3- Describe Azure functions

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Azure Functions is a `serverless compute service` that lets you run code in response to events or triggers without managing servers. You write your code in small, single-purpose functions, and Azure Functions handles the infrastructure, scaling, and execution of your code.

- **!** Azure Functions is an `event-driven`, `serverless` compute option that doesn't require maintaining virtual machines or containers.

- If you build an app using VM's or containers, those resources have to be "running" in order for your app to function.

- With Functions, <u>an event wakes the function</u>, alleviating the need to keep resources provisioned when there are no events.

Benefits

- Using Azure functions is ideal when you're only concerned about the code running your service and not about the underlying platform or infrastructure.

- **&** Commonly used when you need to perform `work` in response to an `event` (often via a <u>REST</u> request).

- Functions scale automatically based on *demand*.

- Azure Functions runs your code when it's triggered and automatically deallocates resources when the function is finished.

- **!** Only charged for the <u>CPU time used while your function runs</u>.

2 types of Functions

- `stateless (default)` :
  they behave as if they're restarted every time they respond to an event.

- `statefull` :
  (called Durable Functions), a context is passed through the function to track prior activity.