SE 216 – SOFTWARE PROJECT MANAGEMENT
SOFTWARE TOOLS DOCUMENT

PROJECT NAME: DrivEco

GROUP NUMBER and MEMBERS: Group 5 - Bade Balcı, Elif Göksu Sümer, Deniz Yetiş, Selin Gilgil, Fatih Anamaslı, Yunus Erdem Gökdağ

TASK #	PROJECT TASKS WHICH REQUIRE SOFTWARE TOOL SUPPORT
1	Map
2	Payment
3	Database

SOFTWARE TOOLS FOR TASK 1: Map

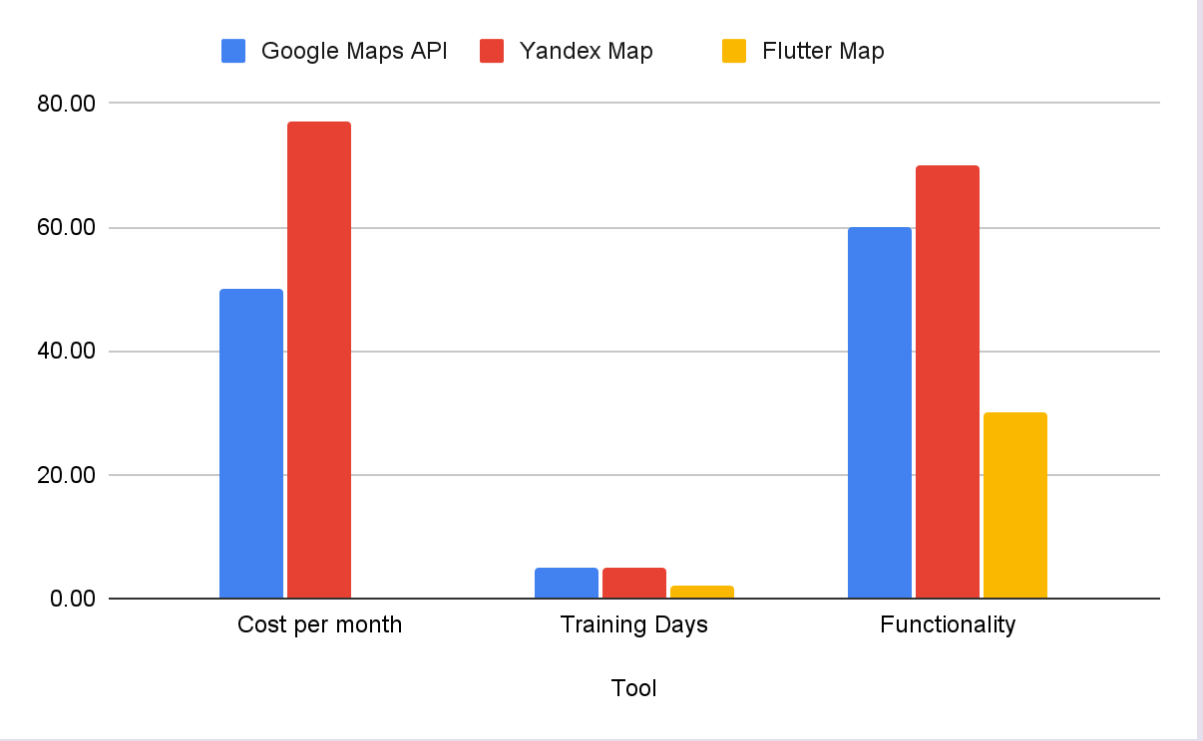
Tool Cost/Training/Functionality Data

Tool	Google Maps API	Yandex Map API	Flutter Map package	
Cost (per month)	500$	770$	Free	
Training Days	5	5	2	
Functionality	80	60	55	

Normalized Cost/Training/Functionality Data

Tool	Google Maps API	Yandex Map API	Flutter Map package	
Cost	65	100	0	
Training Days	100	100	40	
Functionality	100	75	68	

Normalized Tool Graph



The graph shows how many units the fee corresponds to out of 10 units.

Which tool has been selected? Why?
The Google Maps JavaScript API provides functions that you can use to track users' locations. Using these functions, you can retrieve the user's current location and display it on the map. Therefore, we moved on from the Google Maps API.

