SE 216 – SOFTWARE PROJECT MANAGEMENT
SOFTWARE TOOLS DOCUMENT

PROJECT NAME: UniLearn

GROUP NUMBER and MEMBERS: Group – 1 / Mehmet Şakir Şeker, Demirkan Yıldız, Sarp Demirtaş, Sertan Unal, Melik Fırat Gültekin, Cavit Kaya

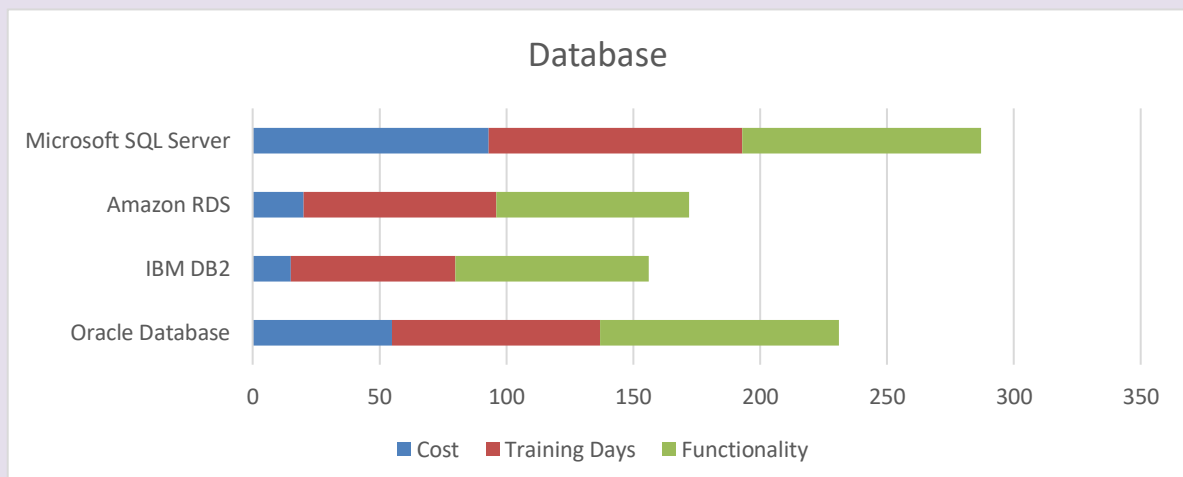| TASK #	PROJECT TASKS WHICH REQUIRE SOFTWARE TOOL SUPPORT
1	Database: long term relaible, safe data storage.
2	Front-end Libraries: for developing UI.
3	IDE: for implementation and testing.

SOFTWARE TOOLS FOR TASK 1: DATABASE

Tool Cost/Training/Functionality Data

Tool	Oracle Database	IBM DB2	Amazon RDS	Microsoft SQL Server
Cost	$3,454	$969	$6,240	$1,260
Training Days	14	11	13	17
Functionality	85	40	90	70

Normalized Cost/Training/Functionality Data

Tool	Oracle Database	IBM DB2	Amazon RDS	Microsoft SQL Server
Cost	55.14	15.58	100	20.16
Training Days	82.35	64.71	76.47	100
Functionality	94.44	44.44	100	77.78

Normalized Tool Graph

Selection & notes:

The selected tool for the project is Amazon RDS. This choice is made due to its scalability, high availability, managed service, and cost-effectiveness. For example, in our project aiming to provide an integrated online learning platform for university students, Amazon RDS is chosen to handle the database management efficiently. With the platform expected to scale rapidly as more universities and students join, Amazon RDS offers the flexibility to easily expand database resources as needed. Its high availability ensures uninterrupted access to course materials and student data. Additionally, as the project team may not have extensive experience in database management, Amazon RDS's managed service automates many tasks, reducing the need for manual intervention and allowing the team to focus on other aspects of the project. Lastly, Amazon RDS's cost-effective pricing model aligns well with the project's budget constraints, ensuring that resources are used efficiently. Overall, Amazon RDS emerges as the optimal choice for our project due to its comprehensive features and suitability for our specific requirements.

