SE 216 – SOFTWARE PROJECT MANAGEMENT
SOFTWARE TOOLS DOCUMENT

PROJECT NAME: LIKE

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TASK #	PROJECT TASKS WHICH REQUIRE SOFTWARE TOOL SUPPORT
1	Data Collection (web scraping)
2	Database Design
3	User Interface Design

SOFTWARE TOOLS FOR TASK 1: Data Collection

Tool Cost/Training/Functionality Data

Tool	Scrapy	Beautiful Soup	Octoperse	Selenium
Cost	Free	Free	210$/monthly	Free
Training Days	14 days	7 days	14 days	20 days
Functionality	100	50	75	50

Normalized Cost/Training/Functionality Data

Tool	Scrapy	Beautiful Soup	Octoperse	Selenium
Cost	0	0	1	0
Training Days	0.7	0.35	0.7	1
Functionality	1	0.5	0.75	0.5

Normalized Tool Graph
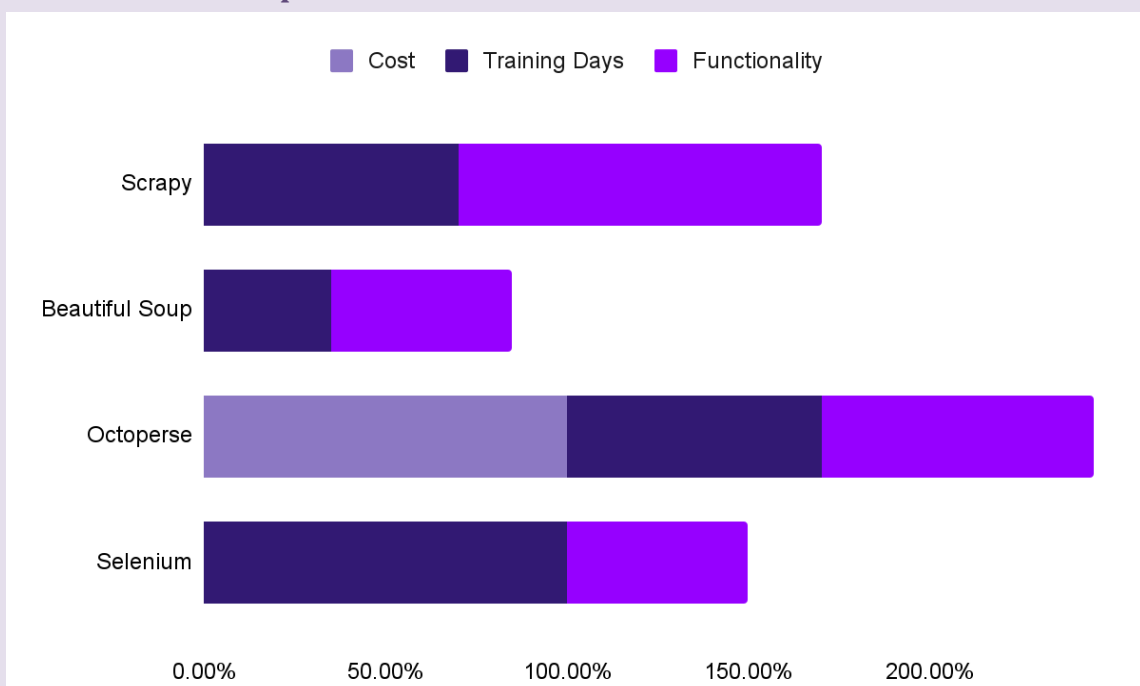
Which tool has been selected? Why?

Scrapy is a Python framework for web scraping, which automates the extraction of data from websites. It's highly customizable and scalable, making it ideal for our project's need to gather data from various review platforms and music streaming services. With Scrapy, we can efficiently collect data to generate personalized recommendations based on user preferences and interactions with different media types. Scrapy offers advanced functionality for web scraping, including powerful data extraction capabilities, support for handling dynamic content (such as JavaScript-rendered pages), and scalability for large-scale scraping tasks. This functionality aligns well with LIKE's requirements for collecting diverse types of data from multiple sources.

## SOFTWARE TOOLS FOR TASK 2: Database Design

Tool Cost/Training/Functionality Data

Tool	MySQL Workbench	Microsoft SSMS	**Apache Cassandra**	Apache Hadoop
Cost	Free	Free	**Free**	Free
Training Days	15 days	20 days	**20 days**	40 days
Functionality	65	75	**100**	90

Normalized Cost/Training/Functionality Data

Tool	MySQL Workbench	Microsoft SSMS	**Apache Cassandra**	Apache Hadoop
Cost	1	1	**1**	1
Training Days	0.4	0.5	**0.5**	1
Functionality	0.65	0.75	**1**	0.9

