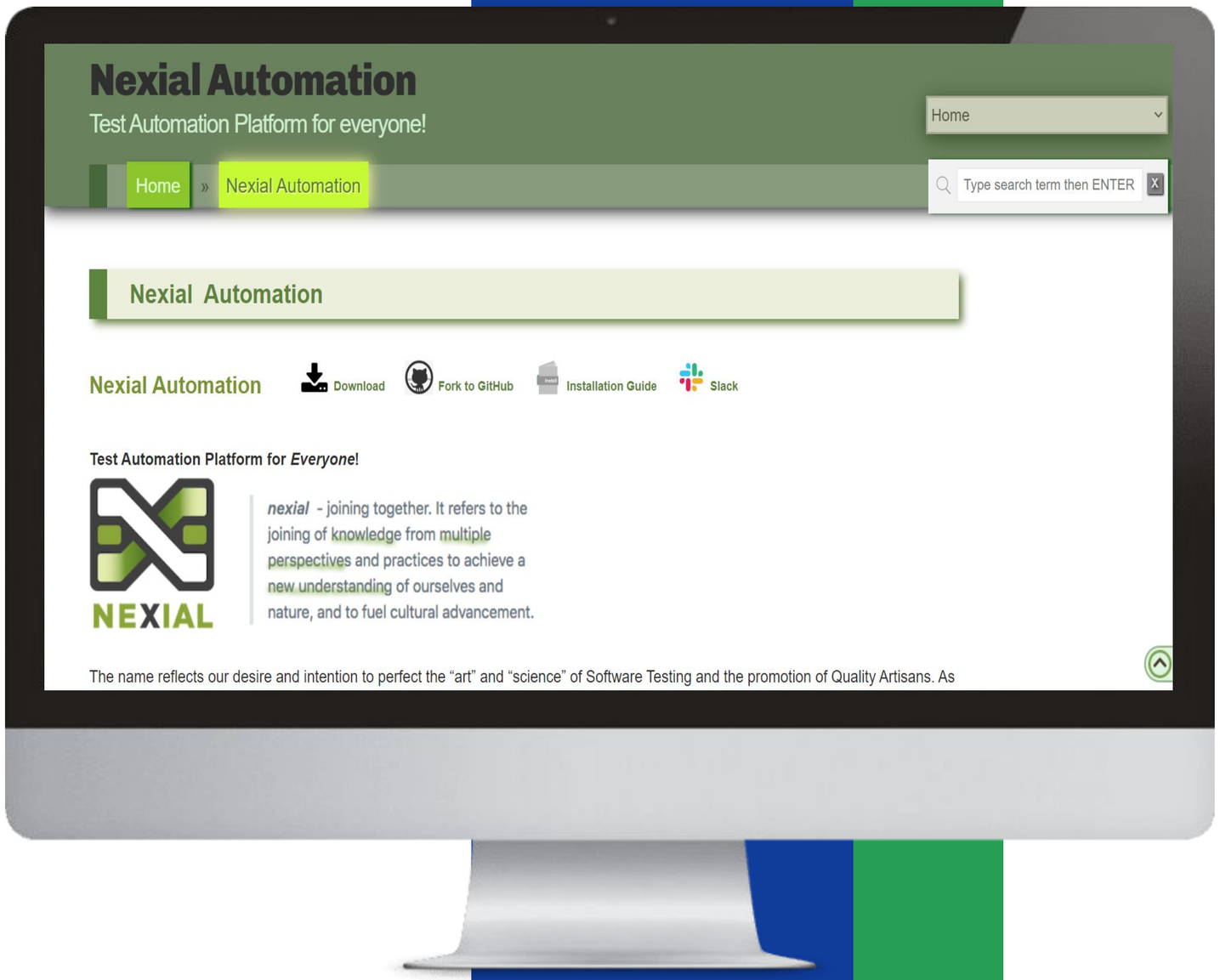
Nexial - The Underlying Technology

Nexial is a Low code, Keyword Driven, Hybrid, QA Automation platform that provides a simple Spreadsheet interface to build automated tests

- Supports various types of testing like Web(browser), Rest/SOAP/GraphQL, Database, Batch, Mobile etc.
- Integrates with various tools and frameworks.
- Extensible and flexible Test/Data Management



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Demo!

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Thank You!

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