

**Exam : 70-487**

**Title : Developing Windows Azure  
and Web Services**

**Vendor : Microsoft**

**Version : V13.75**

**NO.1** You are developing a WCF service.

A new service instance must be created for each client request.

You need to choose an instancing mode.

Which instancing mode should you use?

- A.** Single
- B.** PerRequest
- C.** PerCall
- D.** Multiple
- E.** PerSession

**Answer:** C

---

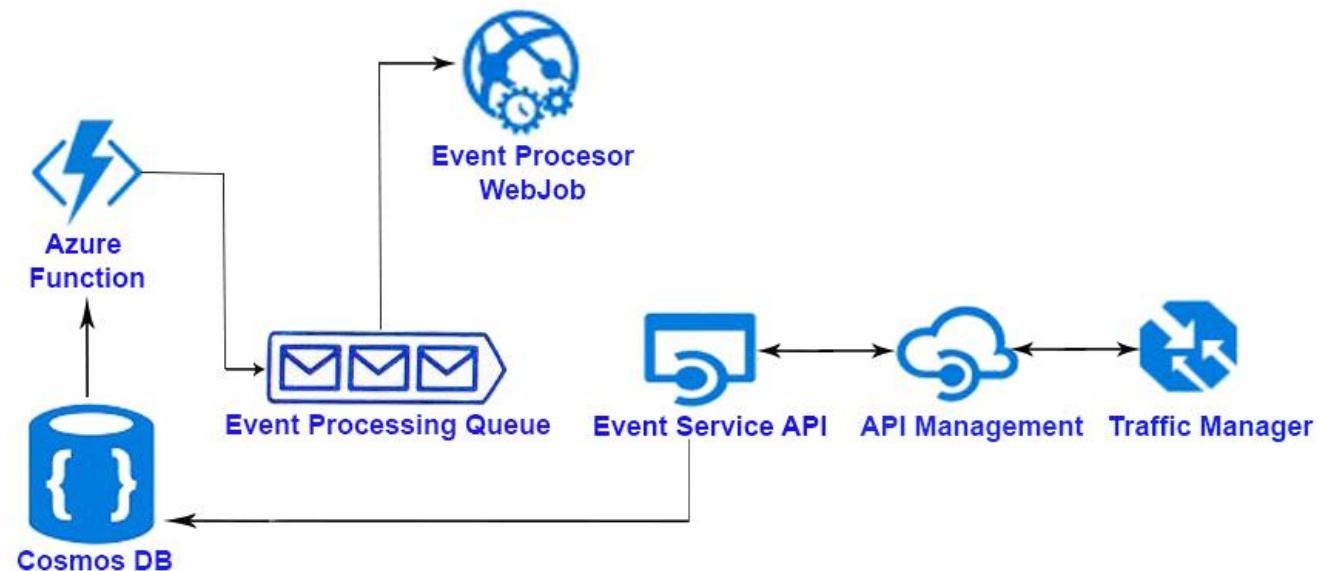
Topic 1, Trey Research Inc

Overview

Trey Research Inc. is a Software-as-a-Service (SaaS) company that provides hosted solutions for business partners around the world. The company is developing a solution that will allow business partners to manage events, including shareholder meetings and trade shows.

You hold meetings with key partners to identify requirements and constraints for the solution. You must minimize costs where possible.

You work with an Azure solutions architect to design the logical structure for the solution. The solution will use the following architecture:



Solution components

The solution will use Azure Traffic Manager to distribute traffic. The solution will use API Management to provide caching for the Event Service. Partner companies will interact with the solution by using the Event Service API. This API will be implemented as an ASP.NET Core Web API that runs as an Azure Web App. Event data will be stored in Cosmos DB using the Document API.

The solution will be highly available. You define regional Azure outages as periods of 60 seconds or more where the Event Service is not available.

An Azure WebJob named EventJob will be deployed with the Event Service Web App. The WebJob:

- \*Creates new computed events when partner events are created.
- \*Must be active whenever the Event Service is running.
- \*Is updated once a quarter.

Trey Research Inc. has developer teams that work with a variety of operating systems including Windows, Linux, and MacOS.

### Event Service

Individual events must be immutable. Event data can be up to 800 kilobytes (KB) in size. The Event Service must meet the following requirements:

- \*Use REST-based design
- \*Cache data whenever possible.
- \*Support both JSON and XML-based data.
- \*Log customer information whenever data is modified.
- \*Include the X-Customer header in all calls to identify the partner.

### Regional access to the Event Service API

Data for partners in Germany and Brazil must be served from Azure datacenters in their respective geographies unless there is a regional Azure outage. All other partners must use the US West Azure datacenter.

### Testing

All testing must interact directly with the Web App backend. Automated testing of the solution is performed using a remote third-party testing solution.

### Event data

You identify the following requirements for the event data store:

- \*Each partner's event data must be stored in a Collection that is specific to the partner.
- \*Event data must be available if a regional Azure outage occurs.
- \*Event read and write operations for a single partner must always store events in the correct order.

### Event API

Relevant portions of the app files are shown below. Line numbers are included for reference only and include a two-character prefix that denotes the specific file to which they belong.

#### EventController.cs

```
EC01[Route("api/events")]
EC02 public class EventsController : Controller
EC03 {
EC04     public IFileProvider FileProvider { get; }
EC05     public IEventDB EventDB { get; }
EC06     public EventsController(IFileProvider fileProvider, IEventDB eventDB)
EC07     {
EC08         FileProvider = fileProvider;
EC09         EventDB = eventDB;
EC10     }
EC11
EC12     [HttpGet]
EC13     public IEnumerable<Event> GetEvents()
EC14     {
EC15         return EventDB.LoadEvents();
EC16     }
EC18
EC19}
```

### Event processing

Relevant portions of the app files are shown below. Line numbers are included for reference only and include a two-character prefix that denotes the specific file to which they belong.

**Program.cs**

```

PR01 using System
PR02 using System.Collections.Generic;
PR03 using System.Linq;
PR04 using System.Text;
PR05 using System.Threading.Tasks;
PR06 using Microsoft.Azure.WebJobs;
PR07 namespace EventJob
PR08 {
PR09 class Program
PR10 {
PR11     static void Main()
PR12     {
PR13         var config = new JobHostConfiguration();
PR14         var host = new JobHost(config);
PR15         host.RunAndBlock();
PR16     }
PR17 }
PR18 }
```

**ComputedEventProcessor.cs**

```

CE01 public class ComputedEventProcessorBebJob
CE02 {
CE03     public static void ProcessQueueMessage ([QueueTrigger ("eventprocess")] string message, TextWriter log)
CE04     {
CE05         ...
CE06     }
CE07 }
```

Middleware Relevant portions of the app files are shown below. Line numbers are included for reference only and include a two-character prefix that denotes the specific file to which they belong.

**CustomerMiddleware.cs**

```

CM01 public class CustomerMiddleware
CM02 {
CM03     private readonly RequestDelegate _next;
CM04     public CustomerMiddleware (RequestDelegate next)
CM05     {
CM06         _next = next;
CM07     }
CM08     public async Task Invoke(HttpContext httpContext, IEventDB store)
CM09     {
CM10         var user = httpContext.Request.Headers["X-Customer"];
CM11         store.CurrentCustomer = user;
CM12         await _next(httpContext);
CM13     }
CM14 }
```

**NO.2** You develop an ASP.NET MVC application that is secured by using SSL. You are ready to deploy the application to production.

The deployment package must include the installation of the SSL certificate.

You need to configure the deployment package to meet the requirement.

What should you do?

- A.** Create a web publish pipeline target file with a custom web deploy target.
- B.** In the Package/Publish settings of the project, select the All Files in this project option.
- C.** Extend the CopyAllFilesToSingleFolder target in the project file.
- D.** In the Build Events settings of the project, configure a pre-build event to include the SSL certificate.

**Answer:** A

### NO.3 DRAG DROP

You are developing an ASP.NET Web API for a home inventory management system.

You need to limit access to users with IP addresses based only in the United States.

You have the following code:

```
public class HomeInventoryAuthorization: Target 1
{
    public override void OnAuthorization (Target 2 context)
    {
        var isUSIP = IP.IsUSIPAddress (context);
    }
}
```

Which code segments should you include in Target 1 and Target 2 to complete the code? (To answer, drag the appropriate code segments to the correct targets in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

Code Segments	Answer Area
<code>HttpContext</code>	Target 1: <input type="text"/>
<code>AuthorizeAttribute</code>	Target 2: <input type="text"/>
<code>AuthorizationFilterAttribute</code>	
<code>AuthorizationContext</code>	
<code>CountryContext</code>	

**Answer:**

Target 1:	<code>AuthorizeAttribute</code>	
Target 2:	<code>HttpContext</code>	

**NO.4** Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question

sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You develop a REST API that uses Node.js. The API will store data in Azure Cosmos DB. You plan to deploy the API to a new Azure App Services Web App. You create a new Web App by using the Azure portal.

The API must be deployed by using SFTP.

You need to provide the proper deployment credentials to deploy the API.

**Solution:** Download the .PublishSettings file and enter the username and password located in the file. Does the solution meet the goal?

**A.** Yes

**B.** No

**Answer:** A

Explanation:

Example:

```
# Get FTP publishing profile and query for publish URL and credentials
creds=$(az webapp deployment list-publishing-profiles --name $webappname --resource-group
myResourceGroup \
--query "[?contains(publishMethod, 'FTP')].[publishUrl,userName,userPWD]" --output tsv) --query
"[?contains(publishMethod, 'FTP')].[publishUrl,userName,userPWD]" --output tsv)
References:
https://docs.microsoft.com/en-us/azure/app-service/scripts/app-service-cli-deploy-ftp
```

## NO.5 HOTSPOT

You are developing a WCF service in Visual Studio 2013 that integrates with the Microsoft Azure service bus relay.

The Azure service bus namespace is named RestaurantServiceBus

You need to obtain the issuer name and secret.

What should you do? (To answer, select the appropriate option in the answer area.)

The screenshot shows the Azure Management Portal interface. On the left, there's a navigation menu with options like Home, Hosted Services, Storage Accounts & CDN, Database, Data Sync, Reporting, Service Bus, Access Control & Caching, and Virtual Network. The 'Service Bus' item is under the 'Access Control & Caching' section. The main area has a toolbar with buttons for New, Modify, Delete, Refresh, Access Control Service, Regenerate Access Key, New Queue, New Topic, New Subscription, and Delete. Below the toolbar, there's a 'Manage Service Bus' section with a 'Manage Entities' button. To the right, there's a table titled 'Choose Columns' with columns for Name, Type, and Status. It lists two entries: '3-Month Free Trial' (Subscription, Active) and 'RestaurantServiceBus' (Namespace, Active). To the right of the table, there's a 'Properties' panel with various details: Created On (5/30/2012 9:01:02 PM UTC), Subscription ID (76af80ce469a4560b9a4a45980), Project ID (020995cc5ab844a6a085080f55), Service Gateway (https://restaurantservicebus.se), Management Endpoint (https://restaurantservicebus-sb), ACS Version (ACSV2), and Default Key (<Hidden> View).

**Answer:**

The screenshot shows the Azure Management Portal with the 'Service Bus' section selected. The 'Access Control Service' blade is active, showing a list of namespaces. The 'RestaurantServiceBus' namespace is selected. On the right, a properties pane displays various details, including the 'Default Key' field, which has a 'View' button highlighted with a red box.

- NO.6** You are preparing to develop a set of libraries that uses large data sets. The libraries must be shared across an organization and distributed to several servers. You need to create a remote NuGet feed that exposes the libraries for developer use. What should you do? (Each answer presents part of the solution. Choose all that apply.)
- A. Add packages to the Packages folder.
  - B. Create a new Empty Web Application in Visual Studio.
  - C. Configure the Packages folder located in the appSettings section of the web application's Web.config.
  - D. Install the NuGet.DataFeed Package.
  - E. Install the NuGet.Server Package.
  - F. Create a new Empty Web Site in Visual Studio.

**Answer:** ABCE

#### Creating Remote Feeds

You can host a remote (or internal) feed on a server that runs IIS.

Step 1 (B): Create a new Empty Web Application in Visual Studio

Step 2 (E): Install the NuGet.Server Package

Step 3 (C): Configure the Packages folder

Step 4 (A): Add Packages to the Packages folder

Step 5: Deploy and run your brand new Package Feed!

Reference: [Hosting Your Own NuGet Feeds](#)

- NO.7** Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You need to ensure that testing, development, and end user access requirements are met.

Solution: Add Web App backend endpoints to Azure Traffic Manager and use weighted routing.  
Does the solution meet the goal?

**A.** Yes

**B.** No

**Answer:** B

Explanation:

Scenario: All testing must interact directly with the Web App backend. Automated testing of the solution is performed using a remote third-party testing solution.

## NO.8 DRAG DROP

You are developing a web application that uses an assembly named MyAssembly.

You need to ensure that when MyAssembly version 1.0.0.0 is requested, version 2.0.0.0 is used.

How should you complete the markup in the Web.config file? To answer, drag the appropriate elements to the correct locations. Each element may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

### Elements

assemblyBinding  
bindingRedirect  
name  
oldVersion  
handlers  
newVersion  
type

### Answer Area

```

<configuration>
  <runtime>
    <dependentAssembly
      <assemblyIdentity name="myAssembly"
        publicKeyToken="32ab4ba45e0a69a1"
        culture="neutral" />
      <!-- Element -->
      <!-- Element = "1.0.0.0" -->
      <!-- Element = "2.0.0.0" />
    </dependentAssembly>
  </runtime>
</configuration>

```

**Answer:**

## Answer Area

```

<configuration>
  <runtime>
    <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
      <dependentAssembly>
        <assemblyIdentity name="myAssembly"
          publicKeyToken="32ab4ba45e0a69a1"
          culture="neutral" />
        <bindingRedirect oldVersion="1.0.0.0"
          newVersion="2.0.0.0"/>
      </dependentAssembly>
    </assemblyBinding>
  </runtime>
</configuration>

```

Box 1: assemblyBinding

Box 2: bindingRedirect

To redirect one assembly version to another, use the <bindingRedirect> element.

Box 3: OldVersion

Box 4: NewVersion

The newVersion attribute should specify a single version. For example, <bindingRedirect oldVersion="1.1.0.0-1.2.0.0" newVersion="2.0.0.0"/> specifies that the runtime should use version 2.0.0.0 instead of the assembly versions between 1.1.0.0 and 1.2.0.0.

Box 5: assemblyBinding

The following code example demonstrates a variety of binding redirect scenarios. The example specifies a redirect for a range of versions for myAssembly, and a single binding redirect for mySecondAssembly.

```

<configuration>
  <runtime>
    <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
      <dependentAssembly>
        <assemblyIdentity name="mySecondAssembly"
          publicKeyToken="32ab4ba45e0a69a1"
          culture="en-us" />
        <bindingRedirect oldVersion="1.0.0.0" newVersion="2.0.0.0" />
      </dependentAssembly>
    </assemblyBinding>
  </runtime>
</configuration>

```

References: <https://docs.microsoft.com/en-us/dotnet/framework/configure-apps/redirect-assembly-versions>

## NO.9 HOTSPOT

You are creating a streamed Windows Communication Foundation (WCF) service.  
You implement the following service methods.

```
[ServiceContract]
public interface IEmployee
{
    [OperationContract]
    Stream EmployeeMethod1(string string1);

    [OperationContract]
    bool EmployeeMethod2(Message msg1);

    [OperationContract]
    IXmlSerializable EmployeeMethod3(Stream stream1, string string1);

    [OperationContract]
    int EmployeeMethod4(bool booll, Message msg1);
}
```

For each of the following statements, select Yes if the statement is true. Otherwise, select No.

## Answer Area

Statement	Yes	No
The input for EmployeeMethod3 is streamed.	<input type="radio"/>	<input type="radio"/>
The output for EmployeeMethod3 is streamed.	<input type="radio"/>	<input type="radio"/>
The input for EmployeeMethod4 is streamed.	<input type="radio"/>	<input type="radio"/>
The output for EmployeeMethod4 is streamed.	<input type="radio"/>	<input type="radio"/>

**Answer:**

Statement	Yes	No
The input for EmployeeMethod3 is streamed.	<input type="radio"/>	<input checked="" type="radio"/>
The output for EmployeeMethod3 is streamed.	<input checked="" type="radio"/>	<input type="radio"/>
The input for EmployeeMethod4 is streamed.	<input type="radio"/>	<input checked="" type="radio"/>
The output for EmployeeMethod4 is streamed.	<input type="radio"/>	<input checked="" type="radio"/>

To enable streaming, define the OperationContract appropriately and enable streaming at the transport level.

To stream data, the OperationContract for the service must satisfy two requirements:

References: <https://docs.microsoft.com/en-us/dotnet/framework/wcf/feature-details/how-to-enable-streaming>

## NO.10 DRAG DROP

You are developing a WCF service.

You need to implement transport security by using NTLM authentication and NetTcpBindings.

Which configuration values should you use? (To answer, drag the appropriate configuration values to the correct location or locations in the answer area. Each configuration value may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

```

<system.serviceModel>
  <protocolMapping>
    <add scheme="https" binding="netTcpBinding" />
  </protocolMapping>
  <bindings>
    <wsHttpBinding>
      <binding>
        <security mode="Transport" />
        <transport clientCredentialType="NtLm" />
      </binding>
    </wsHttpBinding>
  </bindings>
</system.serviceModel>

```

## Answer:

```

<system.serviceModel>
  <protocolMapping>
    <add scheme="https" binding="netTcpBinding" />
  </protocolMapping>
  <bindings>
    <wsHttpBinding>
      <binding>
        <security mode="Transport" />
        <transport clientCredentialType="NtLm" />
      </binding>
    </wsHttpBinding>
  </bindings>
</system.serviceModel>

```

## NO.11 DRAG DROP

You are developing a .NET application that uses the HttpClient type to access an ASP.NET Web API application.

You need to add a header to ensure that data is returned as XML.