SOFTWARE TOOLS FOR TASK 2: Payment

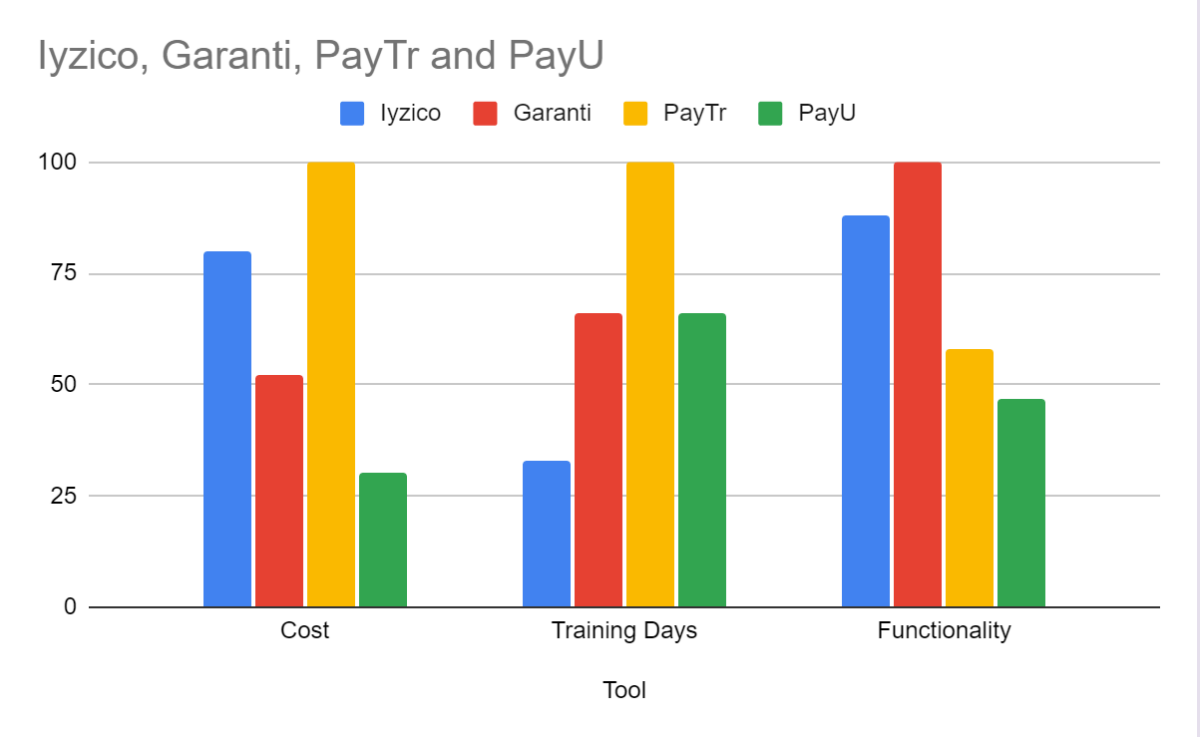
Tool Cost/Training/Functionality Data

Tool	Iyzico	Garanti	PayTr	PayU
Cost	%3.99	%2.59	%4.97	%1.5
Training Days	3	4	2	2
Functionality	75	85	60	55

Normalized Cost/Training/Functionality Data

Tool	Iyzico	Garanti	PayTr	PayU
Cost	79.8	52	100	30
Training Days	75	100	50	50
Functionality	88	100	70	64

Normalized Tool Graph



Which tool has been selected? Why?
We decided it would be best to choose Garanti BBVA Online POS because it is safer and cheaper. Additionally, the fact that the bank has a customer service center was an important factor in making this choice.

