UNIVERSIDAD DEL QUINDÍO ®
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RENOVACIÓN ACREDITACIÓN

SMS de Herramientas de Automatización de Pruebas

Seminario de Trabajo de Grado

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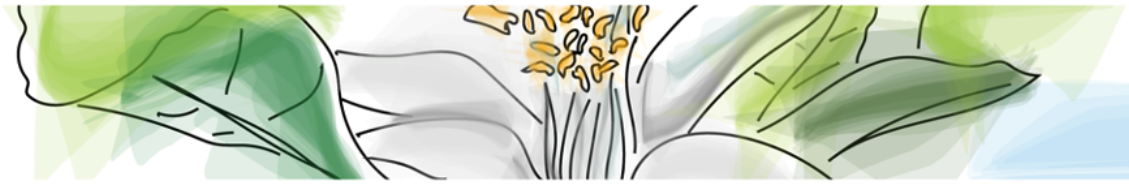

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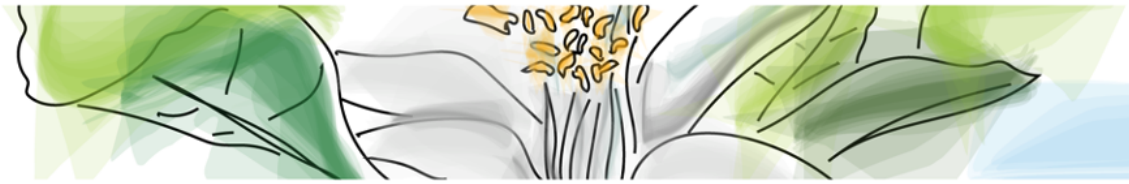
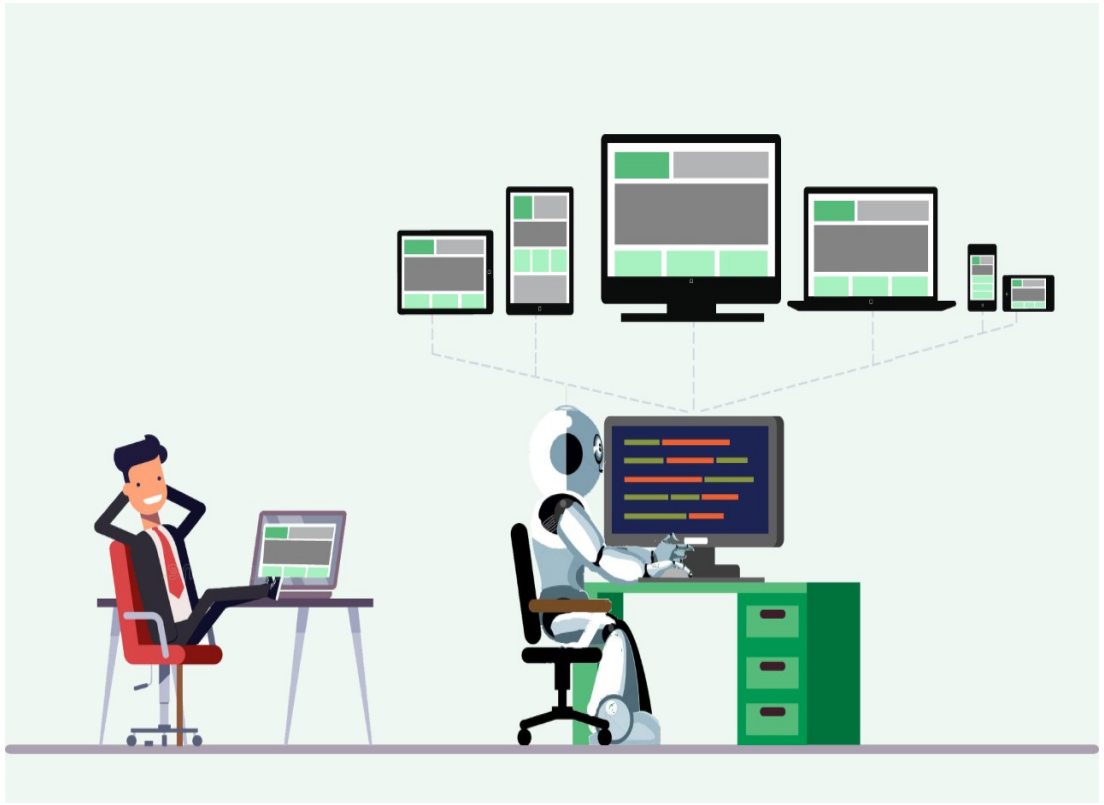