You have the following code:

```
HttpClient client = new HttpClient ();
Client.DefaultRequestHeaders.
    Add("Target 1", "Target 2");
```

Which segments should you include in Target 1 and Target 2 to complete the code? (To answer, drag the appropriate code segments to the correct targets in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

## Code Segments

ContentType

Accept

AcceptEncoding

application/xhtml+xml

application/xml

application/soap+xml

## Answer Area

Target 1: Code Segment

Target 2: Code Segment

**Answer:**

## Code Segments

ContentType

AcceptEncoding

application/xhtml+xml

application/soap+xml

## Answer Area

Target 1: Accept

Target 2: application/xml

References: <http://codecaster.nl/blog/2015/11/webclient-httpwebrequest-httpclient-perform-web->

[requests-net/#headers](#)

## NO.12 DRAG DROP

You are developing an ASP.NET Web API action method.

The action method must return the following JSON in the message body.

{"Name": "Fabrikam", "VendorId" :9823, Items": ["Dogs", "Cats"] }>

You need to return an anonymous object that is serialized to JSON.

What should you do? (To answer, drag the appropriate code segments to the correct location or locations in the answer area. Each code segment may be used once, more than once, or not at all.)

You may need to drag the split bar between panes or scroll to view content.)

```

Answer Area

public object Get()
{
    {
        Name = 
        Items = 
    };
}

```

### Answer:

Box 1: return new List<string>

Box 2: "Fabrikam", VendorNumber=9823,

Box 3: new list<string>{"Dogs", "Cats"}

## NO.13 DRAG DROP

You are developing an ASP.NET MVC Web API application.

The method names of the Web API must match naming guidelines for RESTful services.

You need to create methods to support standard insert, select, update, and delete operations in an HTTP service.

What should you do? (To answer, drag the appropriate HTTP methods to the correct row in the table in the answer area. Each HTTP method may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

## Answer Area

GET

POST

INSERT

DELETE

CREATE

READ

UPDATE

ADD

PUT

Action	HTTP method	Relative URI
Retrieve a list of all customers		/api/customers
Retrieve a customer by id		/api/customers/ <i>id</i>
Retrieve a customer by category		/api/customer/?category= <i>category</i>
Create a new customer		/api/customers
Update a customer		/api/customers/ <i>id</i>
Remove a customer		/api/customers/ <i>id</i>

**Answer:**

Action	HTTP method	Relative URI
Retrieve a list of all customers	GET	/api/customers
Retrieve a customer by id	GET	/api/customers/ <i>id</i>
Retrieve a customer by category	GET	/api/customer/?category= <i>category</i>
Create a new customer	POST	/api/customers
Update a customer	PUT	/api/customers/ <i>id</i>
Remove a customer	DELETE	/api/customers/ <i>id</i>

**NO.14 DRAG DROP**

You need to configure settings to identify regional outages.

Which values should you use? To answer, drag the appropriate values to the correct settings. Each value may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

### Values

3	5
10	20

### Answer Area

#### Setting

Probing Interval

#### Value

Value

Tolerated Number of Failures

Value

**Answer:**

### Values

5
20

### Answer Area

#### Setting

Probing Interval

#### Value

10

Tolerated Number of Failures

3

Box 1, Probing interval: 10

Probing Interval. This value specifies how often an endpoint is checked for its health from a Traffic Manager probing agent. You can specify two values here: 30 seconds (normal probing) and 10 seconds (fast probing). If no values are provided, the profile sets to a default value of 30 seconds.

Box 2: Tolerated Number of Failures: 3

Tolerated Number of Failures. This value specifies how many failures a Traffic Manager probing agent tolerates before marking that endpoint as unhealthy. Its value can range between 0 and 9. A value of 0 means a single monitoring failure can cause that endpoint to be marked as unhealthy. If no value is specified, it uses the default value of 3.

Scenario: Regional access to the Event Service API

Data for partners in Germany and Brazil must be served from Azure datacenters in their respective geographies unless there is a regional Azure outage. All other partners must use the US West Azure datacenter.

The solution will be highly available. You define regional Azure outages as periods of 60 seconds or more where the Event Service is not available.

References: <https://docs.microsoft.com/en-us/azure/traffic-manager/traffic-manager-monitoring>

**NO.15** Note: This question is part of a series of questions that present the same scenario. Each

question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have a web application in a Docker container image. You set the tag for the image as myApp. You plan to deploy the application to Azure Container Services.

You run the following commands. All commands complete successfully.

```
az acr create --resource-group myResourceGroup --name myRegistry --sku Basic  
az acr login --name myRegistry
```

You need to ensure that the image can be run on an Azure Container Service cluster.

Solution: You run the following commands:

```
docker tag myapp myregistry.azurecr.io/samples/myapp  
docker pull myregistry.azurecr.io/samples/myapp
```

Does the solution meet the goal?

A. Yes

B. No

**Answer:** B

Explanation:

You need the push the image into your private registry, not pull it.

References: <https://medium.com/@pjbgf/azure-kubernetes-service-aks-pulling-private-container-images-from-azure-container-registry-acr-9c3e0a0a13f2>

**NO.16** Historical flight information data will be stored in Windows Azure Table Storage using the FlightInfo class as the table entity.

There are millions of entries in the table. Queries for historical flight information specify a set of airlines to search and whether the query should return only late flights. Results should be ordered by flight name.

You need to specify which properties of the FlightInfo class should be used at the partition and row keys to ensure that query results are returned as quickly as possible.

What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

A. Use the WasLate property as the row key.

B. Use the Airline property as the row key.

C. Use the WasLate property as the partition key

D. Use the Arrival property as the row key.

E. Use the Airline property as the partition key.

F. Use the Flight property as the row key.

**Answer:** BF

**NO.17 DRAG DROP**

You need to configure the Windows Azure service definition to enable Consolidated Messenger to upload files.

What should you do? (To answer, drag the appropriate configuration items to the correct location or locations. Each configuration item may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

**Answer Area**

http  
tcp  
https  
InternalEndpoint  
InputEndpoint  
80  
22  
3389

```

<Binding name="Website" endpointName="Website" />
<Binding name="Transfer" endpointName="Transfer" />
</Bindings>
</Site>
</Sites>
<Endpoints>

< InputEndpoint name="Website"
    protocol=" http "
    port=" 80 "
  >/>

< InputEndpoint name="Transfer"
    protocol=" tcp "
    port=" 22 "
  >/>

</Endpoints>
</WebRole>

```

**Answer:**

```

<Binding name="Website" endpointName="Website" />
<Binding name="Transfer" endpointName="Transfer" />
</Bindings>
</Site>
</Sites>
<Endpoints>

< InputEndpoint name="Website"
    protocol=" http "
    port=" 80 "
  >/>

< InputEndpoint name="Transfer"
    protocol=" tcp "
    port=" 22 "
  >/>

</Endpoints>
</WebRole>

```

**NO.18 DRAG DROP**

You are developing a web application by using Microsoft ASP.NET MVC.

The web application will show a list of cars and their associated prices. The list can be filtered by car model by using a drop-down list. Access to the web application will be anonymous.

The car model list is stored as an .xml file on the application server. The car prices list is stored on a SQL Server server.

You need to recommend a caching strategy for each scenario:

If a user selects a car model from the drop-down list, and then closes the browser, the same model must be selected automatically when the user reopens the web application from the same browser.

If the car model list is updated, the drop-down list must be refreshed upon the next page reload.

If the car prices list is updated, the prices list must be refreshed upon the next page reload.

What should you recommend? To answer, drag the appropriate caching strategies to the correct scenarios. Each caching strategy may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

## Caching Strategies

ApplicationCache

CacheDependency

Cookie

MemoryCache

OutputCache

SqlCacheDependency

ViewState

## Answer Area

If a user selects a car model from the drop-down list, and then closes the browser, the same model must be selected automatically when the user reopens the web application from the same browser.

Caching strategy

If the car model list is updated, the drop-down list must be refreshed upon the next page reload.

Caching strategy

If the car prices list is updated, the prices list must be refreshed upon the next page reload.

Caching strategy

## Answer:

### Answer Area

If a user selects a car model from the drop-down list, and then closes the browser, the same model must be selected automatically when the user reopens the web application from the same browser.

OutputCache

If the car model list is updated, the drop-down list must be refreshed upon the next page reload.

CacheDependency

If the car prices list is updated, the prices list must be refreshed upon the next page reload.

SqlCacheDependency

Box 1: outputCache

outputCache declaratively controls the output caching policies of an ASP.NET page or a user control contained in a page.

**Box 2: CacheDependency**

CacheDependency establishes a dependency relationship between an item stored in an ASP.NET application's Cache object and a file, cache key, an array of either, or another CacheDependency object.

The CacheDependency class monitors the dependency relationships so that when any of them changes, the cached item will be automatically removed.

**Box 3: SqlCacheDependency**

SQL cache dependency enables you to cache pages that are dependent on data from SQL Server tables.

You can configure SQL Server and ASP.NET to cache page requests, reducing server workload, until the data on which the page depends has been updated in SQL Server. SQL cache dependency is useful for data such as product catalogs or customer registration information that remains comparatively static.

**outputCache CacheDependency****References:**

[https://msdn.microsoft.com/en-us/library/system.web.caching.cachedependency\(v=vs.110\).aspx](https://msdn.microsoft.com/en-us/library/system.web.caching.cachedependency(v=vs.110).aspx)

**Case Study Flight Information Background** You are developing a flight information consolidation service. The service retrieves flight information from a number of sources and combines them into a single data set. The consolidated flight information is stored in a SQL Server database. Customers can query and retrieve the data by using a REST API provided by the service.

The service also offers access to historical flight information. The historical flight information can be filtered and queried in an ad hoc manner.

The service runs on a Windows Azure Web Role. SSL is not used.

**Business Requirements**

\*A new data source for historical flight information

is being developed by a contractor located on  
another continent.

\*If a time zone is not specified, then it should be  
interpreted as Coordinated Universal Time (UTC).

\*When you upgrade a service from a staging  
deployment to a production deployment, the time  
that the service is unavailable must be minimized.

\*The default port must be used for HTTP.

**Technical Requirements**

The existing sources of flight information and the mechanism of exchange are listed below.

\*Blue Yonder Airlines provides flight information in  
an XML file.

\*Consolidated

Messenger provides flight  
information in a Microsoft Access database that is  
uploaded every 12 hours to the service using SFTP.

The company uses port 22 for SFTP.

\*Margie's Travel provides and consumes flight  
information using serialized ADO.NET DataSets.

Data is periodically synced between the service and  
Margie's Travel.

\*Trey Research provides data from multiple sources serialized in proprietary binary formats. The data must be read by using .NET assemblies provided by Trey Research. The assemblies use a common set of dependencies. The current version of the Trey Research assemblies is 1.2.0.0. All assemblies provided by Trey Research are signed with a key pair contained in a file named Trey.snk, which Trey Research also supplies.

\*The application specification requires that any third-party assemblies must have strong names.

### Application Structure

#### **FlightInfoContext.cs**

```
public class FlightInfoContext : DbContext
{
    public DbSet<FlightInfo> FlightInfo { get; set; }

    public override int SaveChanges()
    {
        return base.SaveChanges();
    }

    private bool IsTransient(int ex)
    {
        var errors = new[] { 10053, 10054, 64 };
        return errors.Contains(ex);
    }
}
```

#### **FlightDataController.cs**

```
public class FlightDataController : ApiController
{
    FlightInfoContext _Context;

    public FlightDataController()
    {
        _Context = new FlightInfoContext();
    }

    [HttpGet]
    public IEnumerable<FlightInfo> GetFlightInfo()
    {
        return _Context.FlightInfo.Select(x => x).AsEnumerable();
    }

    private IEnumerable<HistoricalFlightInfo> LoadHistorical()
    {
        return HistoricalDataLoader.LoadHistoricalFlights();
    }
}
```

**NO.19** You are planning to migrate websites from IIS 6 to IIS 7.5.

You do not have access to SSH or a VPN.

You need to select a deployment tool to securely migrate the websites.

Which tool should you use?

- A.** RoboCopy
- B.** Web Deploy
- C.** Microsoft command-line FTP
- D.** xCopy

**Answer:** B

**NO.20** You are designing an ASP.NET Web API application.

You need to select an HTTP verb to allow blog administrators to remove a comment.

Which HTTP verb should you use?

- A.** PUT
- B.** DELETE
- C.** POST
- D.** GET

**Answer:** B

**NO.21 DRAG DROP**

You are developing a self-hosted WCF service that returns stock market information.

The service must be discoverable by any client application.

You need to build the service host.

How should you build the host? (To answer, drag the appropriate code segments to the correct location or locations in the answer area. Each code segment may be used once, more than once, or not at all.)

You may need to drag the split bar between panes or scroll to view content.)

UdpDiscoveryEndpoint

DiscoveryEndpoint

ServiceBehaviorAttribute

ServiceDiscoveryBehavior

ServiceHost

**Answer Area**

```

static void Main(string[] args)
{
    Uri StockURI = new Uri("http://localhost:8733/StockTicker");
    var mytype = typeof(StockTickerService);

    using (host = new ServiceHost(mytype, StockURI))
    {
        host.AddServiceEndpoint(typeof(IStockTickerService),
            new WSHttpBinding(), "");

        host.Description.Behaviors.Add(new ServiceDiscoveryBehavior());
        host.AddServiceEndpoint(new ServiceDiscoveryEndpoint());
    }

    host.Open();
    Console.ReadLine();
    host.Close();
}

```

**Answer:**

```

static void Main(string[] args)
{
    Uri StockURI = new Uri("http://localhost:8733/StockTicker");
    var mytype = typeof(StockTickerService);

    using ( ServiceHost host
        = new ServiceHost (mytype, StockURI))
    {
        host.AddServiceEndpoint(typeof(IStockTickerService),
            new WSHttpBinding(), "");

        host.Description.Behaviors.Add(new ServiceDiscoveryBehavior());
        host.AddServiceEndpoint(new UdpDiscoveryEndpoint());
        host.Open();
        Console.ReadLine();
        host.Close();
    }
}

```

**NO.22 DRAG DROP**

Historical flight information data will be stored in Windows Azure Table Storage using the FlightInfo class as the table entity.

There are millions of entries in the table. Queries for historical flight information specify a set of airlines to search and whether the query should return only late flights. Results should be ordered by flight name.

You need to specify which properties of the FlightInfo class should be used at the partition and row keys to ensure that query results are returned as quickly as possible.

What should you do? (To answer, drag the appropriate properties to the correct location or locations in the answer area. Each property may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

**Answer Area**

<b>Airline</b>	Use the <input type="text"/> property as the partition key.
<b>WasLate</b>	Use the <input type="text"/> property as the row key.
<b>Flight</b>	
<b>Arrival</b>	

**Answer:**

Airline

Flight

**NO.23 DRAG DROP**

You are developing an ASP.NET MVC Web API application.

The methods of the Web API must return details about the result of the operation. You need to create a method to add products.

You have the following code:

```

public Target 1 PostProduct (Target 2 item)
{
    item = repository.Add(item);
    var response = new Target 3 <Product>(
        item, Target 4 .Created);
    string uri = Url.Route("DefaultApi", new { id = item.Id});
    response.Headers Target 5
    return response;
}

```

Which code segments should you include in Target 1, Target 2, Target 3, Target 4 and Target 5 to complete the code? {To answer, drag the appropriate code segments to the correct targets in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

Code Segments	Answer Area	
<code>HttpResponseMessage</code>	Target 1:	Code Segment
<code>HttpStatusCode</code>	Target 2:	Code Segment
<code>Product</code>	Target 3:	Code Segment
<code>.Location = new Uri(uri);</code>	Target 4:	Code Segment
<code>.Add(new Uri(uri));</code>	Target 5:	Code Segment

### Answer:

Target 1:	<code>HttpResponseMessage</code>
Target 2:	<code>Product</code>
Target 3:	<code>HttpResponseMessage</code>
Target 4:	<code>HttpStatusCode</code>
Target 5:	<code>.Location = new Uri(uri);</code>

### NO.24 DRAG DROP

You are developing a WCF Data Services service in Visual Studio 2012 to display movie information from a SQL Server database that changes every 24 hours. The service is defined in the following class.

```

public class MovieService : DataService<MovieEntities>
{
    public static void InitializeService(DataServiceConfiguration config)
    {
        config.SetEntitySetAccessRule("Movies", EntitySetRights.AllRead);
        config.DataServiceBehavior.MaxProtocolVersion = DataServiceProtocolVersion.V2;
    }
}

```

The application contains the following Entity Framework model.



The service must only return data for movies that are currently in theaters.

You need to add a method to the MovieService class to filter the data.

a.

How should you build the method? (To answer, drag the appropriate code segments to the correct location or locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

Answer Area

ChangeInterceptor

QueryInterceptor

"Movies"

"MovieEntities"

Expression

Filter

```
public class MovieService : DataService<MovieEntities>
{
    public static void InitializeService(DataServiceConfiguration config)
    {
        config.SetEntitySetAccessRule("Movies", EntitySetRights.AllRead);
        config.DataServiceBehavior.MaxProtocolVersion =
            DataServiceProtocolVersion.V2;
    }

    [  (  ) ]
    public  <Func<Movie, bool>> ApplyTheaterFilter()
    {
        return movie => movie.IsInTheaters == true;
    }
}
```

**Answer:**

```

public class MovieService : DataService<MovieEntities>
{
    public static void InitializeService(DataServiceConfiguration config)
    {
        config.SetEntitySetAccessRule("Movies", EntitySetRights.AllRead);
        config.DataServiceBehavior.MaxProtocolVersion =
            DataServiceProtocolVersion.V2;
    }

    [QueryInterceptor("Movies")]
    public Expression<Func<Movie, bool>> ApplyTheaterFilter()
    {
        return movie => movie.IsInTheaters == true;
    }
}

```

**NO.25 DRAG DROP**

You are developing a web application that uses the Entity Framework.

You plan to use the table-per-type mapping strategy to store the following data.

```

public class Product
{
    public int ProductId { get; set; }
    public string Name { get; set; }
    public decimal UnitPrice { get; set; }
}

public class DiscontinuedProduct : Product
{
    public DateTime DiscontinuedDate { get; set; }
}

```

You need to implement a mapping strategy that will store the data.

How should you complete the code? To answer, drag the appropriate methods to the correct locations.

