**SMART PARKING LOT DEPLOYMENT ON AWS**

**AWS Deployment Architecture:**

1. Amazon RDS for Database:

* Use Amazon RDS for the relational database.
* Deploy a multi-AZ (Availability Zone) instance for high availability.
* Choose the appropriate database engine (e.g., MySQL, PostgreSQL).

2. EC2 Instances for API Servers:

* Deploy API servers on Amazon EC2 instances.
* Use Auto Scaling Groups to ensure scalability.
* Distribute instances across multiple availability zones.

3. Amazon ElastiCache for Caching:

* Utilize Amazon ElastiCache for caching frequently accessed data.
* Improve response times for spot availability queries.

4. Amazon S3 for Static Content:

* Store static content (e.g., images, documentation) on Amazon S3 for easy retrieval.

5. Amazon CloudFront for CDN:

* Use Amazon CloudFront as a Content Delivery Network to distribute static content globally.

6. Amazon Route 53 for DNS:

* Utilize Amazon Route 53 for DNS management.
* Configure a scalable and fault-tolerant domain name system.

7. Amazon VPC for Network Isolation:

* Set up Amazon VPC (Virtual Private Cloud) for network isolation.
* Implement security groups and network ACLs for access control.