Contexto

Calidad de software

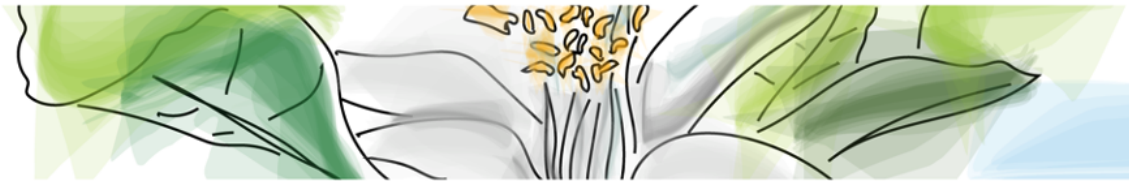
La realización de pruebas de software de manera eficiente y efectiva desempeña un papel fundamental en la garantía de la seguridad y calidad de los productos de software.



Automatización de pruebas

El uso de una herramienta de automatización agiliza significativamente el proceso de pruebas, lo que a su vez contribuye a una etapa de prueba más rápida y eficiente.

Objetivo

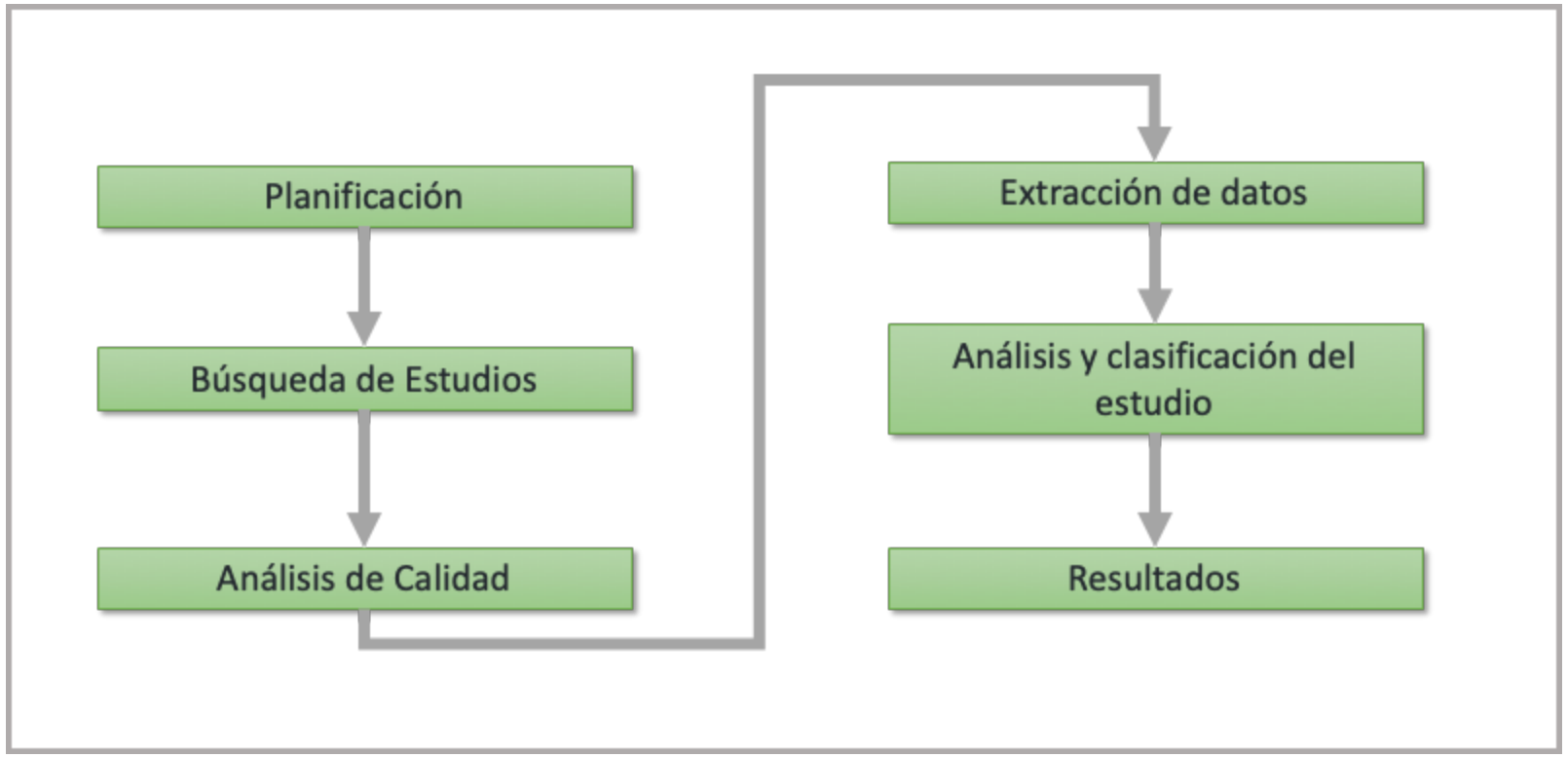


Objetivo

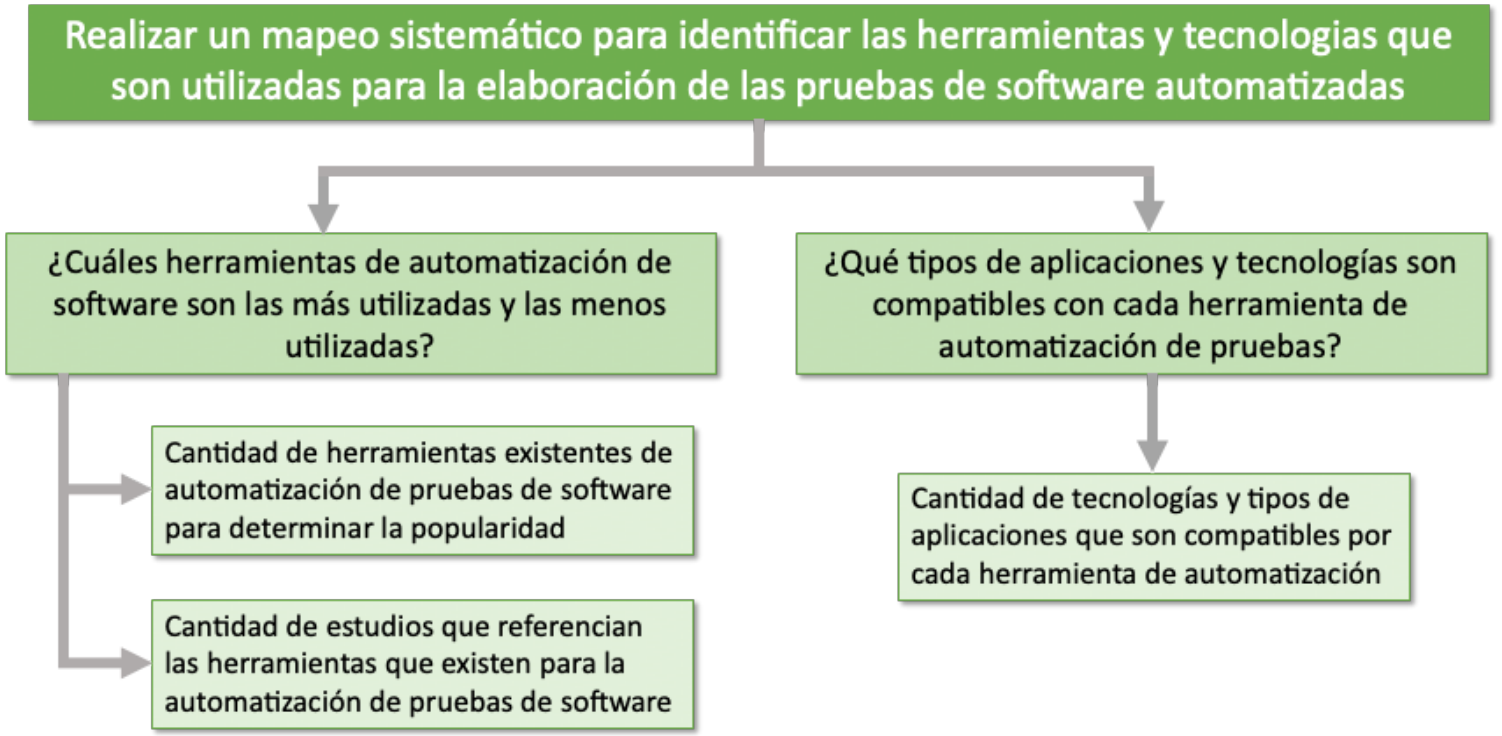
Realizar un estudio de mapeo sistemático (SMS) para identificar las herramientas y tecnologías que son utilizadas para elaboración de las pruebas de software automatizadas.