Each method may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

**Methods**

MapHierarchy  
modelBuilder  
OnInit  
OnModelCreating  
ToList  
...  
ToTable

**Answer area**

```
protected override void OnModelCreating(DbModelBuilder modelBuilder)
{
    modelBuilder.Entity<Product>()
        .ToTable("dbo.Products");

    modelBuilder.Entity<DiscontinuedProduct>()
        .ToTable("dbo.DiscontinuedProducts");
}
```

**Answer:****Methods**

MapHierarchy  
modelBuilder  
OnInit  
OnModelCreating  
ToList  
...  
ToTable

**Answer area**

```
protected override void OnModelCreating(DbModelBuilder modelBuilder)
{
    modelBuilder.Entity<Product>()
        .ToTable("dbo.Products");

    modelBuilder.Entity<DiscontinuedProduct>()
        .ToTable("dbo.DiscontinuedProducts");
}
```

**References:**

<https://msdn.microsoft.com/en-us/library/system.data.entity.dbcontext.onmodelcreating%28v=vs.113%29.aspx>  
[https://msdn.microsoft.com/en-us/library/jj591617\(v=vs.113\).aspx#Model Used in Samples](https://msdn.microsoft.com/en-us/library/jj591617(v=vs.113).aspx#Model Used in Samples)

**NO.26** You are adding a new REST service endpoint to the FlightDataController controller that returns the total number of seats for each airline.

You need to write a LINQ to Entities query to extract the required data.

Which code segment should you use?

C A. var query = from flight in \_Context.FlightInfo  
     group flight by flight.Seats into agg  
     let airline = agg.First()  
     select new  
     {  
         TotalSeats = agg.Key,  
         Airline = airline,  
     };

C B. var query = from flight1 in \_Context.FlightInfo  
     from flight2 in \_Context.FlightInfo  
     where flight1.Airline == flight2.Airline  
     select new  
     {  
         Airline = flight1.Airline,  
         TotalSeats = Math.BigMul(flight1.Seats, flight2.Seats),  
     };

C C. var query = from flight in \_Context.FlightInfo  
     from airline in flight.Airline  
     group airline by airline into agg  
     select new  
     {  
         Airline = agg.Key,  
         TotalSeats = agg.Sum(x => Convert.ToInt32(x)),  
     };

C D. var query = from flight in \_Context.FlightInfo  
     group flight by flight.Airline into agg  
     select new  
     {  
         Airline = agg.Key,  
         TotalSeats = agg.Sum(x => x.Seats),  
     };

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Answer:** D

## NO.27 DRAG DROP

You are developing a RESTful application by using ASP.NET MVC. The application is a pet management system and implements the following method in a controller for retrieving pet data.

```
public Pet Get(int id)
{
    return new PetRepository().GetPetById(id);
}
```

The method must only accept JSON data using the standard MIME type.

You need to implement a controller that saves pet data and return a properly formatted HTTP/1.1 protocol response.

You have the following code:

```

public Target 1 Post ()
{
    if (Request.Content.Headers.ContentType.MediaType !=

        Target 2)
    {
        throw new HttpResponseMessage(JsonMessage);
    }
    Pet pet = new Pet ();
    var response = new Target 3 (pet,
        HttpStatusCode.Created);
    var relativePath = Target 4 ;
    response.Headers.Location = new Uri (Request.RequestUri,
        relativePath);
    return response;
}

```

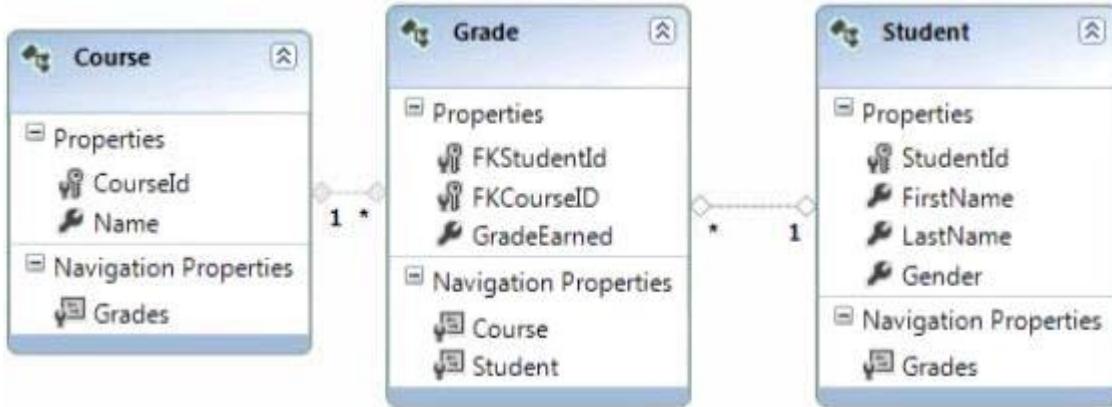
Which code segments should you include in Target 1, Target 2, Target 3 and Target 4 to complete the code? {To answer, drag the appropriate code segments to the correct targets in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

Code Segments	Answer Area
ActionResult	Target 1: <input type="text"/>
HttpResponseMessage<Pet>	Target 2: <input type="text"/>
HttpMessageContent	Target 3: <input type="text"/>
"/api/get/pet/" + pet.Id	Target 4: <input type="text"/>
"/pet/get/" + pet.Id	
"/api/pet/" + pet.Id	
"text/json"	
"json"	
"application/json"	

### Answer:

- |           |   |
|-----------|---|
| Target 1: | <input type="text"/> HttpResponseMessage<Pet> |
| Target 2: | <input type="text"/> "application/json"       |
| Target 3: | <input type="text"/> HttpResponseMessage<Pet> |
| Target 4: | <input type="text"/> "/api/pet/" + pet.Id     |

**NO.28** You are developing an application in Visual Studio 2012 to display student information. The application contains the following Entity Framework model.



The application contains a WCF data service named DirectoryService.svc.

You need to create a query expression to display all of the grades for students whose first name is "John".

How should you build the expression?

- A. `http://localhost:54946/DirectoryService.svc/Students?$filter=FirstName eq 'John' &$expand=Grades`
- B. `http://localhost:54946/DirectoryService.svc/Students?$filter=FirstName eq 'John'/Grades`
- C. `http://localhost:54946/DirectoryService.svc/Students?$filter=FirstName = 'John' &$expand=Grades`
- D. `http://localhost:54946/DirectoryService.svc/Grades/Students?$filter=FirstName eq 'John'`

**Answer:** A

### NO.29 DRAG DROP

You are developing an ASP.NET Web API application that will be consumed by a web browser via a composite application that is served from another web domain.

You need to configure the Web API.

What should you do? (To answer, drag the appropriate XML elements to the correct location or locations in the answer area. Each XML element may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

Access-Control-Allow-Origin  
 Access-Control-Allow-Headers  
 Access-Control-Allow-Methods  
 Access-Control-Request-Method  
 Access-Control-Request-Headers  
 \*  
 POST, GET  
 Content-Type

**Answer Area**

```
<httpProtocol>
  <customHeaders>
    <add name="Access-Control-Allow-Origin"
      value="*" />
    <add name="*" />
      value="PUT, DELETE"/>
    <add name="*" />
      value="*" />
  </customHeaders>
</httpProtocol>
```

**Answer:**

Access-Control-Allow-Origin  
 Access-Control-Request-Method  
 Access-Control-Request-Headers  
 POST, GET

**Answer Area**

```
<httpProtocol>
  <customHeaders>
    <add name="Access-Control-Allow-Origin"
      value="*" />
    <add name="Access-Control-Allow-Methods"
      value="PUT, DELETE"/>
    <add name="Access-Control-Allow-Headers"
      value="Content-Type" />
  </customHeaders>
</httpProtocol>
```

**NO.30** You are developing an ASP.NET Core web application by using an Entity Framework code-first approach.

The application uses a SQLite database.

You make changes to the classes in the model. You must apply the changes to the database.

You need to suggest an approach to reliably handle the Entity Framework migrations.

Which three actions should you perform? Each correct answer presents a part of the solution.

NOTE: Each correct selection is worth one point.

- A. Modify the scaffolded migration script to drop the modified tables.
- B. Run the following command: dotnet ef database update
- C. Modify the scaffolded migration script to create new tables with the migration changes.
- D. Modify the scaffolded migration script to drop the existing database and create the new database.
- E. Run the following command: dotnet ef migrations add

**Answer:** C,D,E

Explanation:

E: Run dotnet ef migrations add InitialCreate to scaffold a migration and create the initial set of tables for the model.

C: You can workaround some of the SQLite limitations by manually writing code in your migrations to perform a table rebuild. A table rebuild involves renaming the existing table, creating a new table, copying data to the new table, and dropping the old table.

D: SQLite does not support all migrations (schema changes) due to limitations in SQLite. For new development, consider dropping the database and creating a new one rather than using migrations when your model changes.

References:

<https://docs.microsoft.com/en-us/ef/core/get-started/netcore/new-db-sqlite>

<https://docs.microsoft.com/en-us/ef/core/providers/sqlite/limitations>

**NO.31** Transformed historical flight information provided by the RemoteDataStream() method must be written to the response stream as a series of XML elements named Flight within a root element named Flights.

Each Flight element has a child element named FlightName that contains the flight name that starts with the two-letter airline prefix.

You need to implement the StreamHistoricalFlights() method so that it minimizes the amount of memory allocated.

Which code segment should you use as the body of the StreamHistoricalFlights() method in the HistoricalDataLoader.es file?

C A. responseWriter.WriteStartElement("Flights");  
 var flights = RemoteDataStream()  
 .OrderBy(x => GetAirline(x.Element("FlightName")));  
 var filteredFlights = flights  
 .SkipWhile(x => GetAirline(x.Element("FlightName")) != airline);  
 foreach (var f in filteredFlights)  
 {  
 var flight = ConvertToHistoricalFlight(f);  
 flight.WriteTo(responseWriter);  
 }  
 responseWriter.WriteEndElement();

C B. responseWriter.WriteStartElement("Flights");  
 var flights = RemoteDataStream().Select(x =>  
 {  
 if (GetAirline(x) == airline)  
 {  
 return ConvertToHistoricalFlight(x);  
 }  
 return null;  
});  
flights.TakeWhile(x =>  
{  
x.WriteTo(responseWriter);  
return x != null;  
});  
responseWriter.WriteEndElement();

C C. var data = RemoteDataStream().ToDictionary(x =>  
GetAirline(x.Element("FlightName")),  
x => new XStreamingElement("Flights", ConvertToHistoricalFlight(x).Descendants()));  
data[airline].WriteTo(responseWriter);

C D. var flights = new XStreamingElement("Flights",  
from flight in RemoteDataStream()  
where GetAirline(flight.Element("FlightName")) == airline  
select ConvertToHistoricalFlight(flight));  
flights.WriteTo(responseWriter);

- A.** Option A
- B.** Option B
- C.** Option C
- D.** Option D

**Answer:** D

<http://msdn.microsoft.com/en-us/library/system.xml.linq.xstreamingelement.aspx> and  
<http://msdn.microsoft.com/en-us/library/bb551307.aspx>

## NO.32 HOTSPOT

You create the following Windows Communication Foundation (WCF) service.

```
namespace WcfEmployeeService
{
    [ServiceContract]
    public interface IEmployeeservice
    { ... }

    public class EmployeeService : IEmployeeservice
    { ... }
}
```

The service is accessible at the URL of `http://Service1/EmployeeService.svc`. You need to add the endpoint for the WCF service to the Web.config file. How should you complete the markup? To answer, select the appropriate options in the answer area.

### Answer Area

<code>&lt;endpoint</code>	<code>address</code>	=	<code>"http://Service1"</code>
	<code>binding</code>		<code>"http://Service1/EmployeeService.svc"</code>
	<code>bindingConfiguration</code>		<code>"NetTcpBinding"</code>
	<code>listenUri</code>		<code>"WSHttpBinding"</code>

<code>contract=</code>	<code>/&gt;</code>
	<code>"WcfEmployeeService"</code>
	<code>"WcfEmployeeService.EmployeeService"</code>
	<code>"WcfEmployeeService.IEmployeeService"</code>

**Answer:**

### Answer Area

<code>&lt;endpoint</code>	<code>address</code>	=	<code>"http://Service1"</code>
	<code>binding</code>		<code>"http://Service1/EmployeeService.svc"</code>
	<code>bindingConfiguration</code>		<code>"NetTcpBinding"</code>
	<code>listenUri</code>		<code>"WSHttpBinding"</code>

<code>contract=</code>	<code>/&gt;</code>
	<code>"WcfEmployeeService"</code>
	<code>"WcfEmployeeService.EmployeeService"</code>
	<code>"WcfEmployeeService.IEmployeeService"</code>

Box 1: address

Box 2: "http://Service1/EmployeeService.svc"

In WCF, an EndpointAddress models an endpoint reference (EPR) as defined in the WS-Addressing standard.

The address URI for most transports has four parts. For example, this URI,

`"http://www.fabrikam.com:322/mathservice.svc/secureEndpoint"` has the following four parts:

Scheme: http:

Machine: www.fabrikam.com

(Optional) Port: 322

Path: /mathservice.svc/secureEndpoint

Box 3:

The names and namespaces of the .NET types in the definition of contracts and operations are significant when contracts are converted into WSDL and when contract messages are created and sent.

Therefore, it is strongly recommended that service contract names and namespaces are explicitly set

using the Name and Namespace properties of all supporting contract attributes such as the ServiceContractAttribute, OperationContractAttribute, DataContractAttribute, DataMemberAttribute, and other contract attributes.

References: <https://docs.microsoft.com/en-us/dotnet/framework/wcf/specifying-an-endpoint-address>

<https://docs.microsoft.com/en-us/dotnet/framework/wcf/designing-service-contracts>

**NO.33** You need to load flight information provided by Consolidated Messenger.

Which should you use?

- A.** SQL Server Data Transformation Services (DTS)
- B.** EntityTransaction and EntityCommand
- C.** Office Open XML
- D.** OleDbConnection and OleDbDataReader

**Answer:** D

**NO.34** Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You deploy an ASP.NET Core web application to Azure App Services. You are using Azure Event Hubs to collect the telemetry data for the application.

You need to configure Event Hubs to automatically deliver the telemetry data stream to a persistent data store.

Solution: Configure Azure Event Hubs Capture to deliver data to Azure SQL Database.

Does the solution meet the goal?

- A.** Yes
- B.** No

**Answer:** B

Explanation:

Use Azure Blob storage to store the telemetry data.

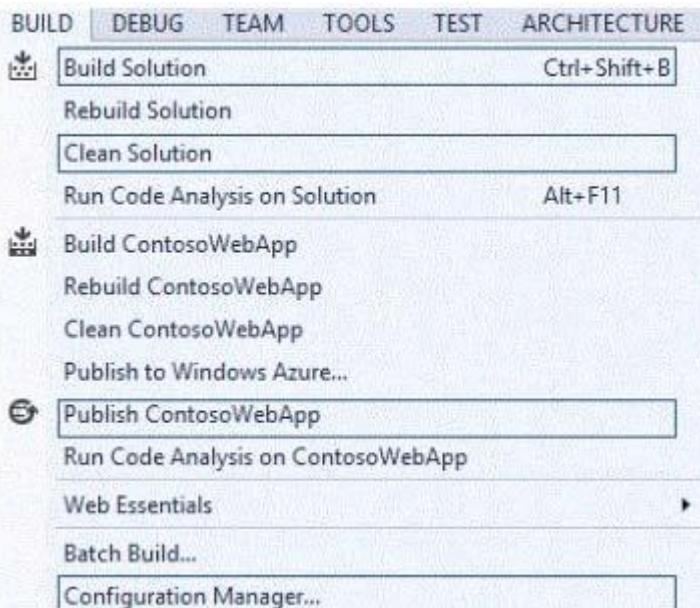
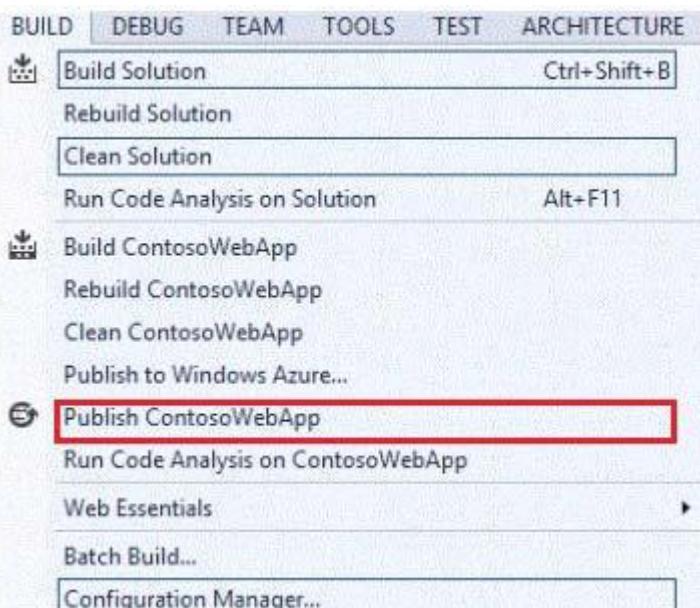
References: <https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-capture-overview>

**NO.35 HOTSPOT**

You are developing an ASP.NET MVC application named ContosoWebApp. You are ready to deploy the application to your production web server.

You need to import the publishing profile.

Which menu item should you use? (To answer, select the appropriate menu item in the answer area).

**Answer:****NO.36** You create a web application.

You deploy the application by using a Web Deploy Package.

You need to identify which setting will be created automatically in the SetParameters.xml file during the package generation.

Which three settings should you identify? Each correct answer presents part of the solution.

- A.** the connection strings in the Web.config file
- B.** the destination IIS web application path and name
- C.** the service endpoints of the Web.config file
- D.** the connection strings of any databases you add to the Package/Publish SQL tab on the Properties page of the project
- E.** the application settings of the Web.config file

**Answer:** A,B,D

Explanation:

References: <https://docs.microsoft.com/en-us/aspnet/web-forms/overview/deployment/web-deployment-in-the-enterprise/configuring-parameters-for-web-package-deployment>

## NO.37 HOTSPOT

You are developing a WCF service.

The service must be interoperable with ASP.NET web service clients. In addition, it must have a time-out of three hours.

You need to configure the service to meet the requirements.