SOFTWARE TOOLS FOR TASK 3: Server & Database

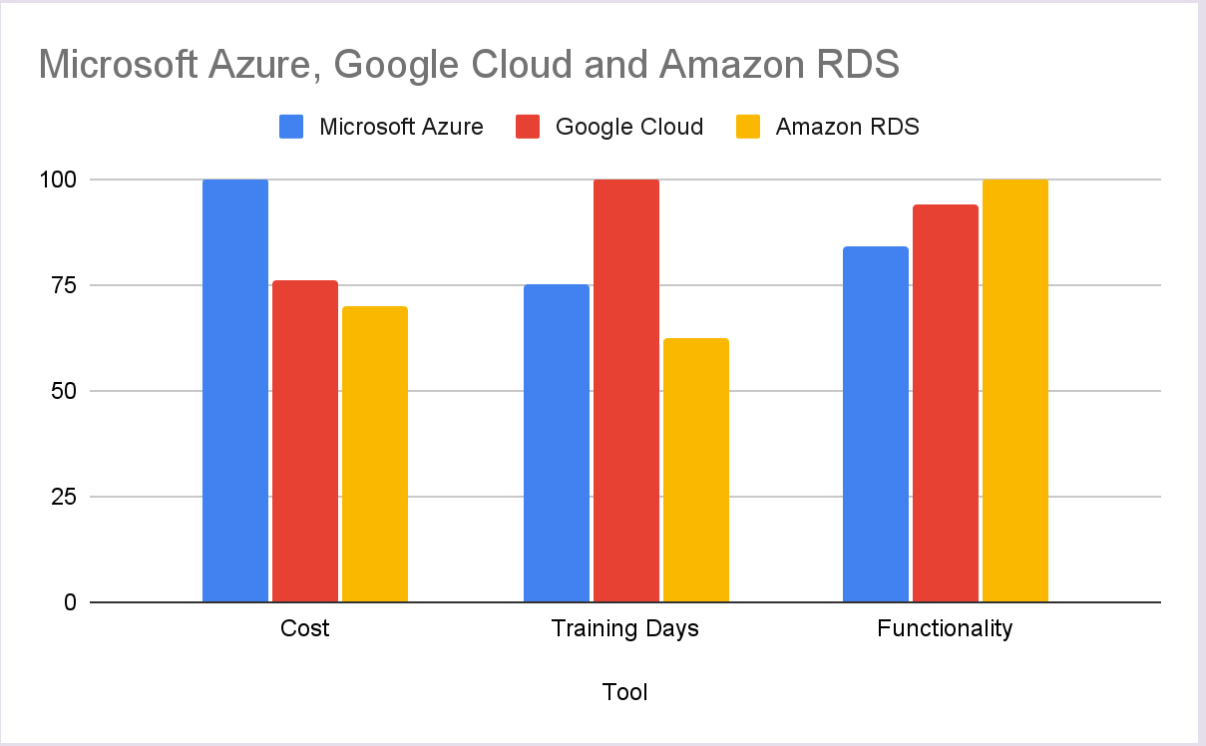
Tool Cost/Training/Functionality Data

Tool	Microsoft Azure	Google Cloud	Amazon RDS	
Cost (per month)	$396	$300	$280	
Training Days	30	40	25	
Functionality	85	90	85	

Normalized Cost/Training/Functionality Data

Tool	Microsoft Azure	Google Cloud	Amazon RDS	
Cost	100	76	70	
Training Days	75	100	62.5	
Functionality	94	100	84	

Normalized Tool Graph



Which tool has been selected? Why?

When we look at the features of the service providers required for our application, we see that 80 GB of storage and 16 GB of RAM meet our needs. When comparing different service providers, our preference is Google Cloud Platform as it meets these requirements with 4 vCPUs with a more affordable price compared to its other rivals.

We will use MONGODB because of these reasons:

- **MongoDB has built-in features for backing up data and distributing it across multiple servers, ensuring high availability and durability. This provides high accessibility and resilience.**
- **As a document-oriented database, MongoDB boasts a flexible data structure where each record is stored as a JSON-like document. This enables storing and updating data without the need to define a database schema beforehand.**
- **MongoDB is known for its high performance, facilitated by its document-oriented architecture which enables faster data reads and writes. Moreover, it supports scalability through distributed architectures, allowing for easy management of large data workloads.**

Which language will we use ?

We will use React Native for building the application, as it offers the opportunity for cross-platform development. Additionally, it enables rapid development of the website using React. Since React Native is based on JavaScript, we find it logical to use Node.js for the backend.

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