Metodología

Proceso de Mapeo Sistemático



Planificación.



Búsqueda de estudios.

:: SMS - Builder ::

Mendeley

ELSEVIER Scopus®

EBSCO Discovery Service

ACM DL DIGITAL LIBRARY

Engineering Source

ScienceDirect

Búsqueda de estudios.

Criterios de exclusión/Inclusión		
Categoría	**Inclusión**	**Exclusión**
Campo	Resultados, palabras claves, titulo del estudio	
Tipo de publicación	Artículos de revistas científicas.	Publicaciones no referenciadas en base de datos confiables, tesis, libros, proceedings
Área/Disciplina	Software, Testing, Ingeniería de software, automatización de pruebas, tecnología, programación, informática, ciencias de la computación.	Áreas no afines a Software, Testing, Ingeniería de software, automatización de pruebas, tecnología, programación, informática, ciencias de la computación.
Periodo	Entre 2019 a 2023	Menores al 2019
Idioma	Inglés	-

Búsqueda de estudios.

Palabras	Sinónimo
"Automated testing tolos	"Test automation tools" "Testing automation tolos" "Automated testing technologies "Test automation frameworks
Software	

Cadena de búsqueda
("Automated testing tools" OR "Test automation tools" OR "testing automation tools" OR "Automated testing technologies" OR "Test automation Technology" OR "Test automation frameworks") AND ("Software")

BD	Scopus	EDS	ACM	Enginnering Source	Science Direct
Sin Criterios	1039	495	404	12	296
Con criterios	57	19	16	5	22

Búsqueda de estudios.

BOLA DE NIEVE

Iteraciones	Bola de nieve hacia atrás		Bola de nieve hacia adelante	
	Exclusión	Inclusión	Exclusión	Inclusión
Iteración 1	468	4	242	13
Iteración 2	702	6	119	5
Iteración 3	147	0	58	0

28 artículos en total, de los cuales se descartaron 6 estudios por estar duplicados, dando un total de 22 seleccionados.

Análisis de calidad.