You have the following markup:

```
<?xml version="1.0" encoding="utf-8" ?>
<configuration>
  <system.serviceModel>
    <services>
      <service name="MyNamespace.Orderservice">
        <endpoint address=""
                  contract="MyNamespace.IOrderservice"
                  binding="Target 1"
                  bindingConfiguration="Target 2">
          </endpoint>
        </service>
      </services>
    <bindings>
      <Target 3>
        <binding name="Target 4"
                Target 5="Target 6"/>
      </Target 7>
    </bindings>
  </system.serviceModel>
</configuration>
```

Which markup segments should you include in Target 1, Target 2, Target 3, Target 4, Target 5, Target 6 and Target 7 to complete the markup? (To answer, select the appropriate markup segment from each drop-down list in the answer area.)

**Answer Area****Target 1:**

▼

basicHttpBinding
closeTimeout
timeout
wsHttpBinding

**Target 2:**

▼

basicHttpBinding
closeTimeout
timeout
wsHttpBinding

**Target 3:**

▼

basicHttpBinding
closeTimeout
timeout
wsHttpBinding

**Target 4:**

▼

basicHttpBinding
closeTimeout
timeout
wsHttpBinding

**Target 5:**

▼

basicHttpBinding
closeTimeout
timeout
wsHttpBinding

**Target 6:**

▼

03:00:00
00:03:00
00:00:03

**Target 7:**

▼

basicHttpBinding
closeTimeout
timeout
wsHttpBinding

**Answer:**

## Answer Area

Target 1:

basicHttpBinding  
closeTimeout  
timeout  
wsHttpBinding

Target 2:

basicHttpBinding  
closeTimeout  
timeout  
wsHttpBinding

Target 3:

basicHttpBinding  
closeTimeout  
timeout  
wsHttpBinding

Target 4:

basicHttpBinding  
closeTimeout  
timeout  
wsHttpBinding

Target 5:

basicHttpBinding  
closeTimeout  
timeout  
wsHttpBinding

Target 6:

03:00:00  
00:03:00  
00:00:03

Target 7:

basicHttpBinding  
closeTimeout  
timeout  
wsHttpBinding

**NO.38** Errors occasionally occur when saving data using the FlightInfoContext ADO.NET Entity Framework context. Updates to the data are being lost when an error occurs.

You need to ensure that data is still saved when an error occurs by retrying the operation. No more than five retries should be performed.

Which code segment should you use as the body of the SaveChanges() method in the FlightInfoContext.es file?

---

C A. for (var i = 0; i < 5; i++)  
{  
 try  
 {  
 return base.SaveChanges();  
 }  
 catch (SqlException ex)  
 {  
 if (IsTransient(ex.Number))  
 {  
 continue;  
 }  
 }  
}  
return base.SaveChanges();

C B. var exception = new EntitySqlException();  
while (exception.Data != 0 && exception.Data.Count < 5)  
{  
 try  
 {  
 return base.SaveChanges();  
 }  
 catch (EntitySqlException ex)  
 {  
 if (IsTransient(ex.HResult))  
 {  
 exception = ex;  
 }  
 }  
}  
return base.SaveChanges();

```
C C. for (var i = 0; i < 5; i++)
{
    try
    {
        return base.SaveChanges();
    }
    catch (SqlException ex)
    {
        if (IsTransient(ex.Number))
        {
            break;
        }
    }
}
return base.SaveChanges();

C D. for (var i = 0; i < 5; i++)
{
    try
    {
        return base.SaveChanges();
    }
    catch (SqlException ex)
    {
        if (!IsTransient(ex.Number))
        {
            continue;
        }
    }
}
return base.SaveChanges();
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Answer:** A

**NO.39** You are developing an ASP.NET Core web application by using an Entity Framework code-first approach.

The application uses an Azure SQL Database. The code-first migration is configured to run as part of a continuous integration build.

You must add an Azure MySQL Database. This database must use the same schema as the existing Azure SQL Database instance.

You need to configure the migration to ensure that the existing TFS build definition remains unchanged.

What are two possible ways to achieve this goal? Each correct answer presents a complete solution.

NOTE: Each correct selection is worth one point.

- A.** Use the ActiveProvider property to specify the provider to which the migration is applied.
- B.** Create a new type that derives from DbContext and override the ActiveProvider object. Then, add or apply migrations using this type.
- C.** Use the Entity Framework Core Fluent API to identify database providers.

- D.** Create a separate Migration Assembly than the one containing the DbContext and switch the active provider during build.

**Answer:** B,C

Explanation:

References:

[https://medium.com/@rc\\_dos\\_santos/how-configure-asp-net-core-web-api-project-with-mysql-database-b7a64a247a99](https://medium.com/@rc_dos_santos/how-configure-asp-net-core-web-api-project-with-mysql-database-b7a64a247a99)

## NO.40 DRAG DROP

You are developing a .NET application that uses the HttpClient type to access an ASP.NET Web API application.

You need to add a header to specify that data is returned as JSON. You have the following code:

```
HttpClient client = new HttpClient () ;
Client.DefaultRequestHeaders.
    Add("Target 1", "Target 2");
```

Which code segments should you include in Target 1 and Target 2 to complete the code? (To answer, drag the appropriate code segments to the correct targets in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content)

Code Segments	Answer Area
ContentType	Target 1: <input type="text"/>
Accept	Target 2: <input type="text"/>
AcceptEncoding	
application/xhtml+xml	
application/xml	
application/json	

**Answer:**

Target 1:	<input type="text" value="Accept"/>
Target 2:	<input type="text" value="application/json"/>

- NO.41** You are developing a WCF service that compares several data sources. The service takes a long time to complete.

The service must meet the following requirements:

The client must be able to continue processing while the service is running.

The service must initiate communication with the client application when processing is complete.

You need to choose a message pattern to meet the requirements.

Which message pattern should you choose?

- A.** One Way
- B.** Streaming
- C.** Duplex
- D.** Request/Reply

**Answer:** C

**NO.42** You have a web application that was developed by using Microsoft ASP.NET MVC. The application is deployed to an Azure web app and uses an Azure SQL Database.

From a development environment, you use Microsoft Visual Studio to change the application code, and you modify the schema of the database.

You need to deploy the changes to Azure.

Which publishing method should you use?

- A.** BACPAC
- B.** FTP
- C.** Msdeploy
- D.** Robocopy

**Answer:** A

Explanation:

You can deploy a .bacpac file to an Azure SQL Database using an Azure Resource Manager Template. .bacpac contains the schema and data necessary to deploy your database.

Note: A BACPAC file is a ZIP file with an extension of BACPAC containing the metadata and data from a SQL Server database. A BACPAC file can be stored in Azure blob storage or in local storage in an on-premises location and later imported back into Azure SQL Database or into a SQL Server on-premises installation.

References: <https://docs.microsoft.com/en-us/azure/sql-database/sql-database-export>

### **NO.43 HOTSPOT**

You are developing an application.

The application must be deployed from Team Foundation Server after a successful build is completed.

The Process tab of the Build Definition screen is shown in the exhibit. (Click the Exhibit button.)

- ▲ **1. Required**
  - ▷ Items to Build
- ▲ **2. Basic**
  - ▷ Automated Tests
  - Build Number Format
  - Clean Workspace
  - Logging Verbosity
  - Perform Code Analysis
- ▷ Source And Symbol Server Settings
- ▲ **3. Advanced**
  - ▷ Agent Settings
  - Analyze Test Impact
  - Associate Changesets and Work Items
  - Create Work Item on Failure
  - Disable Tests
  - Get Version
  - Analyze Test Impact
  - Associate Changesets and Work Items
  - Create Work Item on Failure
  - Disable Tests
  - Get Version
  - Label Sources
  - MSBuild Arguments
  - MSBuild Multi-Proc
  - MSBuild Platform
  - Private Drop Location
  - Solution Specific Build Outputs

You need to configure the automated deployment.

In which section should you define the parameters for the automated deployment? (To answer, select the appropriate section in the answer area.)

#### **Answer Area**

- ▲ **1. Required**
  - ▷ Items to Build
  - ...
- ...
- ▲ **3. Advanced**
  - ...
  - MSBuild Arguments
  - MSBuild Multi-Proc
  - MSBuild Platform
  - Private Drop Location
  - Solution Specific Build Outputs

**Answer:**

**Answer Area****1. Required**

▷ Items to Build

...

**3. Advanced**

...

**MSBuild Arguments**

MSBuild Multi-Proc

**MSBuild Platform**

Private Drop Location

Solution Specific Build Outputs

**NO.44** Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have a web application in a Docker container image. You set the tag for the image as myApp. You plan to deploy the application to Azure Container Services.

You run the following commands. All commands complete successfully.

```
az acr create --resource-group myResourceGroup --name myRegistry --sku Basic
az acr login --name myRegistry
```

You need to ensure that the image can be run on an Azure Container Service cluster.

Solution: You run the following commands:

```
docker run -d -p 5000:80 myregistry.azurecr.io/samples/myapp
docker push myregistry.azurecr.io/samples/myapp
```

Does the solution meet the goal?

**A.** Yes

**B.** No

**Answer:** B

Explanation:

First tag the image, and the push it into your private registry.

References: <https://medium.com/@pjbgf/azure-kubernetes-service-aks-pulling-private-container-images-from-azure-container-registry-acr-9c3e0a0a13f2>

**NO.45** You are developing an ASP.NET MVC application.

Applications can be deployed to remote servers only by administrators who have elevated privileges. The administrators do not have access to Visual Studio 2012.

You need to select a deployment tool to deploy the application to remote servers for testing.

Which tool should you use?

**A.** Copy Web Site Tool

**B.** One-Click Publish

**C.** Publish Web Site Tool

**D.** Web Deployment Package

**Answer:** D**NO.46 DRAG DROP**

You are developing a WCF service.

You need to implement transport security by using NTLM authentication and NetTcpBindings.

Which configuration values should you use? (To answer, drag the appropriate configuration values to the correct location or locations in the answer area. Each configuration value may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

```

<system.serviceModel>
  <protocolMapping>
    <add scheme="https" binding="netTcpBinding" />
  </protocolMapping>
  <bindings>
    <wsHttpBinding>
      <binding>
        <security mode="Transport" />
        <transport clientCredentialType="Ntlm" />
      </binding>
    </wsHttpBinding>
  </bindings>
</system.serviceModel>

```

**Answer:**

```

<system.serviceModel>
  <protocolMapping>

    <add scheme="https" binding="netTcpBinding" />

  </protocolMapping>
  <bindings>
    <wsHttpBinding>
      <binding>
        <security mode="Transport" />
        <transport clientCredentialType="Ntlm" />
      </binding>
    </wsHttpBinding>
  </bindings>
</system.serviceModel>

```

**NO.47** You are developing an ASP.NET MVC application. The application is a loan processing system that uses the ADO.NET Entity Framework against a SQL Server database. It has a controller that loads a page that displays all loans along with rate information. Lazy loading has been disabled. The Loan class is shown below.

```

public partial class Loan
{
    ...
    public string RateID { get; set; }
    ...
    public virtual Rate Rate { get; set; }
}

```

You need to return the loans and rate information in a single round trip to the database.  
Which code segment should you use?

- A. 

```

public ActionResult Index()
{
    IQueryable<Loan> loans = db.Loans;
    return View(loans.ToList());
}
```
- B. 

```

public ActionResult Index()
{
    IQueryable<Loan> loans = db.Loans;
    loans = loans.Include("Rate");
    return View(loans.ToList());
}
```
- C. 

```

public ActionResult Index()
{
    IQueryable<Loan> loans = db.Loans.Include("Loan.Rate");
    return View(loans.ToList());
}
```
- D. 

```

public ActionResult Index()
{
    IQueryable<Loan> loans = db.Loans;
    loans.Select(o => o.Rate).Load();
    return View(loans.ToList());
}
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer:** B

**NO.48** You need to ensure that computed events are processed correctly.

What should you do?

- A.** Move the WebJob to a different App Service plan.
- B.** Select a deployment slot for the WebJob.
- C.** Disable WebJobs during deployments.
- D.** Create an additional upgrade domain.

**Answer:** B

Explanation:

Scenario: An Azure WebJob named EventJob will be deployed with the Event Service Web App. The WebJob:

References: <https://stackify.com/azure-deployment-slots/>

**NO.49** You are developing an ASP.NET MVC application that reads and writes data from a SQL Server database.

You need to maintain data integrity in all situations that use transactions.

- A.** ReadUncommitted
- B.** Repeatable
- C.** Serializable
- D.** ReadCommitted

**Answer:** C

**NO.50** You are developing a library to support multiple ASP.NET MVC web applications on a shared server. The library provides implementations of security algorithms.

If a problem with any of the security algorithms is discovered, a new version of the library must be created and deployed. Application downtime during the update must be minimized.

You need to ensure that the new version of the library will be used by all applications as soon as possible.

What should you do?

**A.** Build the web applications and include the security assembly as an embedded resource. When an update is needed, copy the new assembly to the bin directory for the application.

**B.** Sign all assemblies in each application with the same key used to sign the security assembly.

When an update is needed, create a new key pair and re-sign all assemblies.

**C.** Build the security assembly as a netmodule in a shared location.

Use the assembly linker to merge the netmodule into the assemblies for the application.

When an update is needed, update the netmodule in the shared location.

**D.** Install the security assembly in the Global Assembly Cache (GAC).

When an update is needed, update the assembly in the GAC.

**Answer:** D

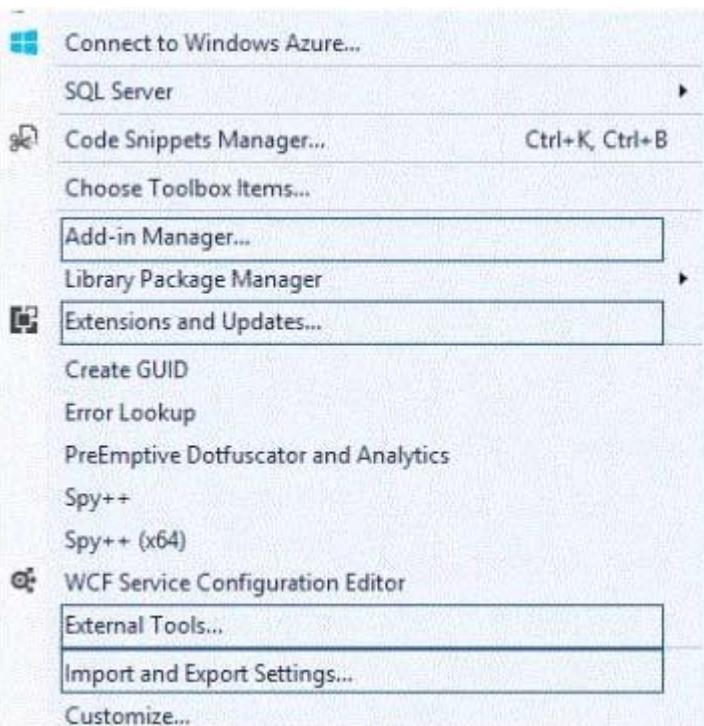
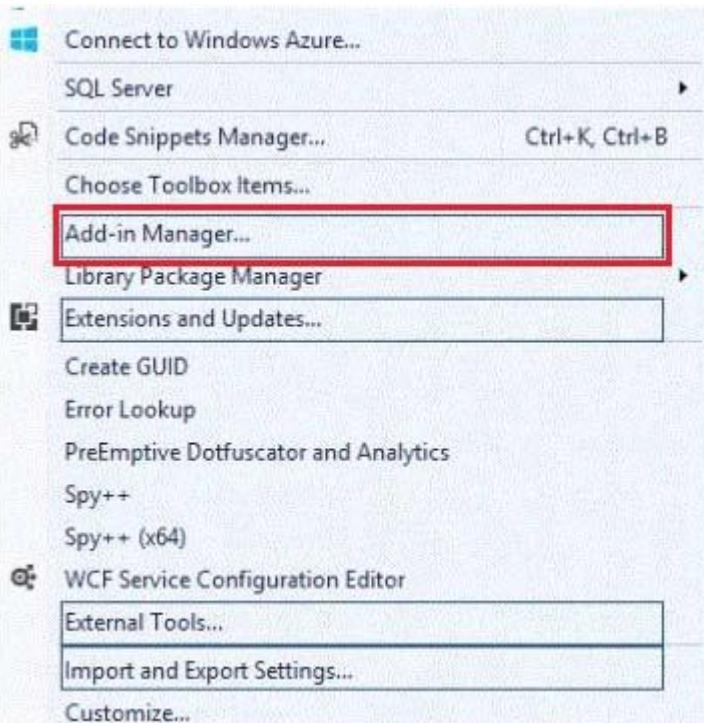
### **NO.51 HOTSPOT**

You are supporting an application that uses the ADO.NET Entity Framework to query and access data.

The latest version of a tool will add new templates and wizards that will enhance developer productivity.

You need to update the tool.

Which Visual Studio 2012 menu item should you choose? (To answer, select the appropriate menu item in the answer area.)

**Answer:**

**NO.52** You have a Microsoft Visual Studio project named Project1 that is deployed as an Azure web app. The Azure web app uses an Azure SQL Database.

You plan to deploy updates to the Azure web app by using a Web Deploy Package.

The password for the Azure SQL Database was changed since you first published the Azure web app. You need to deploy the package by using Windows PowerShell.

Which file should you modify before running the PowerShell deployment script?

- A.** WebApiConfig.cs from the App\_Start folder
- B.** IdentityConfig.cs from the App\_Start folder

- C.** App.config from the Web Application folder  
**D.** Project1-waws-dev.json from the Configurations folder

**Answer:** A

### NO.53 DRAG DROP

You are supporting a WCF data contract that returns a price calculation that can be expanded to add new data members.

Clients using the old version of the data contract must be supported.

You need to define the data contract so that the data serializer can put unknown data members into a property bag.

