Assignment 9: Migrate your application logic to the cloud

Clouds, such as Azure from Microsoft, offer more than just computes to rent. The main type of cloud offerings include:

- Infrastructure as a service (IaaS)
- Platform as a service (PaaS)
- Serverless
- Software as a service (SaaS)

Learn about these different types of offerings, and explain what they are and how they differ. Explain which offerings are relevant for IoT developers.

Answer:

1.Explain the different cloud offerings

	Infrastructure as a service (IaaS)	**Platform as a service (PaaS)**	**Serverless**	**Software as a service (SaaS)**
Explain	IaaS offers virtualized computing resources over the internet. Users can rent servers, storage, and networking components on a pay-as-you-go basis. It provides flexibility and scalability without requiring physical hardware management.	PaaS provides a cloud-based platform for application development. It includes development tools, databases, and frameworks, allowing developers to build, test, and deploy applications without managing the underlying infrastructure.	Serverless computing allows developers to run applications without managing servers. The cloud provider automatically allocates and scales resources as needed. This model is event-driven and is commonly used for functions that respond to real-time events.	SaaS delivers software applications over the internet on a subscription basis. Users can access these applications without worrying about installation, maintenance, or updates.
Example	Amazon Web Service, Google Compute Engine	Microsoft Azure App Services, Google App Engine	AWS Lambda, Google Cloud Functions	Google Drive, Microsoft Office 365, Salesforce

2. Explain which offering is relevant for IoT

	Infrastructure as a service (IaaS)	Platform as a service (PaaS)	Serverless	Software as a service (SaaS)
Relevant for IoT	IoT devices generate large amounts of data that require scalable infrastructure. IaaS provides virtual machines and storage solutions for IoT data management.	Many IoT applications need real-time analytics and integration with databases. PaaS allows developers to create and deploy IoT applications efficiently.	IoT applications often need to process real-time data from sensors. Serverless computing enables event-driven execution, reducing costs and improving scalability.	Many IoT solutions provide dashboards and analytics tools via SaaS platforms, helping businesses monitor and manage IoT devices remotely.