SCI considera el número de citas de cada estudio con respecto a la edad de las publicaciones.

$$SCI = \frac{C}{Y}$$

IRRQ corresponde al índice de relación con las preguntas de investigación.

$$IRRQ = \frac{N}{T}$$

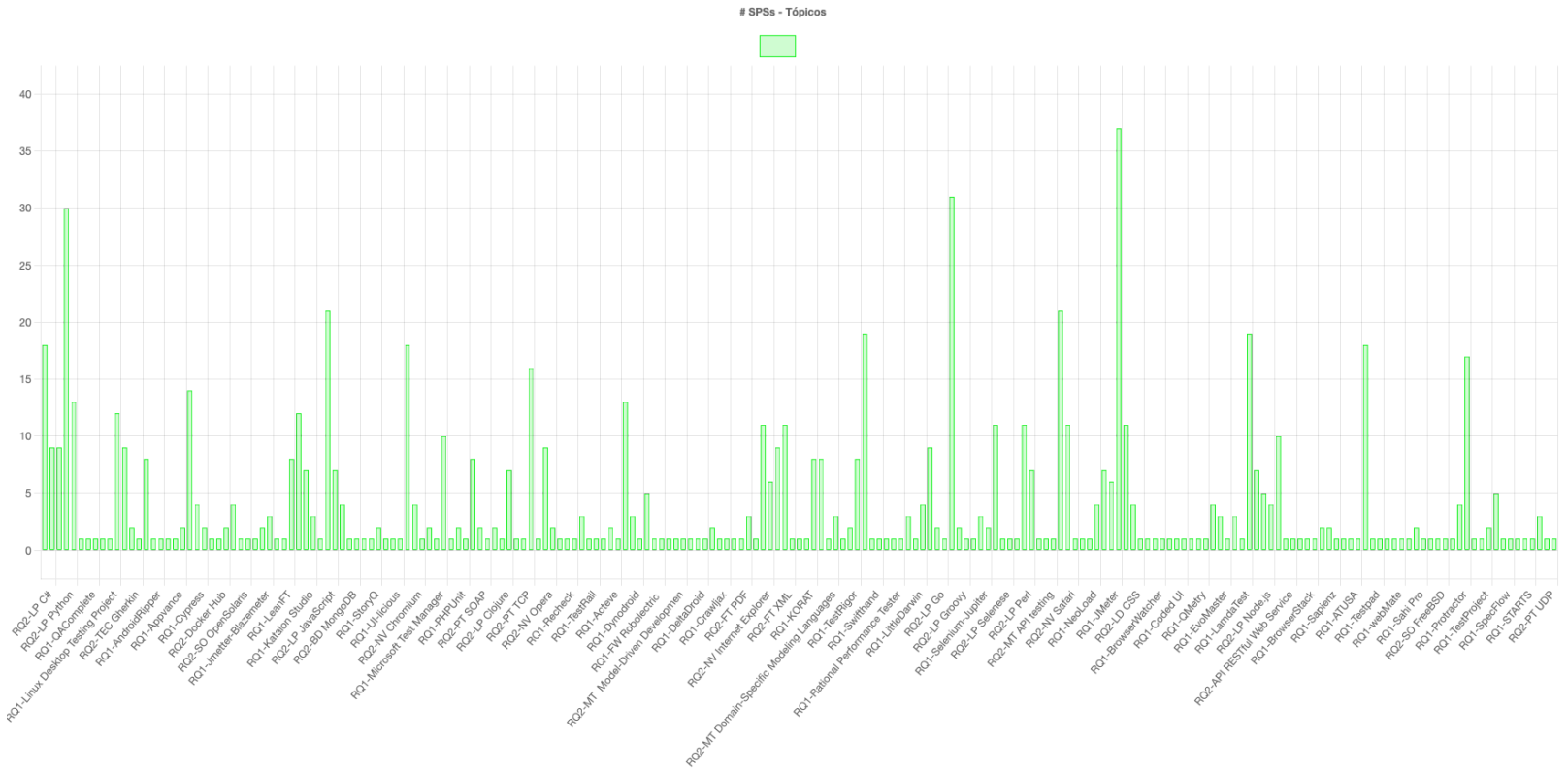
CVI indica el valor de relevancia según la opinión asignada por cada trabajador del equipo.