You have the following code:

```
[DataContract]
public class PriceCalculationResponse : Target 1
{
    public Target 2 ExtensionData { get; set; }
    [DataMember]
    public int Flag { get; set; }
    [DataMember]
    public double Price { get; set; }
    [DataMember]
    public string Currency { get; set; }
}
```

Which code segments should you include in Target 1 and Target 2 to complete the data contract? (To answer, drag the appropriate code elements to the correct targets in the answer area. Each code element may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

Code Elements	Answer Area
<code>ExpansionDataObject</code>	Target 1: <input type="text"/>
<code>IExtensibleDataObject</code>	Target 2: <input type="text"/>
<code>IExpansionDataObject</code>	
<code>ExtensionDataObject</code>	
<code>ExtensionData</code>	
<code>IExtensionDataObject</code>	
:::	

**Answer:**

Target 1:  `IExtensibleDataObject`  
 Target 2:  `ExtensionDataObject`

### NO.54 DRAG DROP

You are developing an ASP.NET Web API application for currency conversion that will be consumed by a web browser by using a composite application that is served from another web domain. You need to configure the Web API.

What should you do? (To answer, drag the appropriate XML elements to the correct location or locations in the answer area. Each XML element may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

```

<httpProtocol>
  <customHeaders>
    <add name="Access-Control-Allow-Origin"
      value="" />

    <add name="*" value="PUT, DELETE" />

    <add name="Access-Control-Allow-Methods" value="Content-Type" />

  </customHeaders>
</httpProtocol>

```

### Answer:

```

<httpProtocol>
  <customHeaders>
    <add name="Access-Control-Allow-Origin"
      value="*" />

    <add name="*" value="PUT, DELETE" />

    <add name="Access-Control-Allow-Methods" value="Access-Control-Allow-Headers" />

    <add name="Access-Control-Allow-Headers" value="Content-Type" />

  </customHeaders>
</httpProtocol>

```

### NO.55 DRAG DROP

You are developing an ASP.NET MVC Web API application.

The application must meet the following requirements:

It must send or receive data without the use of a buffer.

It must allow up to 1 MB of data to be received.

It must allow up to 2 MB of data to be sent.

You need to complete the code to meet the requirements.

You have the following code:

```

class Program
{
    private static string _baseAddress = "http://localhost:8080/";
    static void Main (string [] args)
    {
        var config = new HttpSelfHostConfiguration(_baseAddress);
        config.Routes.MapHttpRoute(
            name: "DefaultApi",
            routeTemplate: "api/{controller}/{id}",
            defaults: new { id=RouteParameter.Optional }
        );
        Target 1 . Target 2 = 1024*1024*2;
        Target 3 . Target 4 = 1024*1024;
        Target 5 . TransferMode =
            TransferMode. Target 6;
        var server = new HttpSelfHostServer (config);
        server.OpenAsync(). Wait();
    }
}

```

What code segments should you include in Target 1, Target 2, Target 3, Target 4, Target 5 and Target 6 to complete the code? (To answer, drag the appropriate code segments to the correct targets the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

## Code segments

config
server
MaxBufferSize
MaxReceivedMessageSize
MaxConcurrentRequests
Streamed
Buffered

## Answer area

Target 1:	Code Segment
Target 2:	Code Segment
Target 3:	Code Segment
Target 4:	Code Segment
Target 5:	Code Segment
Target 6:	Code Segment

**Answer:**

## Code segments

server

MaxConcurrentRequests

Buffered

## Answer area

Target 1:	config
Target 2:	MaxBufferSize
Target 3:	config
Target 4:	MaxReceivedMessageSize
Target 5:	config
Target 6:	Streamed

### NO.56 DRAG DROP

You are configuring a web application for deployment.

You need to create a SetParameters.xml file to configure the IIS application pool.

You have the following markup:

```
<?xml version="1.0" encoding="UTF-8"?>
<parameters>
  <setParameter
    Target 1
    Target 2
  </parameters>
```

Which configuration values should you include in Target 1 and Target 2 to complete the markup? (To answer, drag the appropriate configuration values to the correct targets in the answer area. Each configuration value may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

Configuration Values	
<code>key="applicationPool"</code>	
<code>name="applicationPool"</code>	
<code>setting="applicationPool"</code>	
<code>setting="MyServiceNameAppPool" /&gt;</code>	
<code>param="MyServiceNameAppPool" /&gt;</code>	
<code>value="MyServiceNameAppPool" /&gt;</code>	

Answer Area	
Target 1:	Configuration Value
Target 2:	Configuration Value

**Answer:**

Target 1:	<code>name="applicationPool"</code>
Target 2:	<code>value="MyServiceNameAppPool" /&gt;</code>

**NO.57 DRAG DROP**

You are developing an ASP.NET MVC Web API image management application.

The application must meet the following requirements:

It must send or receive image data without the use of a buffer.

It must allow up to 4 MB of image data to be received.

It must allow up to 3 MB of image data to be sent.

You need to complete the code to meet the requirements.

What should you do? (To answer, drag the appropriate code segments to the correct location or

locations in the answer area. Each code segment may be used once, more than once, or not at all.

You may need to drag the split bar between panes or scroll to view content.)

**Answer Area**

```

class Program
{
    private static string _baseAddress = "http://localhost:8080/";

    static void Main(string[] args)
    {
        var config = new HttpSelfHostConfiguration(_baseAddress);
        config.Routes.MapHttpRoute(
            name: "DefaultApi",
            routeTemplate: "api/{controller}/{id}",
            defaults: new { id = RouteParameter.Optional }
        );
    }

    config .MaxBufferSize = 1024 * 1024 * 3;

    config .MaxReceivedMessageSize = 1024 * 1024 * 4;

    config .TransferMode =
        TransferMode. ;

    var server = new HttpSelfHostServer(config);
    server.OpenAsync().Wait();
}

```

**Answer:**

```

class Program
{
    private static string _baseAddress = "http://localhost:8080/";

    static void Main(string[] args)
    {
        var config = new HttpSelfHostConfiguration(_baseAddress);
        config.Routes.MapHttpRoute(
            name: "DefaultApi",
            routeTemplate: "api/{controller}/{id}",
            defaults: new { id = RouteParameter.Optional }
        );

        config .MaxBufferSize = 1024 * 1024 * 3;

        config .MaxReceivedMessageSize = 1024 * 1024 * 4;

        config .TransferMode =
            TransferMode. Streamed ;

        var server = new HttpSelfHostServer(config);
        server.OpenAsync().Wait();
    }
}

```

**NO.58** You are developing a Microsoft Azure web application. The application will be deployed to 10 web role instances. A minimum of 8 running instances is needed to meet scaling requirements.

You need to configure the application so that upgrades are performed as quickly as possible, but do not violate scaling requirements.

How many upgrade domains should you use?

- A. 1**
- B. 2**
- C. 5**
- D. 10**

**Answer:** B

The .csdef is only used for Cloud Services, not for VMs. So regardless of what you set or even how you try to do it, Azure VM UD come in groups of 5. With 8 VMs, that means you'll have 2 UD.

**NO.59** You have a Web.config file that contains the following markup.

```
<?xml version="1.0"?>
<configuration>
  <appSettings>
    <add key="Key1" value="Value1" />
    <add key="Key2" value="Value2" />
    <add key="Key3" value="Value3" />
  </appSettings>
</configuration>
```

You need to use an XSLT transformation to remove the add tag for Key3.

Which markup should you use?

- A. <add key="Key3" xdt: Transform="Remove" />**
- B. <add key="Key3" xdt:Transform="Remove"
xdt:Locator="Match(/configuration/appSettings/add[@key='Key3'])"/>**
- C. <add xdt:Transform="Remove" />**
- D. <add key="Key3" xdt:Transform="Remove" xdt:Locator="Match(key)" />**

**Answer:** D

Explanation:

References: [https://msdn.microsoft.com/en-us/library/dd465326\(v=vs.110\).aspx](https://msdn.microsoft.com/en-us/library/dd465326(v=vs.110).aspx)

**NO.60** Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have a web application in a Docker container image. You set the tag for the image as myapp. You plan to deploy the application to Azure Container Services.

You run the following commands. All commands complete successfully.

```
az acr create --resource-group myResourceGroup --name myRegistry --sku Basic
az acr login --name myRegistry
```

You need to ensure that the image can be run on an Azure Container Service cluster.

Solution: You run the following commands:

```
docker tag myapp myregistry.azurecr.io/samples/myapp
docker push myregistry.azurecr.io/samples/myapp
```

Does the solution meet the goal?

A. Yes

B. No

**Answer:** A

Explanation:

First tag the image, and then push it into your private registry.

References: <https://medium.com/@pjbgf/azure-kubernetes-service-aks-pulling-private-container-images-from-azure-container-registry-acr-9c3e0a0a13f2>

**NO.61** You are developing an ASP.NET MVC application. The application is an order processing system that uses the ADO.NET Entity Framework against a SQL Server database. It has a controller that loads a page that displays customers. Customers are filtered on Country and, if provided, on CompanyName.

You have an Entity Framework context named db.

The Customer class is shown below.

```
public partial class Customer
{
    ...
    public string CustomerID { get; set; }
    public string CompanyName { get; set; }
    public string ContactName { get; set; }
    public string Country { get; set; }
    ...
}
```

You need to execute a single deferred query to return the filtered list of customers.

Which code segment should you use?

Ⓐ `public ActionResult Index(string country, string CompanyName)`  
{  
    `IEnumerable<Customer> customers;`  
    `IQueryable<Customer> query = db.Customers.Where(c => c.Country == country);`  
    `if (!string.IsNullOrEmpty(CompanyName))`  
    {  
        `customers = query.Where(c => c.CompanyName.ToLower().StartsWith(CompanyName.ToLower()));`  
    }  
    `return View(customers);`  
}

Ⓑ `public ActionResult Index(string country, string CompanyName)`  
{  
    `IEnumerable<Customer> customers;`  
    `IQueryable<Customer> query = db.Customers.Where(c => c.Country == country);`  
    `if (!string.IsNullOrEmpty(CompanyName))`  
    {  
        `customers = query.Where(c => c.CompanyName.ToLower().StartsWith(CompanyName.ToLower()));`  
    }  
    `return View(customers);`  
}

Ⓒ `public ActionResult Index(string country, string CompanyName)`  
{  
    `IEnumerable<Customer> customers;`  
    `IQueryable<Customer> query = db.Customers.Where(c => c.Country == country);`  
    `query.Load();`  
    `if (!string.IsNullOrEmpty(CompanyName))`  
    {  
        `customers = query.Where(c => c.CompanyName.ToLower().StartsWith(CompanyName.ToLower()));`  
    }  
    `return View(customers);`  
}

Ⓓ `public ActionResult Index(string country, string CompanyName)`  
{  
    `IEnumerable<Customer> customers;`  
    `IQueryable<Customer> query = db.Customers;`  
    `query.Load();`  
    `query = query.Where(c => c.Country == country);`  
    `if (!string.IsNullOrEmpty(CompanyName))`  
    {  
        `customers = query.Where(c => c.CompanyName.ToLower().StartsWith(CompanyName.ToLower()));`  
    }  
    `return View(customers);`  
}

A. Option A

B. Option B

C. Option C

D. Option D

**Answer:** C

**NO.62** Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have developed a .NET Standard Library.

You need to produce a NuGet package.

Solution: Run the dotnet pack command

Does the solution meet the goal?

**A.** Yes

**B.** No

**Answer:** B

Explanation:

Package the component with the NuGet pack command.

References: <https://docs.microsoft.com/en-us/nuget/guides/create-net-standard-packages-vs2015>

## NO.63 DRAG DROP

You are developing a WCF service.

The WCF service requires implementations of the new data contracts to validate against the old schema.

You need to develop a new data contract without breaking current functionality.

What should you do? (To answer, drag the appropriate code segments to the correct location or locations in the answer area. Each code segment may be used once, more than once, or not at all.)

You may need to drag the split bar between panes or scroll to view content.)

The screenshot shows a 'Windows Forms' style application window. The title bar says 'Answer Area'. On the left side, there is a vertical list of five code snippets, each highlighted with a yellow background and a thin black border. On the right side, there are two large, empty text input fields. A vertical blue line serves as a splitter between the left and right panes. The code snippets are:

- [DataContract(Validate = "Profile")]
- [DataContract(Identifier = "Profile")]
- [DataContract(Name = "Profile")]
- [DataContract(TypeID = "Profile")]
- [DataContract(ID = "Profile")]

The right side contains the following C# code:

```

public class ProfileV1
{
    [DataMember]
    public string Username;
}

public class ProfileV2
{
    [DataMember]
    public string Username;

    [DataMember]
    public string Email;
}

```

**Answer:**

Answer Area

[DataContract(Validate = "Profile")]

[DataContract(Identifier = "Profile")]

[DataContract(Name = "Profile")]

[DataContract(TypeID = "Profile")]

[DataContract(ID = "Profile")]

[DataContract(Name = "Profile")]

```
public class ProfileV1
{
    [DataMember]
    public string Username;
}
```

[DataContract(Name = "Profile")]

```
public class ProfileV2
{
    [DataMember]
    public string Username;

    [DataMember]
    public string Email;
}
```

**NO.64** You are preparing to develop a set of libraries for a company.

The libraries must be shared across the company.

You need to create a remote NuGet feed that exposes the libraries.

What should you do? (Each answer presents part of the solution. Choose all that apply.)

- A.** Install the NuGet.Feed Package.
- B.** Install the NuGet.Server Package.
- C.** Configure the Packages folder located in the system.webserver section of the web application's Web.config.
- D.** Create a new Empty Web Site in Visual Studio 2012.
- E.** Configure the Packages folder located in the appSettings section of the web application's Web.config.
- F.** Add packages to the Packages folder.
- G.** Create a new Empty Web Application in Visual Studio 2012.

**Answer:** B, E, F, G

Explanation/Reference:



**NO.65** You are designing an ASP.NET Web API application.

You need to select an HTTP verb to allow blog administrators to modify the text of a comment.

Which HTTP verb should you use?

- A.** GET
- B.** DELETE
- C.** POST
- D.** PUT

**Answer:** D

**NO.66** Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have developed a .NET Standard Library.

You need to produce a NuGet package.

Solution: Run the msbuild command with the publish target specified.

Does the solution meet the goal?

A. Yes

B. No

**Answer:** B

Explanation:

Package the component with the NuGet pack command.

References: <https://docs.microsoft.com/en-us/nuget/guides/create-net-standard-packages-vs2015>

**NO.67** You are developing a WCF service.

A new service instance must be created for each client session.

You need to choose an instancing mode.

Which instance mode should you use?

A. PerCall

B. Single

C. Multiple

D. PerSession

E. PerRequest

**Answer:** D

**NO.68 DRAG DROP**

You are developing a self-hosted WCF service to display data about books. The solution contains a service named BookService that implements the IBookService interface.

You need to expose the metadata in the service host programmatically.

You have the following code:

```
static void Main(string[] args)
{
    Target 1 host = new Target 2 (
        typeof(BookService), new Uri(ServiceUrl));
    host.AddServiceEndpoint(
        typeof(IBookService), new WSHttpBinding(), "");
    Target 3 behavior =
        new Target 4 ();
    behavior.HttpGetEnabled = Target 5 ;
    host.Description.Behaviors.Add(behavior);
    host.Open();
    ...
    host.Close();
}
```

Which code segments should you include in Target 1, Target 2, Target 3, Target 4 and Target 5 to build the service host? (To answer, drag the appropriate code segments to the correct targets in the

answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

Code Segments	Answer Area
true	Target 1: <input type="text"/>
false	Target 2: <input type="text"/>
ServiceMetadataBehavior	Target 3: <input type="text"/>
ClientViaBehavior	Target 4: <input type="text"/>
ServiceHost	Target 5: <input type="text"/>

**Answer:**

Target 1:	<input type="text"/> ServiceHost
Target 2:	<input type="text"/> ServiceHost
Target 3:	<input type="text"/> ServiceMetadataBehavior
Target 4:	<input type="text"/> ServiceMetadataBehavior
Target 5:	<input type="text"/> true

**NO.69** You are developing a new ASP.NET MVC application that does not have an existing database. The requirements for the application are not complete, and the SQL data model will likely change. You need to choose an approach to visually manage a data model.

Which approach should you use?

- A. Physical First
- B. Database First
- C. Code First
- D. Model First

**Answer:** D

With the model first workflow, you can design a model in a designer.

**NO.70 DRAG DROP**

You are developing a Windows Azure based web application that provides users the ability to rent training videos. The application is deployed to hosted services in Asia and Europe.

The web application must meet the following requirements:

Video files are large and must be able to be streamed.

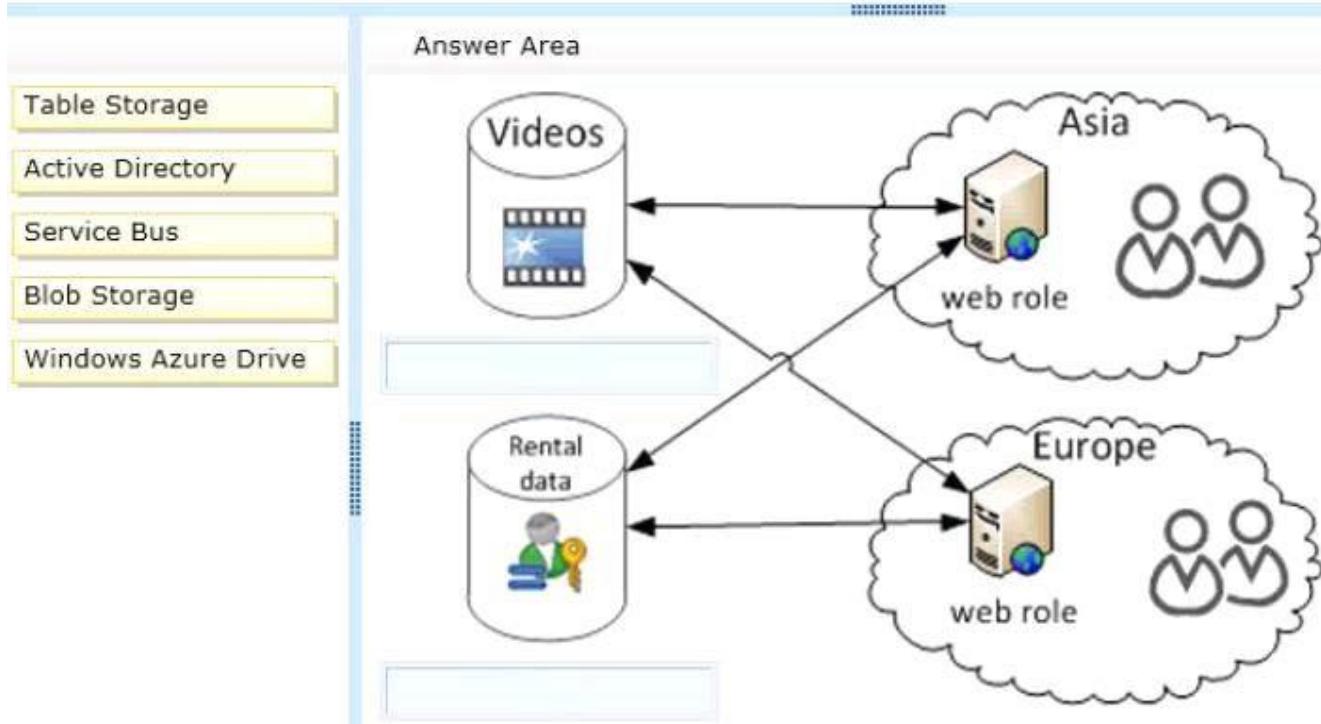
Streaming videos requires low latency network connections.