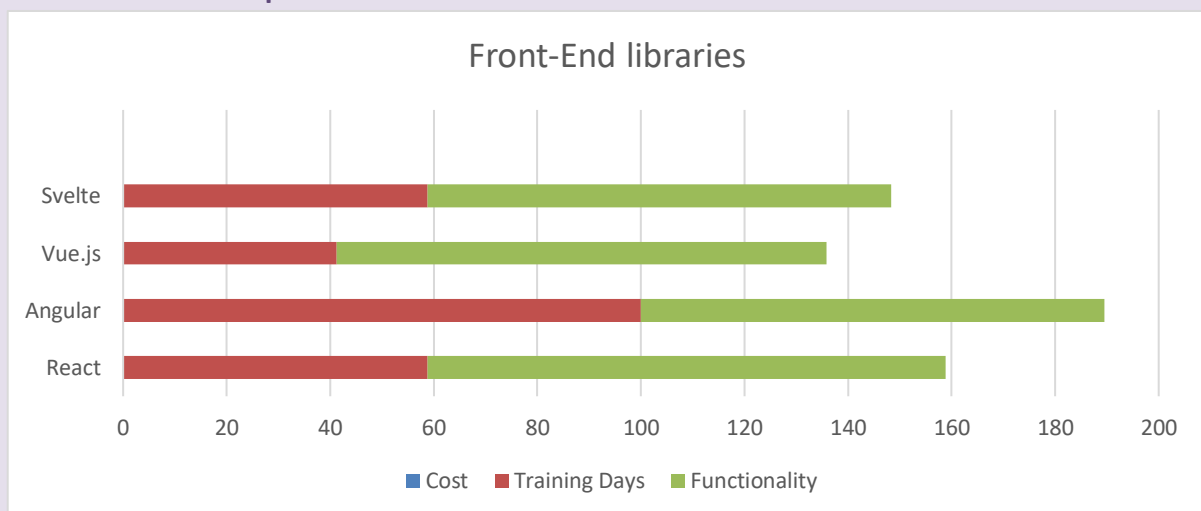## SOFTWARE TOOLS FOR TASK 2: Front-End libraries

Tool Cost/Training/Functionality Data

Tool	React	Angular	Vue.js	Svelte
Cost	$0	$0	$0	$0
Training Days	10	17	7	10
Functionality	95	85	90	85

Normalized Cost/Training/Functionality Data

Tool	React	Angular	Vue.js	Svelte
Cost	0	0	0	0
Training Days	58,8	100	41,2	58,8
Functionality	100	89,5	94,7	89,5

Normalized Tool Graph

Front-End libraries

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Selection & notes:

We selected React for developing front-end part of website. Because it gives us more functionality due to reusablitiy and its speed. It doesnt take too much time to learn, vue.js can be another option because of its simplicity and low training days, but we dont have time issues and since theres no Money cost for these libraries, react will be best option.

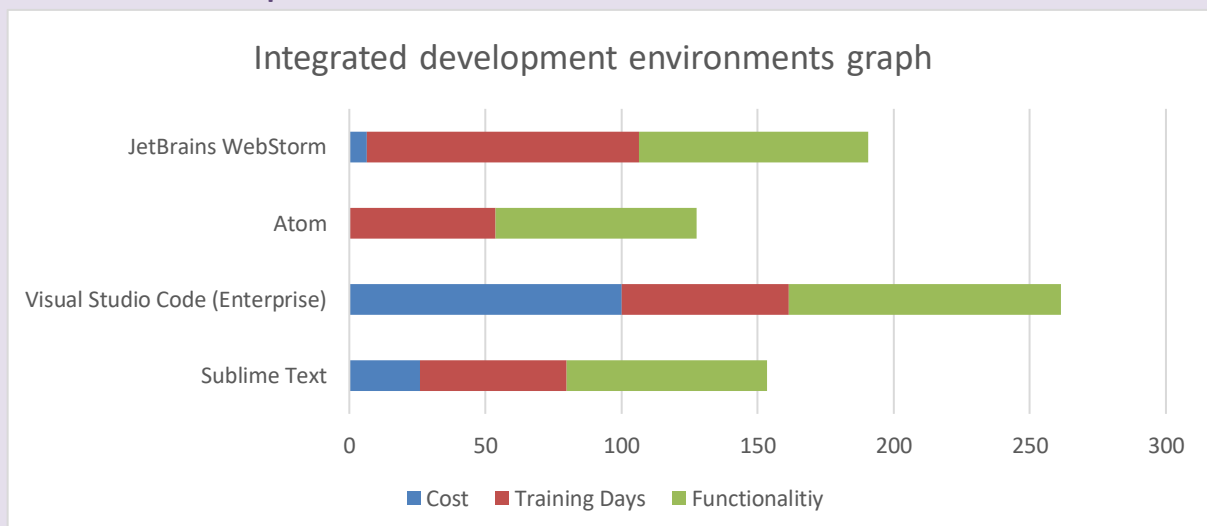**SOFTWARE TOOLS FOR TASK 3: Integrated Development Environments.**

Tool Cost/Training/Functionality Data

Tool	JetBrains WebStorm	Atom	Visual Studio Code	Sublime Text
Cost	$160	$0	$2500	$650
Training Days	13	7	8	7
Functionality	80	70	95	70

Normalized Cost/Training/Functionality Data

Tool	JetBrains WebStorm	Atom	Visual Studio Code	Sublime Text
Cost	6,4	0	100	26
Training Days	100	53,8	61,5	53,8
Functionality	84,2	73,7	100	73,7

Normalized Tool Graph

Selection & notes:

The selected IDE as a software tool for this project is Visual Studio Code. Our general approach was "functionality > cost" as importance. The reason for that selection is that other good IDEs for web site development like WebStorm or SublimeText are unnecessarily expensive for less functionalitiy, they dont have testing tools, colloborative tools, etc. Vs code is more known, has tools for management (agile tools), in general more functional.

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