Normalized Tool Graph
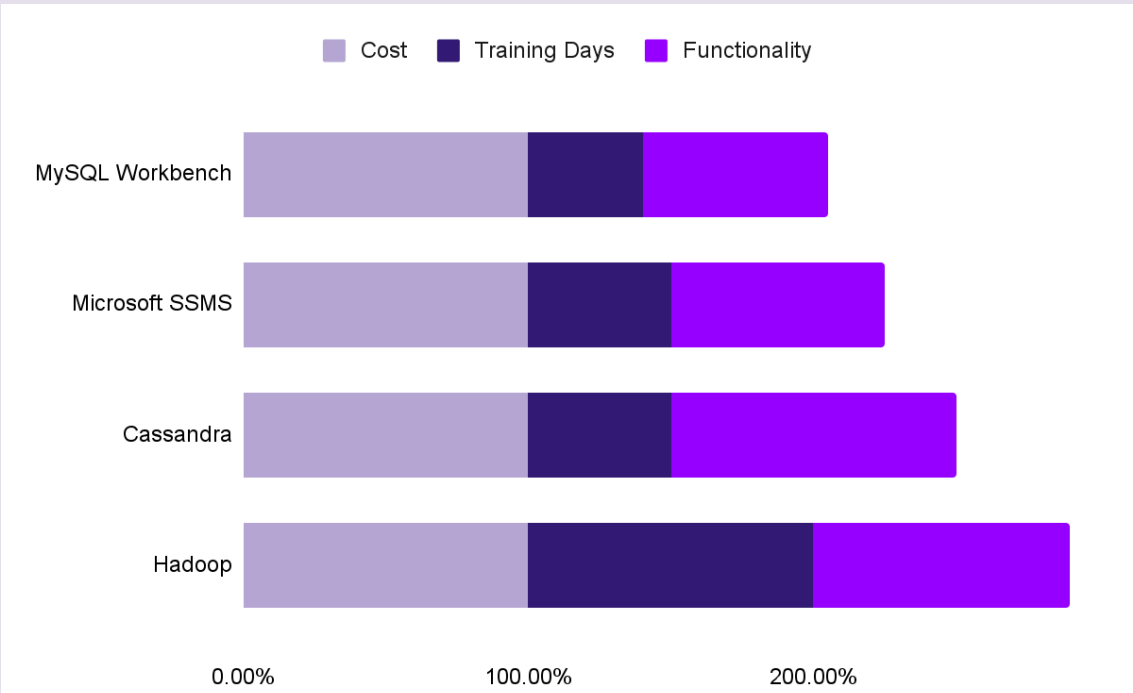
Which tool has been selected? Why?

For our project LIKE which involves personalized recommendations, user feedback analysis, and handling a large amount of data efficiently, *Apache Cassandra* is selected. Our project requires real-time processing of user interactions, feedback, and recommendation updates. Cassandra's architecture is optimized for low-latency read and write operations, making it well-suited for real-time data processing use cases. Cassandra offers linear scalability, meaning it can easily scale out by adding more nodes to the cluster as the data volume and user base grow. This feature aligns well with our requirements for handling a large amount of data efficiently and accommodating increasing workload demands over time.

Cassandra's flexible schema and support for semi-structured and unstructured data make it suitable for storing diverse types of data, including user preferences, ratings, feedback, and metadata. This feature allows our project to adapt to evolving data requirements and efficiently manage different types of content.

SOFTWARE TOOLS FOR TASK 3: UI Design

Tool Cost/Training/Functionality Data

Tool	Figma	Adobe XD	Sketch	Marvel
Cost	75$/Monthly	**2$/Monthly**	20$/Monthly	12$/Monthly
Training Days	15 Days	**10 Days**	5 Days	10 days
Functionality	100	**90**	85	75

Normalized Cost/Training/Functionality Data

Tool	Figma	Adobe XD	Sketch	Marvel
Cost	1	**0.03**	0.3	0.2
Training Days	1	**0.7**	0.3	0.7
Functionality	1	**0.9**	0.85	0.75

Normalized Tool Graph
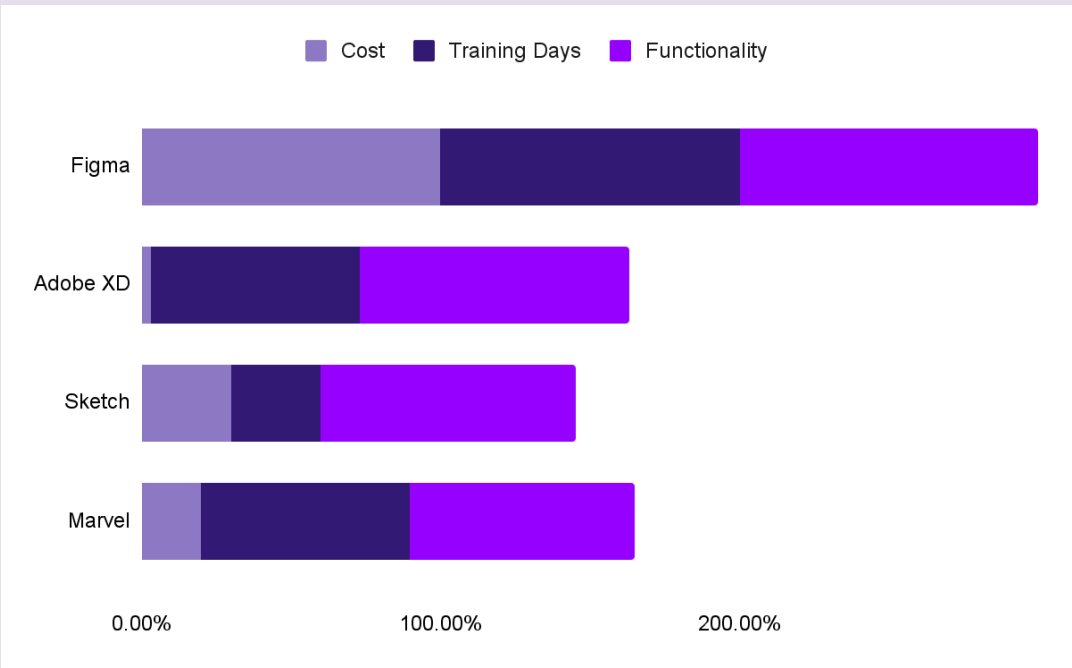
Which tool has been selected? Why?

Adobe XD would be the preferred choice for our project due to its comprehensive set of features, including vector graphic tools and interactive prototyping capabilities. It also offers comprehensive plugin support, enabling us to extend its functionality. Adobe XD allows us to create UI designs that are adaptable to both iOS and Android platforms, ensuring a consistent and optimized user experience across different devices and operating systems.