Rental data contains structured information about the user and the video.

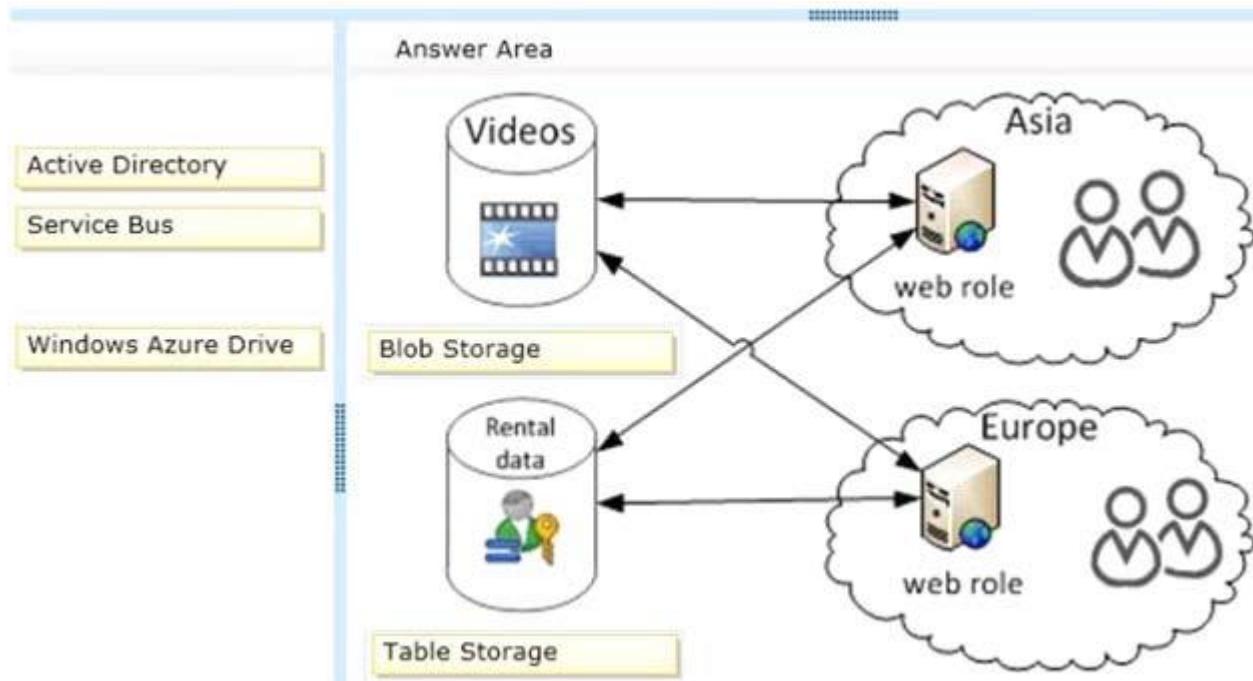
Rental permissions are checked every five seconds during video playback.

You need to recommend a storage architecture for the application.

What should you do? (To answer, drag the appropriate technologies to the correct location or locations in the answer area. Each technology may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)



**Answer:**



### NO.71 DRAG DROP

You have two methods named F1 and F2.

F2 takes a sting as a parameter.

You need to create a method named F3. F3 must retrieve a string value asynchronously. The string

must call F2. During the asynchronous load of the string, F1 must run.  
Which five code blocks should you use? Develop the solution by selecting and arranging the required code blocks in the correct order.  
NOTE: You will not need all of the code blocks.

## Code Blocks

```
F1();  
  
async Task<string> F3()<br/>{  
  
HttpClient client = new HttpClient();  
string urlContents = await  
client.GetStringAsync  
("http://msdn.microsoft.com");  
  
string urlContents = await myTaskString;  
  
return F2(urlContents);  
}  
  
HttpClient client = new HttpClient();  
Task<string> myTaskString =  
client.GetStringAsync  
("http://msdn.microsoft.com");
```

## Answer Area



**Answer:**

**Code Blocks**

```
HttpClient client = new HttpClient();
Task<string> myTaskString =
client.GetStringAsync
("http://msdn.microsoft.com");
```

**Answer Area**

```
async Task<string> F3()
{
    HttpClient client = new HttpClient();
    string urlContents = await
    client.GetStringAsync
    ("http://msdn.microsoft.com");
}
```



```
    string urlContents = await myTaskString;
```

```
    return F2(urlContents);
}
```

```
F1();
```



References: <https://docs.microsoft.com/en-us/dotnet/csharp/programming-guide/concepts/async/>

**NO.72** You are developing an ASP.NET MVC application that reads and writes data from a SQL Server database.

You need to maintain data integrity including retrieving identical sets across reads in all situations that use transactions.

Which isolation level should you use?

- A.** Repeatable
- B.** Serializable
- C.** ReadUncommitted
- D.** ReadCommitted

**Answer:** A

REPEATABLE READ

Specifies that statements cannot read data that has been modified but not yet committed by other transactions and that no other transactions can modify data that has been read by the current transaction until the current transaction completes.

**NO.73 DRAG DROP**

You are developing a web application by using Microsoft ASP.NET MVC.

The application manages company employees and managers.

Each employee is assigned to a manager.

You need to write a LINQ query to retrieve the list of managers and their respective employees.

How should you complete the code? To answer, drag the appropriate keywords to the correct targets.

Each keyword may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

Methods	Answer area
<code>equals</code>	<code>var query = from manager in managers</code>
<code>from</code>	<code>employee in employees</code>
<code>in</code>	<code>manager</code>
<code>join</code>	<code>new {ManagerName = manager.FirstName, EmployeeName = employee.Name};</code>
<code>select</code>	

**Answer:**

Methods	Answer area
<code>equals</code>	<code>var query = from manager in managers</code>
<code>from</code>	<code>join employee in employees</code>
<code>in</code>	<code>in manager</code>
<code>join</code>	<code>equals employee.manager</code>
<code>select</code>	<code>select new {ManagerName = manager.FirstName, EmployeeName = employee.Name};</code>

References: <https://docs.microsoft.com/en-us/dotnet/csharp/programming-guide/concepts/linq/basic-linq-query-operations>

## NO.74 HOTSPOT

You need to deploy the application to the Windows Azure production environment to meet the business requirements.

What should you do? (To answer, select the appropriate button in the answer area.)

The screenshot shows the Windows Azure Management Portal interface. At the top, there are several buttons for managing services: Upgrade, Configure, Delete, Start, Stop, Swap VIP, Configure OS, Reboot, and Reimage. Below these buttons, there are two tabs: 'Deployments' and 'Instances'. The 'Deployments' tab is selected, showing a list of service components. A 'Choose Columns' dropdown is available to customize the table view.

Name	Type	Environment
Main	Subscription	
Main	Hosted Service	
Certificates		
Windows Azure Tools	Service Certificate	
Main Deployment	Deployment	Production
MvcWebRole1	Role	Production
MvcWebRole1_IN_0	Instance	Production
Main Deployment - staging	Deployment	Staging
MvcWebRole1	Role	Staging
MvcWebRole1_IN_0	Instance	Staging

**Answer:**

Name	Type	Environment
Main	Subscription	
Main	Hosted Service	
Certificates		
Windows Azure Tools	Service Certificate	
Main Deployment	Deployment	Production
MvcWebRole1	Role	Production
MvcWebRole1_IN_0	Instance	Production
Main Deployment - staging	Deployment	Staging
MvcWebRole1	Role	Staging
MvcWebRole1_IN_0	Instance	Staging

**NO.75** Data provided by Consolidated Messenger is cached in the `HttpContext.Cache` object. You need to ensure that the cache is correctly updated when new data arrives. What should you do?

- A. Ensure that the `EffectivePrivateBytesLimit` value is greater than the size of the database file.
- B. Change the sliding expiration of the cache item to 12 hours.
- C. Use the `SqlCacheDependency` type configured with a connection string to the database file.
- D. Use the `CacheDependency` type configured to monitor the SFTP target folder.

**Answer:** D

**NO.76** You are developing an application that reads and writes data from a SQL Server database. You need to ensure transactional data integrity. Which isolation level should you use?

- A. Serializable
- B. ReadCommitted
- C. ReadUncommitted
- D. Normal

**Answer:** C

Explanation:

Serializable provides the highest level of data integrity.

References: [https://msdn.microsoft.com/en-us/library/system.data.isolationlevel\(v=vs.110\).aspx](https://msdn.microsoft.com/en-us/library/system.data.isolationlevel(v=vs.110).aspx)

**NO.77 HOTSPOT**

You have a Windows Communication Foundation (WCF) service named Service1.

You deploy the WCF service at the root level of a website in Azure. The address of the Azure website is

`http://service1.azurewebsites.net/`.

You need to generate a .cs file that can be used to interact with Service1.

What command should you run? To answer, select the appropriate options in the answer area.

**Answer Area**

regasm.exe
sn.exe
svchost.exe

<code>http://service1.azurewebsites.net/</code>
<code>svc://service1.azurewebsites.net/</code>
<code>tcp://service1.azurewebsites.net/</code>

service1.asmx
service1.svc
service1.wsdl

**Answer:**

**Answer Area**

regasm.exe
sn.exe
<b>svchost.exe</b>

<code>http://service1.azurewebsites.net/</code>
<code>svc://service1.azurewebsites.net/</code>
<code>tcp://service1.azurewebsites.net/</code>

service1.asmx
<b>service1.svc</b>
service1.wsdl

References: <https://stackoverflow.com/questions/23997821/how-to-generate-wcf-service-with-svcutil-exe>

**NO.78** You are developing a web application by using Microsoft .NET Framework 4.5.

You are creating a web client for the application. The web client will make REST calls to several web services.

You need to ensure that the web client meets the following requirements:

Uses the Task class to perform asynchronous operations

Reuses recently resolved DNS lookups

Which object should you include in the solution?

- A. `ServiceClient`
- B. `WebClient`
- C. `HttpClient`
- D. `WebRequest`

**Answer:** C

Explanation:

References: <https://www.c-sharpcorner.com/article/calling-web-api-using-httpclient/>

**NO.79** Note: This question is part of a series of questions that present the same scenario. Each

question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You deploy an ASP.NET Core web application to Azure App Services. You are using Azure Event Hubs to collect the telemetry data for the application.

You need to configure Event Hubs to automatically deliver the telemetry data stream to a persistent data store.

Solution: Configure Event Hubs Capture to deliver data to Azure Blob storage.

Does the solution meet the goal?

**A.** Yes

**B.** No

**Answer:** A

Explanation:

Azure Event Hubs Capture enables you to automatically deliver the streaming data in Event Hubs to an Azure Blob storage or Azure Data Lake Store account of your choice, with the added flexibility of specifying a time or size interval.

References: <https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-capture-overview>

## NO.80 DRAG DROP

You are developing a WCF service.

You need to configure the web.config file to ensure that metadata is exposed only via the MEX protocol.

You have the following markup:

```

<services>
    <service behaviorConfiguration="behavior"
        name="CustomerService.Service">
        <endpoint binding="basicHttpBinding"
            contract="CustomerService.IService" />
        <endpoint address="mex" binding="Target 1"
            contract="Target 2" />
    </service>
</services>
<behaviors>
    <serviceBehaviors>
        <behavior name="behavior">
            <serviceMetadata
                Target 3="Target 4" />
        </behavior>
    </serviceBehaviors>
</behaviors>
```

Which XML elements should you include in Target 1, Target 2, Target 3 and Target 4 to complete the markup? (To answer, drag the appropriate XML elements to the correct targets in the answer area. Each XML element may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

**XML Elements**`httpGetBinding``httpGetEnabled``mexHttpBinding``mexTcpBinding``mexNamedPipeBinding``true``false``CustomerService.IService``IMetadataExchange`**Answer Area**Target 1: `XML Element`Target 2: `XML Element`Target 3: `XML Element`Target 4: `XML Element`**Answer:**Target 1: `mexHttpBinding`Target 2: `IMetadataExchange`Target 3: `httpGetEnabled`Target 4: `false`**NO.81 DRAG DROP**

You have a UI element library.

You need to build a NuGet package to integrate the library into your projects.

What should you do? (To answer, drag the appropriate code elements to the correct location or

locations in the answer area. Each code element may be used once, more than once, or not at all.

You may need to drag the split bar between panes or scroll to view content.)

**Code Elements**`nupkg``nuspec``Build``Pack`**Answer Area**1. Define the package in a `Code` file.

2. Build the package with the following command.

NuGet `Code` MyPackage. `Code`

**Answer:**

1. Define the package in a . **nuspec** file.
2. Build the package with the following command.

NuGet    **Pack**    MyPackage. **nuspec**

Reference: Creating and Publishing a Package

<http://docs.nuget.org/create/creating-and-publishing-a-package>

**NO.82** Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You deploy an ASP.NET Core web application to Azure App Services. You are using Azure Event Hubs to collect the telemetry data for the application.

You need to configure Event Hubs to automatically deliver the telemetry data stream to a persistent data store.

Solution: Configure Azure Event Hubs Capture to deliver data to Azure File Service.

Does the solution meet the goal?

**A.** Yes

**B.** No

**Answer:** B

Explanation:

Use Azure Blob storage to store the telemetry data.

References: <https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-capture-overview>

**NO.83** You are developing a WCF service.

You need to create a duplex contract.

What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

- A.** Apply the MessageContractAttribute attribute to every public method signature included in the appropriate contract.
- B.** Create an interface for the client-side duplex contract.
- C.** Create an interface for the server-side duplex contract.
- D.** Apply the MessageContractAttribute attribute to the appropriate interface.
- E.** Apply the ServiceContractAttribute attribute to the appropriate interface. Then, apply the OperationContractAttribute attribute to every public method signature included in that contract.
- F.** Set the CallbackContract property to the appropriate interface.

**Answer:** CEF

To create a duplex contract

(C) Create the interface that makes up the server side of the duplex contract.

(E) Apply the ServiceContractAttribute class to the interface.

Declare the method signatures in the interface.

(E) Apply the OperationContractAttribute class to each method signature that must be part of the public contract.

Create the callback interface that defines the set of operations that the service can invoke on the client.

Declare the method signatures in the callback interface.

Apply the OperationContractAttribute class to each method signature that must be part of the public contract.

(F) Link the two interfaces into a duplex contract by setting the CallbackContract property in the primary interface to the type of the callback interface.

Reference: How to: Create a Duplex Contract

**NO.84** Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You are developing a RESTful API that uses ASP.NET Core. You plan to host the API in Azure App Services.

You provision a development environment in the application service.

Developers must be able to deploy the API to the development environment. You must not share the Azure account credentials with developers.

You need to ensure that developers can deploy the API to the development environment.

Solution: Download the Publish profile for the application service and share it with the developers.

Use Microsoft Visual Studio Publishing.

Does the solution meet the goal?

**A.** Yes

**B.** No

**Answer:** A

Explanation:

To configure deployment for a web project in Visual Studio, you create one or more publish profiles using the Publish Web wizard. A publish profile specifies the server you are deploying to, the credentials needed to log on to the server, the databases to deploy, and other deployment options. When you are ready to publish, you choose the profile you want to use and click the Publish button in the wizard or in the Web One Click Publish toolbar.

References: [https://msdn.microsoft.com/en-us/library/dd465337\(v=vs.110\).aspx](https://msdn.microsoft.com/en-us/library/dd465337(v=vs.110).aspx)

## **NO.85 DRAG DROP**

You are developing a Windows Communication Foundation (WCF) service named WCF1.

WCF1 will use a certificate to secure the communication channel.

You need to ensure that the WCF service uses a certificate to secure the communication channel.

How should you complete the code? To answer, drag the appropriate code blocks to the correct locations. Each code block may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

## Code blocks

```
ClientCredentialType  
GetType  
MessageCredentialType.Certificate  
MessageCredentialType.IssuedToken  
MessageCredentialType.Windows  
SetCertificate
```

• • •

## Answer Area

```
WSHttpBinding aBinding = new WSHttpBinding();  
aBinding.Security.Mode = SecurityMode.Message;  
  
aBinding.Security.Message Code Block =  
  
    Code Block ;  
  
EndpointAddress wcfEP = new EndpointAddress("http://wcfl");  
WCFClient wcfClient = new WCFClient(aBinding, wcfEP);  
  
wcfClient.ClientCredentials.ClientCertificate. Code block ()  
  
    StoreLocation.CurrentUser, StoreName.My, X509FindType.FindBySubjectName, "wcfl.com");
```

## Answer:

## Answer Area

```
WSHttpBinding aBinding = new WSHttpBinding();  
aBinding.Security.Mode = SecurityMode.Message;  
  
aBinding.Security.Message ClientCredentialType =  
  
    MessageCredentialType.Certificate ;  
  
EndpointAddress wcfEP = new EndpointAddress("http://wcfl");  
WCFClient wcfClient = new WCFClient(aBinding, wcfEP);  
  
wcfClient.ClientCredentials.ClientCertificate. SetCertificate ()  
  
    StoreLocation.CurrentUser, StoreName.My, X509FindType.FindBySubjectName, "wcfl.com");
```

Target 1: ClientCredentialType

Target 2: MessageCredentialType.Certificate

Set the ClientCredential property to an appropriate value. The following code sets the property to Certificate.