$$CVI = \frac{\sum_{n=1}^{k} f(n)}{k}$$

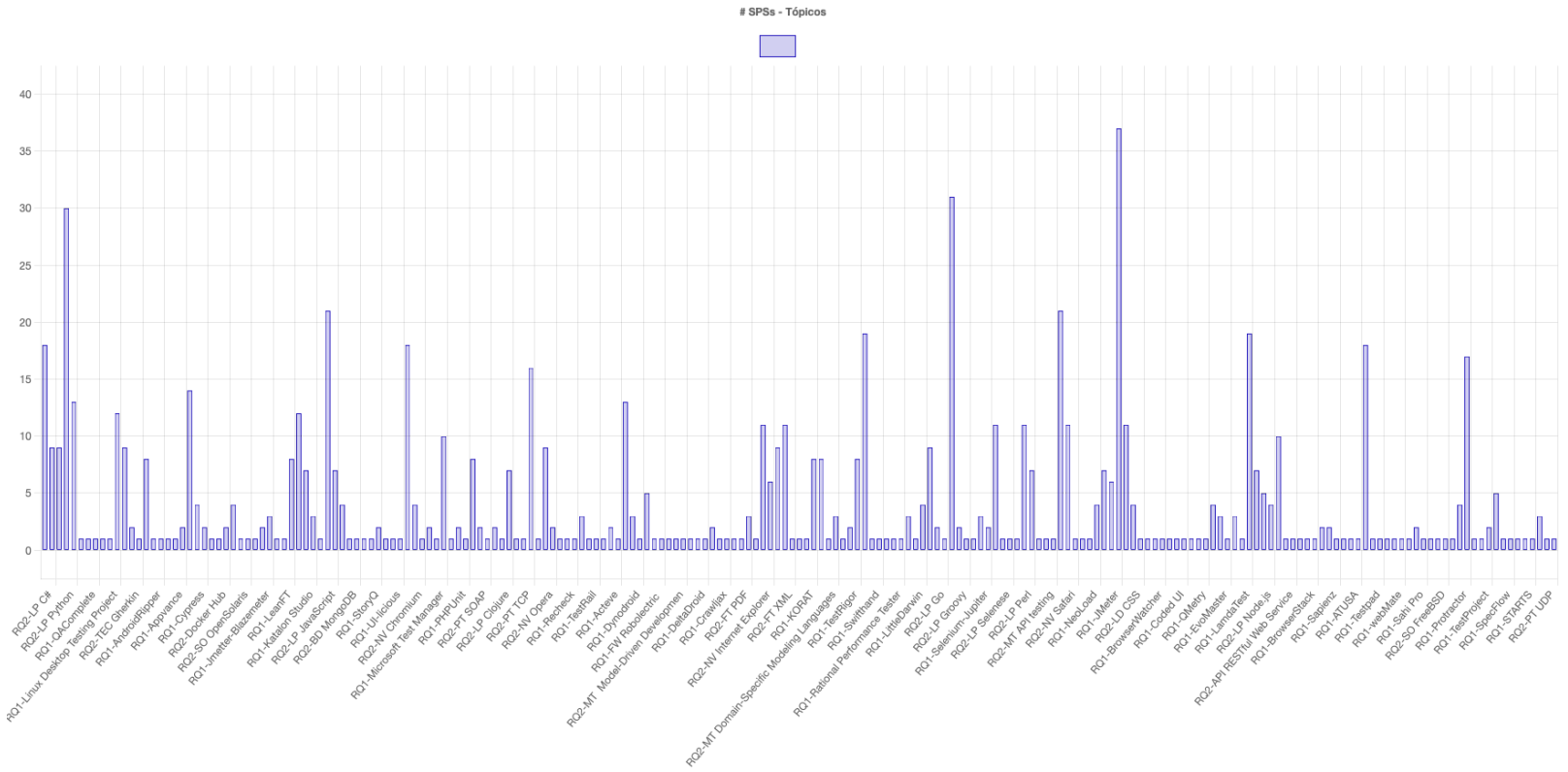
Extracción de datos.

