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1. What are input and output bindings in Azure Functions?

Bindings abstract external data sources into declarative configurations.

- **Input bindings:** Bring external data into the function.
- **Output bindings:** Send function output to an external service.

2. What types of bindings are most commonly used?

- **Azure Blob Storage**
- **Azure Queue Storage**
- **Azure Cosmos DB**
- **HTTP (Trigger + Output)**
- **Azure Table Storage**

3. How do you define bindings in function.json?

Bindings are defined as JSON objects. Example:

```
{
  "bindings": [
    {
      "name": "myBlob",
      "type": "blobTrigger",
      "direction": "in",
      "path": "samples/{name}",
      "connection": "AzureWebJobsStorage"
    }
  ]
}
```

4. How are bindings configured in C# using attributes?

Example (Queue input, Blob output):

```
public static void Run(
    [QueueTrigger("queue-name")] string input,
    [Blob("output-container/{rand-guid}", FileAccess.Write)] out string outputBlob)
{
    outputBlob = input.ToUpper();
}
```

Use specific attributes like [BlobTrigger], [Queue], [CosmosDB].

5. What is the difference between trigger and input bindings?

- **Trigger:** Initiates function execution (only one per function).
 - **Input:** Supplies data for processing (can have multiple).
- Example: A blobTrigger starts the function; a Cosmos DB input binding provides extra data.
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6. How do you bind to Azure Blob Storage?

Input (read):

```
[BlobTrigger("input-container/{name}", Connection = "AzureWebJobsStorage")] Stream inputBlob
```

Output (write):

```
[Blob("output-container/{name}", FileAccess.Write, Connection = "AzureWebJobsStorage")] Stream outputBlob
```

7. How do you bind to Azure Queue Storage?

Trigger:

```
[QueueTrigger("queue-name", Connection = "AzureWebJobsStorage")] string msg
```

Output:

```
[Queue("output-queue", Connection = "AzureWebJobsStorage")] out string outputQueueMsg
```

8. How do you bind to Azure Cosmos DB?

Input (read):

```
[CosmosDB(  
    databaseName: "db",  
    collectionName: "coll",  
    Id = "id",  
    PartitionKey = "key",  
    Connection = "CosmosDBConnection")] dynamic item
```

Output (write):

```
[CosmosDB(  
    databaseName: "db",  
    collectionName: "coll",  
    Connection = "CosmosDBConnection")] out dynamic outputItem
```

9. How do you use output bindings to return data from a function?

- Use the return statement for HTTP output or single output bindings:

```
[FunctionName("HttpExample")]  
public static IActionResult Run(  
    [HttpTrigger(...)] HttpRequest req,  
    [Queue("myqueue")] out string msg)  
{  
    msg = "Queue message";  
    return new OkObjectResult("Success");  
}
```

10. How do you manage binding configuration via app settings?

- Use placeholders in function.json or attribute Connection:
"connection": "AzureWebJobsStorage"
- Then define the value in **Configuration > Application settings** in the portal or via:
az functionapp config appsettings set --name <app-name> --settings AzureWebJobsStorage=<conn-string>