WSHttpBinding b = new WSHttpBinding();

b.Security.Mode = SecurityMode.Message;

b.Security.Message.ClientCredentialType = MessageCredentialType.Certificate; Target 3:

SetCertificate On the client class, set the ClientCredentials property of the ClientBase<TChannel> class to an appropriate value.

Example: // Set the certificate for the client.

cc.ClientCredentials.ClientCertificate.SetCertificate(

StoreLocation.LocalMachine,  
 StoreName.My,  
 X509FindType.FindBySubjectName,  
 "cohownery.com");

References: <https://docs.microsoft.com/en-us/dotnet/framework/wcf/how-to-set-the-security-mode>

<https://docs.microsoft.com/en-us/dotnet/framework/wcf/how-to-specify-client-credential-values>

## NO.86 HOTSPOT

You are updating an existing multitenant ASP.NET MVC application for medical clinics. The application aggressively uses output caching to improve performance by caching content for 36 hours. The application uses a query string parameter named "clinicID" that contains the clinic that the user is currently viewing.

Users report that they are occasionally seeing data for the wrong clinic. Users also report that sensitive data is stored in the browser cache folder on their computers.

You need to configure web.config to resolve the reported problems.

You have the following markup:

```
<caching>
  <outputCacheSettings>
    <outputCacheProfiles>
      <clear />
      <add name="primaryCache"
        Target 1
        Target 2
        Target 3 >/
    </outputCacheProfiles>
  </outputCacheSettings>
</caching>
```

Which markup segments should you include in Target 1, Target 2 and Target 3 to complete the markup?

(To answer, select the correct markup segment from each drop-down list in the answer area.)

Target 1:

noStore="true"	▼
noStore="false"	

Target 2:

varyByCustom="clinicID"	▼
varyByParam="clinicID"	
varyByControl="clinicID"	

Target 3:

duration="129600"	▼
duration="36h"	

**Answer:**

Target 1:

noStore="true"  
 noStore="false"

Target 2:

varyByCustom="clinicID"  
 varyByParam="clinicID"  
 varyByControl="clinicID"

Target 3:

duration="129600"  
 duration= 36h

### NO.87 HOTSPOT

You are updating an existing multitenant ASP.NET MVC application for medical clinics. The application aggressively uses output caching to improve performance by caching content for 36 hours. The application uses a query string parameter named "clinicID" that contains the clinic that the user is currently viewing.

Users report that they are occasionally seeing data for the wrong clinic. Users also report that the application seems to take a long time to return data for a specific clinic even if they have viewed it recently.

You need to configure web.config to resolve the reported problems.

You have the following markup:

```
<caching>
  <outputCacheSettings>
    <outputCacheProfiles>
      <clear />
      <add name="primaryCache"
        Target 1
        Target 2
        Target 3 > /
    </outputCacheProfiles>
  </outputCacheSettings>
</caching>
```

Which markup segments should you include in Target 1, Target 2 and Target 3 to complete the markup?

(To answer, select the correct markup segment from each drop-down list in the answer area.)

## Answer Area

Target 1:

noStore="true"
noStore="false"

Target 2:

varyByCustom="clinicID"
varyByParam="clinicID"
varyByControl="clinicID"

Target 3:

duration="129600"
duration="36h"

**Answer:**

Target 1:

noStore="true"
noStore="false"

Target 2:

varyByCustom="clinicID"
varyByParam="clinicID"
varyByControl="clinicID"

Target 3:

duration="129600"
duration="36h"

Target 1: noStore="false"

The page that has the OutputCacheProfile.NoStore property set to true issues a response specifying in its header to prevent secondary storage of sensitive information.

Target 2: VaryByParam = "clinicID"

The VaryByParam is a semicolon-delimited set of parameters used to vary the cached output. It allows varying the cached output by GET query string or form POST parameters. For instance, you can

vary the user-control output to the cache by specifying the user-control name along with either a query string or a form POST parameter.

Incorrect: Not varyByControl="ClinicID"

The VaryByControl is a semicolon-delimited set of IDs of controls to be cached.

Target 3: duration=129600"

The Duration represents the time in seconds that the page or user control is cached. Setting this property establishes an expiration policy for HTTP responses from the page or control to which it applies and will automatically cause the caching of their output.

129600 seconds is 36 hours ( $60 * 60 * 36$ ).

References: [https://msdn.microsoft.com/en-us/library/system.web.configuration.outputcacheprofile\(v=vs.110\).aspx](https://msdn.microsoft.com/en-us/library/system.web.configuration.outputcacheprofile(v=vs.110).aspx)

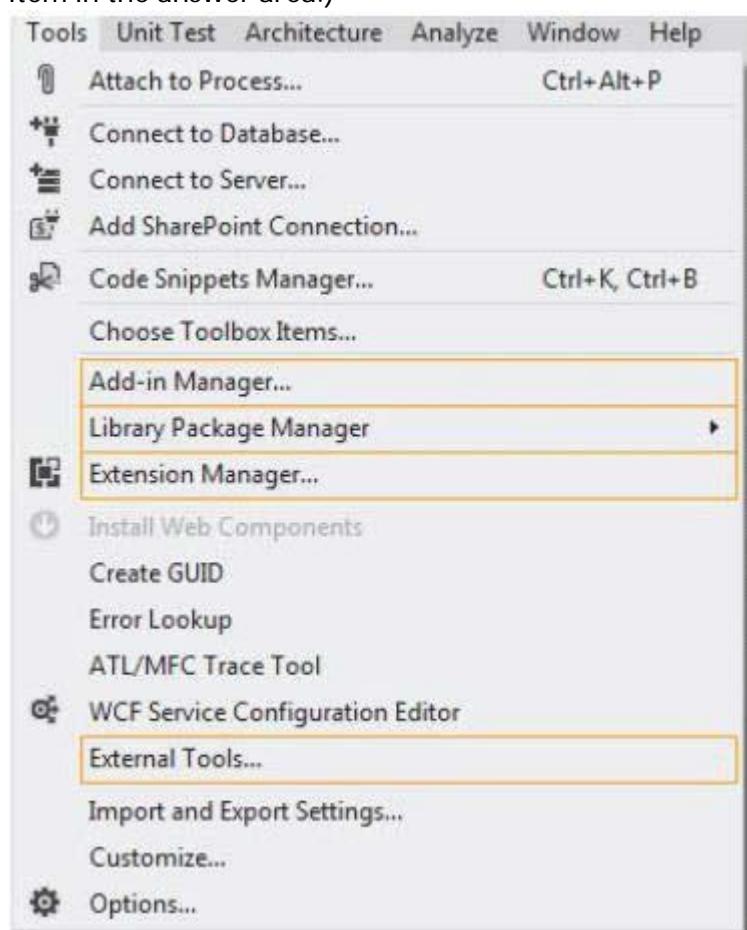
## NO.88 HOTSPOT

You are supporting an application that uses the ADO.NET Entity Framework to query and access data.

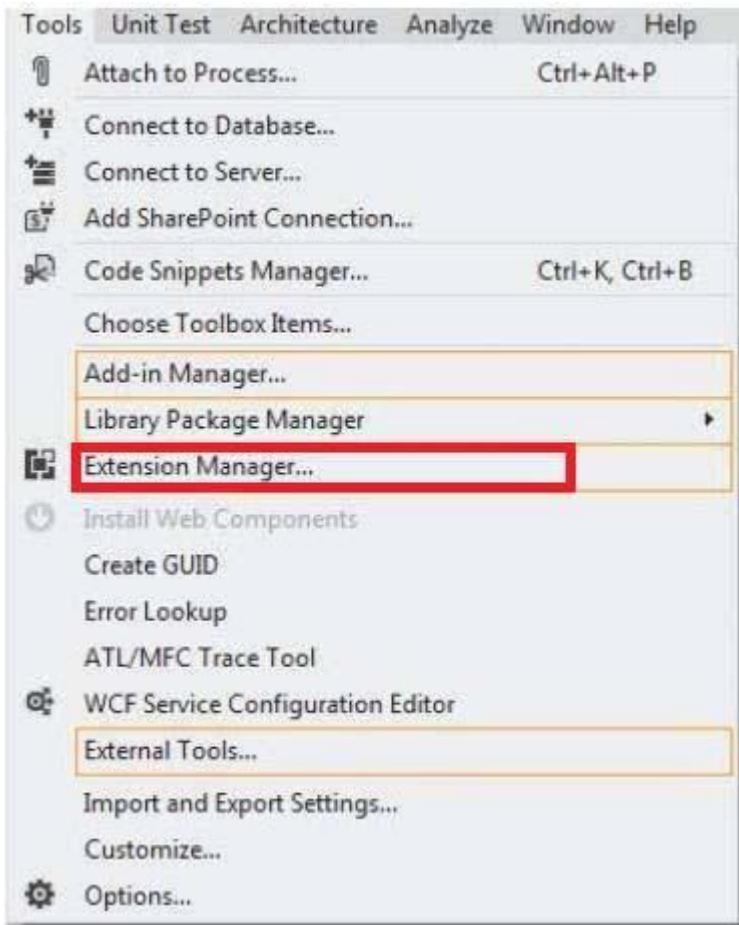
The latest version of Entity Framework contains bug fixes that will improve performance.

You need to update Entity Framework.

Which Visual Studio 2012 menu item should you choose? (To answer, select the appropriate menu item in the answer area.)



**Answer:**



**NO.89** You are developing an ASP.NET MVC application that reads and writes data from a SQL Server database.

You need to prevent the application from reading data that is locked by other transactions. You also need to prevent exclusive range locks.

Which isolation level should you use?

- A. ReadCommitted
- B. Serializable
- C. Repeatable
- D. ReadUncommitted

**Answer:** A

**NO.90** Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You are developing a RESTful API that uses ASP.NET Core. You plan to host the API in Azure App Services.

You provision a development environment in the application service.

Developers must be able to deploy the API to the development environment. You must not share the Azure account credentials with developers.

You need to ensure that developers can deploy the API to the development environment.

Solution: Share the Publish profile for the application service with the developers. Use Web Matrix 2 for publishing.

Does the solution meet the goal?

**A.** Yes

**B.** No

**Answer:** B

Explanation:

You should use a Publishing Profile with Microsoft Visual Studio Publishing as WebMatrix enables developers to build websites, while Visual Studio Publishing is used to develop computer programs for Microsoft Windows, as well as web sites, web applications and web services.

References: [https://msdn.microsoft.com/en-us/library/dd465337\(v=vs.110\).aspx](https://msdn.microsoft.com/en-us/library/dd465337(v=vs.110).aspx)

## NO.91 DRAG DROP

You are developing an ASP.NET Core MVC web application. The application will use Entity Framework Core and a SQLite database.

You rename a property in the Customer data model. You attempt to apply the migration to the SQLite database and receive a NotSupportedException error that includes a table named Customer. You need to resolve the migration error.

Which four actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

### Actions

Create an index on the existing Customer table.

Drop the index on the new Customer table.

Drop the existing Customer table.

Copy data from the existing Customer table to a new Customer table.

Create a new Customer table.

Rename the existing Customer table.

### Answer Area



**Answer:**

## Answer Area

Rename the existing Customer table.

Create a new Customer table.

Copy data from the existing Customer table to a new Customer table.

Drop the existing Customer table.

The SQLite provider has a number of migrations limitations. You can workaround some of these limitations by manually writing code in your migrations to perform a table rebuild. A table rebuild involves renaming the existing table, creating a new table, copying data to the new table, and dropping the old table.

References: <https://docs.microsoft.com/en-us/ef/core/providers/sqlite/limitations>

**NO.92** You are developing an ASP.NET MVC web application that contains the following HTML.

<table id= "customer" ></table>

You also have an ASP.NET Web API application that contains a call for retrieving customers.

You must send and retrieve the data in the most compact format possible.

You need to update the HTML for the customers table to contain data from the Web API application.

Which script segment should you use?

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Answer:** A

**NO.93 DRAG DROP**

You need to parse flight information from Blue Yonder Airlines. The content of the XML file is shown below.

```

<?xml version="1.0" encoding="utf-8"?>
<AirlineFeed>
  <Flight xmlns="urn:CFI" name="AS515">
    <Seats>123</Seats>
    <Arrival>5/2/2011 12:01:13</Arrival>
  </Flight>
  <Flight name="UN24">
    <Seats>123</Seats>
    <Arrival>5/1/2012 10:17:57 PM +02:00</Arrival>
  </Flight>
  <FlightManifest>
    ...
  </FlightManifest>
</AirlineFeed>

```

Some airlines do not specify the timezone of the arrival time. If the timezone is not specified, then it should be interpreted per the business requirements.

You need to implement the LoadFlights() and Parse() methods of the BlueYonderLoader class.

What should you do? (To answer, drag the appropriate code segments to the correct location in the answer area. Each segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

### **Answer:**

```

public IEnumerable<FlightInfo> LoadFlights(XDocument feed)
{
  var flights = feed.Descendants("(urn:CFI)Flight")
    .Concat(feed.Descendants("Flight"));

  return flights.Select(x => Parse(x));
}

private FlightInfo Parse(XElement flightElement)
{
  var fi = new FlightInfo();
  fi.Flight = flightElement.Attribute("name").Value;
  var arrivalRaw = flightElement.Element("Arrival").Value;

  fi.Arrival = DateTimeOffset.Parse(arrivalRaw,
    null, System.Globalization.DateTimeStyles.AssumeUniversal);

  fi.Seats = XmlConvert.ToInt32(flightElement.Element("Seats").Value);
  return fi;
}

```

### **NO.94 DRAG DROP**

You are developing an ASP.NET MVC Web API application.

The application must meet the following requirements:

It must send or receive data without the use of a buffer.

It must allow up to 1 MB of data to be received.

It must allow up to 2 MB of data to be sent.

You need to complete the code to meet the requirements.

What should you do? (To answer, drag the appropriate code segments to the correct location or locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

**Answer Area**

```

class Program
{
    private static string _baseAddress = "http://localhost:8080/";

    static void Main(string[] args)
    {
        var config = new HttpSelfHostConfiguration(_baseAddress);
        config.Routes.MapHttpRoute(
            name: "DefaultApi",
            routeTemplate: "api/{controller}/{id}",
            defaults: new { id = RouteParameter.Optional }
        );
    }
}

var server = new HttpSelfHostServer(config);
server.OpenAsync().Wait();
}

```

The code completion interface shows several dropdown menus on the left side:

- config
- server
- MaxBufferSize
- MaxReceivedMessageSize
- MaxConcurrentRequests
- Streamed
- Buffered

The completed code in the answer area is:

```

class Program
{
    private static string _baseAddress = "http://localhost:8080/";

    static void Main(string[] args)
    {
        var config = new HttpSelfHostConfiguration(_baseAddress);
        config.Routes.MapHttpRoute(
            name: "DefaultApi",
            routeTemplate: "api/{controller}/{id}",
            defaults: new { id = RouteParameter.Optional }
        );
    }
}

var server = new HttpSelfHostServer(config);
server.OpenAsync().Wait();
}

[REDACTED] .MaxBufferSize = 1024 * 1024 * 2;
[REDACTED] .MaxConcurrentRequests = 1024 * 1024;
[REDACTED] .TransferMode =
[REDACTED].TransferMode. [REDACTED];

```

### Answer:

```

class Program
{
    private static string _baseAddress = "http://localhost:8080/";

    static void Main(string[] args)
    {
        var config = new HttpSelfHostConfiguration(_baseAddress);
        config.Routes.MapHttpRoute(
            name: "DefaultApi",
            routeTemplate: "api/{controller}/{id}",
            defaults: new { id = RouteParameter.Optional }
        );
    }
}

[REDACTED] .MaxBufferSize = 1024 * 1024 * 2;
[REDACTED] .MaxConcurrentRequests = 1024 * 1024;
[REDACTED] .TransferMode =
[REDACTED].TransferMode. [REDACTED];
[REDACTED].TransferMode. [REDACTED];
[REDACTED];

```

```

var server = new HttpSelfHostServer(config);
server.OpenAsync().Wait();
}

```

**NO.95** You have a web server that hosts several web applications.

From Microsoft Visual Studio, you create an assembly that is signed.

You need to make the assembly available to all of the web applications on the web server. The

solution must minimize the number of copies of the assembly.

Which tool should you run?

- A.** gacutil.exe
- B.** sn.exe
- C.** tlbImp.exe
- D.** regasm.exe

**Answer:** B

Explanation:

Strong Name Scenario

The following scenario outlines the process of signing an assembly with a strong name and later referencing it by that name.

Assembly A is created with a strong name using one of the following methods:

References: <https://docs.microsoft.com/en-us/dotnet/framework/app-domains/create-and-use-strong-named-assemblies>

## NO.96 DRAG DROP

You are developing a web application that uses the Entity Framework.

You plan to use the table-per-type mapping strategy to store the following data.

```
public class Product
{
    public int ProductId {get; set;}
    public string Name {get; set;}
    public decimal UnitPrice {get; set;}
}

public class DiscontinuedProduct : Product
{
    public DateTime DiscontinuedDate {get; set;}
}
```

You need to implement a mapping strategy that will store the data.

How should you complete the code? To answer, drag the appropriate methods to the correct locations.

Each method may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

### Methods

Entity
OnModelCreating
MapHierarchy
ToTable
OnInit
ToTable

### Answer Area

```
protected override void Method (DbModelBuilder modelBuilder)
{
    modelBuilder. Method <Product>()
        .
        Method ("dbo.Products");
    modelBuilder. Method <DiscontinuedProduct>()
        .
        Method ("dbo. DiscontinuedProducts");
}
```

**Answer:**

Methods	Answer Area
Entity	<code>protected override void OnModelCreating (DbModelBuilder modelBuilder)</code>
MapHierarchy	<code>{ modelBuilder.Entity&lt;Product&gt;()</code>
ToList	<code>. ToTable ("dbo.Products");</code>
OnInit	<code>modelBuilder.Entity&lt;DiscontinuedProduct&gt;()</code>
ToTable	<code>. ToTable ("dbo.DiscontinuedProducts");</code>

Box 1: OnModelCreating

Box 2: Entity

Box 3: ToTable

Mapping an Entity Type to a Specific Table in the Database

Example:

All properties of Department will be mapped to columns in a table called t\_Department.