Pregunta de Investigación	Tópicos	SPS ID (Estudios)
RQ1	Appium	SPS08 SPS12 SPS17 SPS18 SPS20 SPS23 SPS29 SPS30 SPS39 SPS52 SPS54 SPS55 SPS58
RQ1	Cucumber	SPS01 SPS08 SPS12 SPS18 SPS24 SPS33 SPS39 SPS49 SPS54 SPS57
RQ1	UFT - Unified Funcional Testing	SPS02 SPS05 SPS12 SPS23 SPS25 SPS26 SPS29 SPS47 SPS53
RQ1	TestComplete	SPS02 SPS07 SPS12 SPS23 SPS25 SPS26 SPS29 SPS35 SPS40 SPS41 SPS47 SPS53 SPS58
RQ1	Serenity	SPS12 SPS18 SPS43
RQ1	Selenium	SPS01 SPS02 SPS05 SPS07 SPS08 SPS12 SPS15 SPS16 SPS18 SPS20 SPS23 SPS24 SPS25 SPS26 SPS29 SPS32 SPS33 SPS34 SPS35 SPS36 SPS39 SPS40 SPS41 SPS43 SPS45 SPS46 SPS47 SPS49 SPS50 SPS51 SPS52 SPS53 SPS54 SPS55 SPS57 SPS58 SPS60
RQ1	JUnit	SPS05 SPS08 SPS15 SPS18 SPS20 SPS22 SPS25 SPS27 SPS29 SPS33 SPS40 SPS41 SPS43 SPS44 SPS45 SPS47 SPS49 SPS50 SPS57
RQ1	Ranorex Studio	SPS01 SPS11 SPS12 SPS17 SPS23 SPS26 SPS29 SPS36 SPS41 SPS47 SPS58
RQ1	QTP	SPS07 SPS23 SPS25 SPS26 SPS29 SPS40 SPS41 SPS47 SPS51 SPS53 SPS57 SPS58

Análisis y clasificación de estudios

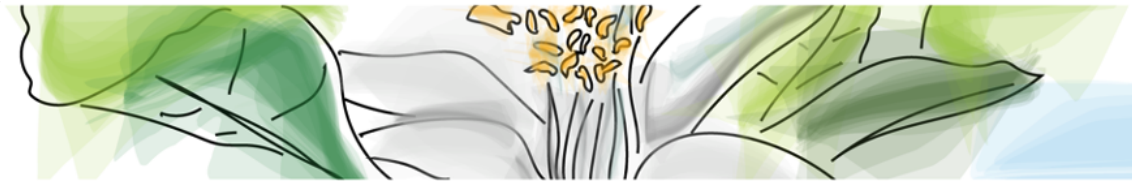


Análisis y clasificación de estudios



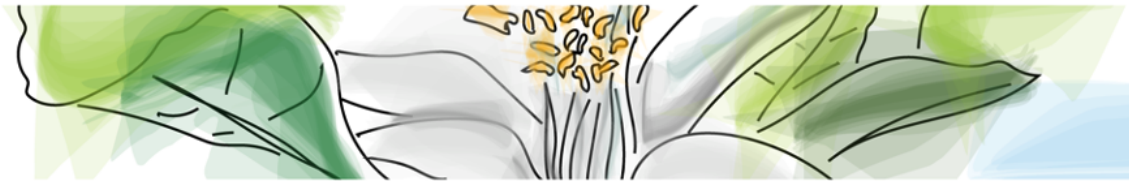
Resultados.

Tópico 1 Herramientas de automatización	Tópico 2 Tecnologías y aplicaciones compatibles
Selenium	Java
JUnit	Python
Appium	JavaScript
TestComplete	Ruby
Ranorex Studio	C#
QTP	Firefox
Cucumber	Chrome
UFT	Windows
	Linux



Conclusiones

- Conclusión 1



Preguntas

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