`modelBuilder.Entity<Department>()``ToTable("t_Department");`

Box 4: Entity

Box 5: ToTable

Mapping the Table-Per-Type (TPT) Inheritance

In the TPT mapping scenario, all types are mapped to individual tables. Properties that belong solely to a base type or derived type are stored in a table that maps to that type. Tables that map to derived types also store a foreign key that joins the derived table with the base table.

`modelBuilder.Entity<Course>().ToTable("Course");``modelBuilder.Entity<OnsiteCourse>().ToTable("OnsiteCourse");`References: [https://msdn.microsoft.com/en-us/library/jj591617\(v=vs.113\).aspx](https://msdn.microsoft.com/en-us/library/jj591617(v=vs.113).aspx)**NO.97 DRAG DROP**

You are developing an Internet-based ASP.NET Web API application that manages pet data.

You install an SSL certificate on the web server to encrypt calls to the API. You create a class named PetAuthorization, which inherits from a type named AuthorizeAttribute, and implements the OnAuthorization() method.

You need to implement basic authentication for the API.

What should you do? (To answer, drag the appropriate words to the correct targets in the answer area.)

Words may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content)

Words	Answer Area
<b>Forms</b>	Set the authentication mode in the web.config file to
<b>None</b>	<input type="text"/> Word , then apply the <input type="text"/> Word
<b>Windows</b>	attribute to the controller. Finally, add code to the AuthorizeAttribute to return a
<b>Authorize</b>	<input type="text"/> Word header in the case of a failed authentication.
<b>PetAuthorization</b>	
<b>SecurityPermission</b>	
<b>WWW-Authenticate</b>	
<b>Authorization</b>	
<b>Proxy-Authenticate</b>	
<b>Allow</b>	

**Answer:**

Set the authentication mode in the web.config file to

None , then apply the  PetAuthorization

attribute to the controller. Finally, add code to the AuthorizeAttribute to return a

WWW-Authenticate header in the case of a failed authentication.

**NO.98** You are developing an ASP.NET MVC application. The application has a page that searches for and displays an image stored in a database. Members of the EntityClient namespace are used to access an ADO.NET Entity Framework data model. Images and associated metadata are stored in a database table.

You need to run a query that returns only the image while minimizing the amount of data that is transmitted.

Which method of the EntityCommand type should you use?

- A.** ExecuteScalar
- B.** ExecuteDbDataReader
- C.** ExecuteReader
- D.** ExecuteNonQuery

**Answer:** A

ExecuteScalar

Executes the command, and returns the first column of the first row in the result set. Additional columns or rows are ignored.

**NO.99** You are developing an ASP.NET MVC application. The application has a page that updates an image stored in a database. Members of the EntityClient namespace are used to access an ADO.NET Entity Framework data model. Images and associated metadata are stored in a single database table. You need to run a single query that updates an image and associated metadata in the database while

returning only the number of affected rows.

Which method of the EntityCommand type should you use?

- A. ExecuteNonQuery()**
- B. ExecutScalar()**
- C. ExecuteDbDataReader()**
- D. ExecuteReader()**

**Answer:** A

**NO.100** You are developing an ASP.NET MVC application that displays a report. The report includes large images that are stored in a database. Members of the EntityClient namespace are used to access the database through the ADO.NET Entity Framework data model.

You need to prevent memory exceptions while generating a report using the EntityDataReader type. Which CommandBehavior type should you use?

- A. FastForwardReadOnly**
- B. SequentialAccess**
- C. SingleResult**
- D. SingleRow**

**Answer:** B

SequentialAccess

Provides a way for the DataReader to handle rows that contain columns with large binary values.

Rather than loading the entire row, SequentialAccess enables the DataReader to load data as a stream.

**NO.101** You are designing an ASP.NET Web API application.

You need to select an HTTP verb to allow blog administrators to moderate a comment.

Which HTTP verb should you use?

- A. GET**
- B. POST**
- C. DELETE**
- D. PUT**

**Answer:** D

**NO.102 DRAG DROP**

You are developing the following applications. All applications will be hosted in Azure and data will be stored using Azure storage.

Application	Description and requirements
Logging	Store log files from various systems. Logs must not be deleted or changed and must be stored for a defined period of time
VM Manager	Store various virtual machine images in VHD format. The images support virtual machines with various operating systems.
Accounting	Store large Microsoft Excel workbooks.

All data must be stored using the binary large object (blob) hot storage tier.

You need to select the blob storage type for each application.

Which blob storage types should you use? To answer, drag the appropriate blob types to the correct

applications. Each blob type may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

## Storage types

block blob    append blob    page blob

## Answer Area

Application	Blob Type
-------------	-----------

Logging	Storage type
---------	--------------

VM Manager	Storage type
------------	--------------

Accounting	Storage type
------------	--------------

**Answer:**

## Answer Area

Application	Blob Type
-------------	-----------

Logging	append blob
---------	-------------

VM Manager	block blob
------------	------------

Accounting	page blob
------------	-----------

Box 1 Logging: append blob

An append blob is comprised of blocks and is optimized for append operations. When you modify an append blob, blocks are added to the end of the blob only, via the Append Block operation.

Box 2 VM Manager: block blob

Block blobs let you upload large blobs efficiently.

Box 3: Accounting: page blob

Page blobs are a collection of 512-byte pages optimized for random read and write operations.

References: <https://docs.microsoft.com/en-us/rest/api/storageservices/understanding-block-blobs--append-blobs--and-page-blobs>

**NO.103** You need to configure DNS for the Event service.

How many DNS entries should you create?

- A. 1
- B. 2
- C. 3
- D. 4

**Answer:** C

Explanation:

Scenario: Regional access to the Event Service API

Data for partners in Germany and Brazil must be served from Azure datacenters in their respective

geographies unless there is a regional Azure outage. All other partners must use the US West Azure datacenter.

**NO.104** You deploy a RESTful ASP.NET Web API to manage order processing.

You are developing an Azure App Services Web App to consume the API and allow customers to order products. You use the HttpClient object to process order entries. The API throws SocketException errors when the Web App experiences a high volume of concurrent users.

You need to resolve the errors.

What should you do?

- A. Implement a Using statement block when declaring the HttpClient object.
- B. Increase the value of the Timeout property when declaring the HttpClient object.
- C. Use the static modifier to declare the HttpClient object.
- D. Create a new HttpClient instance for each API request and use asynchronous method calls.

**Answer:** C

Explanation:

If the class that wraps the external resource is shareable and thread-safe, create a shared singleton instance or a pool of reusable instances of the class.

The following example uses a static HttpClient instance, thus sharing the connection across all requests.

```
public class SingleHttpClientInstanceController : ApiController
{
    private static readonly HttpClient httpClient;
    static SingleHttpClientInstanceController()
    {
        httpClient = new HttpClient();
    }
    // This method uses the shared instance of HttpClient for every call to GetProductAsync.
    public async Task<Product> GetProductAsync(string id)
    {
        var hostName = HttpContext.Current.Request.Url.Host;
        var result = await httpClient.GetStringAsync(string.Format("http://{0}:8080/api/", hostName));
        return new Product { Name = result };
    }
}
```

References: <https://docs.microsoft.com/en-us/azure/architecture/antipatterns/improper-instantiation/>

**NO.105 DRAG DROP**

You are developing an ASP.NET Web API action method.

The action method must return the following JSON in the message body.

{" Name ":" Fabrikam", "Vendor Id": 9823, "Items": ["Apples", "Oranges"] } You need to return an anonymous object that is serialized to JSON.

What should you do? (To answer, drag the appropriate code segments to the correct location or locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

**Answer Area**

```
public object Get()
{
    {
        Name = 
        Items = 
    };
}
```

**Answer:**

Box 1: return new List&lt;string&gt;

Box 2: "Fabrikam", VendorNumber=9823,

Box 3: new list&lt;string&gt;{"Apples", "oranges"}

**NO.106 DRAG DROP**

You are developing a WCF service. The service will stream messages to clients on the internal network.

You must use Windows Authentication, and all messages must be binary encoded.

You need to configure the service.

What should you do? (To answer, drag the appropriate elements to the correct location or locations in the answer area. Each element may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

**Answer Area**

```
<system.serviceModel>
    <bindings>
        <!--  -->
        <binding>
            <security  />
        </binding>
        </!--  -->
    </bindings>
</system.serviceModel>
```

**Answer:**

```
<system.serviceModel>
  <bindings>

    < netTcpBinding >
      <binding>
        <security mode="Transport" />
      </binding>
    </ netTcpBinding >

    </bindings>
  </system.serviceModel>
```

**NO.107** You are developing an ASP.NET MVC application.

Deployment administrators do not have access to Visual Studio 2012, but will have the elevated permissions required to deploy the application to the servers.

You need to select a deployment tool for use by the deployment administrators.

Which tool should you use?

- A.** Publish Web Site Tool
- B.** Web Deployment Package
- C.** One-Click Publish
- D.** Deployment Package Editor

**Answer:** B

**NO.108 DRAG DROP**

You are developing a WCF service application.

The application must meet the following requirements:

Operations must have 30 second timeouts.

The service must have a transaction scope.

Transactions must flow from the client to the server.

You need to write a transactional service contract and implementation class to meet the requirements.

You have the following code:

```

Target 1
interface ITransactionalService
{
    [OperationContract]
Target 2
    Guid Foo (string x1, int x2);
}
Target 3
public class TransactionService: ITransactionalService
{
    Target 4
    public Guid Foo (string x1, int x2)
    {
        throw new NotImplementedException ();
    }
}

```

Which code segments should you include in Target 1, Target 2, Target 3 and Target 4 to complete the code? {To answer, drag the appropriate code segments to the correct targets in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

#### Code Segments

[TransactionFlow(TransactionFlowOption.Allowed)]
[TransactionFlow(TransactionFlowOption.Mandatory)]
[OperationBehavior(TransactionScopeRequired = true)]
[OperationBehavior(TransactionScope.Required)]
[ServiceBehavior(TransactionTimeout = "00:00:30")]
[ServiceBehavior(TransactionTimeout = 30)]
[ServiceContract]

#### Answer Area

Target 1:

Code Segment

Target 2:

Code Segment

Target 3:

Code Segment

Target 4:

Code Segment

#### Answer:

Target 1:

[ServiceContract]

Target 2:

[TransactionFlow(TransactionFlowOption.Mandatory)]

Target 3:

[ServiceBehavior(TransactionTimeout = "00:00:30")]

Target 4:

[OperationBehavior(TransactionScopeRequired = true)]

**NO.109** You are developing an ASP.NET MVC application. The application is an order processing

system that uses the ADO.NET Entity Framework against a SQL Server database. It has a controller that loads a page that displays all orders along with customer information. Lazy loading has been disabled.

The Order class is shown below.

```
public partial class Order
{
    ...
    public string CustomerID { get; set; }
    ...
    public virtual Customer Customer { get; set; }
}
```

You need to return the orders and customer information in a single round trip to the database.

Which code segment should you use?

- C A. 

```
public ActionResult Index()
{
    IQueryable<Order> orders = db.Orders;
    orders = orders.Include("Customer");
    return View(orders.ToList());
}
```
- C B. 

```
public ActionResult Index()
{
    IQueryable<Order> orders = db.Orders.Include("Order.Customer");
    return View(orders.ToList());
}
```
- C C. 

```
public ActionResult Index()
{
    IQueryable<Order> orders = db.Orders;
    orders.Select(o => o.Customer).Load();
    return View(orders.ToList());
}
```
- C D. 

```
public ActionResult Index()
{
    IQueryable<Order> orders = db.Orders;
    return View(orders.ToList());
}
```

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Answer:** A

**NO.110** Errors occasionally occur when saving data using the FlightInfoContext ADO.NET Entity Framework context. Updates to the data are being lost when an error occurs.

You need to ensure that data is still saved when an error occurs by retrying the operation. No more than five retries should be performed.

With which code segment should you replace the body of the SaveChanges() method in the FlightInfoContext.cs file?

```

C A. var result = FlightInfo.SqlQuery("UPDATE WITH RETRY", FlightInfo, "IsTransient", 5);
if (result.Count() > 5)
{
    result.AsNoTracking();
    return -1;
}
return 0;

C B. try
{
    return base.SaveChanges();
}
catch (EntityCommandExecutionException ex)
{
    if (ex.Data.Keys.Cast<int>().Any(x => IsTransient(x)))
    {
        return 5 & SaveChanges();
    }
    return -1;
}

C C. for (var i = 0; i < 5; i++)
{
    try
    {
        return base.SaveChanges();
    }
    catch (SqlException ex)
    {
        if (IsTransient(ex.Number))
        {
            continue;
        }
    }
}
return base.SaveChanges();

C D. var exception = new EntitySqlException();
while (exception.HResult != 0 && exception.Data.Count < 5)
{
    try
    {
        return base.SaveChanges();
    }
    catch (EntitySqlException ex)
    {
        if (IsTransient(ex.HResult))
        {
            exception = ex;
        }
    }
}
return base.SaveChanges();

```

- A.** Option A  
**B.** Option B  
**C.** Option C  
**D.** Option D

**Answer:** C

Explanation/Reference:

EntitySqlException: Represents errors that occur when parsing Entity SQL command text. This exception is thrown when syntactic or semantic rules are violated.

SqlException: The exception that is thrown when SQL Server returns a warning or error. This class

cannot be inherited.

EntityCommandExecutionException : Represents errors that occur when the underlying storage provider could not execute the specified command. This exception usually wraps a provider-specific exception.

## NO.111 DRAG DROP

The service has been deployed to Windows Azure.

Trey Research has provided version 1.3.0.0 of the assembly to support a change in the serialization format. The service must remain available during the transition to the new serialization format.

You need to ensure that the service is using the new assembly.

Which configuration setting should you add to the web.config? (To answer, drag the appropriate configuration elements to the correct location or locations in the answer area. Each configuration element may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

codeBase version="1.3.0.0" href="Trey.Serialization.dll"

bindingRedirect oldVersion="1.2.5.0" newVersion="1.3.0.0"

bindingRedirect oldVersion="1.2.0.0" newVersion="1.3.0.0"

runtime

location

<  >

<assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">  
  <dependentAssembly>  
    <assemblyIdentity name="Trey.Serialization" />

<  >

  </dependentAssembly>  
</assemblyBinding>

</  >

**Answer:**

```

< runtime >
  <assemblyBinding xmlns="urn:schemas-microsoft-com:asm.v1">
    <dependentAssembly>
      <assemblyIdentity name="Trey.Serialization" />

      < bindingRedirect oldVersion="1.2.0.0" newVersion="1.3.0.0" >
        </bindingRedirect>
      </dependentAssembly>
    </assemblyBinding>
  </ runtime >

```

See: <http://msdn.microsoft.com/en-us/library/7wd6ex19.aspx>

## NO.112 DRAG DROP

You need to add code at line SU10 to ensure that event validation can occur.

How should you complete the code? To answer, drag the appropriate code segments to the correct locations. Each code segment may be used once, more than once, or not at all. You may need to split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

Code Segments	Answer Area
DirectoryInfo	services.AddSingleton< Code Segment , Code Segment >(sp=>
IFileProvider	Code Segment (sp.GetService< Code Segment >().ContentRootPath);
IFileInfo	) ;
PhysicalFileProvider	
EmbeddedFileProvider	
CompositeFileProvider	
IHostingEnvironment	
IAplicationBuilder	

### Answer:

**Answer Area**

```

services.AddSingleton< IApplicationBuilder , IHostingEnvironment >(sp=>
{
  return new IApplicationBuilder (sp.GetService< IHostingEnvironment >().ContentRootPath);
});

```

## NO.113 DRAG DROP

Flight information data provided by Margie's Travel is updated both locally and remotely. When the data is synced, all changes need to be merged together without causing any data loss or corruption. You need to implement the Sync() method in the MargiesTravelSync.es file.

What should you do? (To answer, drag the appropriate code segments to the correct location or locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

**Answer Area**

```

public void Sync()
{
    var sendStream = SendStream();
    var receiveStream = ReceiveStream();
    var local = LoadLocal();

    local.WriteXml(sendStream, XmlWriteMode.DiffGram);
    local.ReadXml(receiveStream, XmlReadMode.DiffGram);
}

```

**Answer:**

```

public void Sync()
{
    var sendStream = SendStream();
    var receiveStream = ReceiveStream();
    var local = LoadLocal();

    local.WriteXml(sendStream, XmlWriteMode.DiffGram);
    local.ReadXml(receiveStream, XmlReadMode.DiffGram);
}

```

<http://msdn.microsoft.com/en-us/library/ms135424.aspx>

**NO.114 DRAG DROP**

You are designing a service layer endpoint named EndPoint1 that will read more than one million rows from a database named DB1, and then update several rows in multiple tables in a database named DB2.

You need to identify a data access strategy that meets the following requirements:

Uses the OData protocol to retrieve data from EndPoint1

Creates a strongly typed object based on the table in BD2

Retrieves data from DB1 as quickly as possible, while minimizing memory use on the application server

What should you identify for each requirement? To answer, drag the appropriate data access strategies to the correct requirements. Each data access strategy may be used once, more than once, or not at all.

You may need to drag the split bar between panes or scroll to view content.

**Data Access Strategies****Answer area**

ADO.NET Entity Framework

Uses the OData protocol to retrieve data from EndPoint1:

**Data access strategy**

ADO.NET SqlDataAdapter

Creates a strongly typed object based on the table in DB2:

**Data access strategy**

ADO.NET SqlDataReader

Retrieves data from DB1 as quickly as possible, while minimizing memory use on the application server:

**Data access strategy**

NetTcpBinding binding

WCF Data Services

**Answer:**

**Data Access Strategies****Answer area**

ADO.NET Entity Framework

Uses the OData protocol to retrieve data from EndPoint1:

WCF Data Services

ADO.NET SqlDataAdapter

Creates a strongly typed object based on the table in DB2:

ADO.NET SqlDataAdapter

ADO.NET SqlDataReader

Retrieves data from DB1 as quickly as possible, while minimizing memory use on the application server:

ADO.NET SqlDataReader

NetTcpBinding binding

WCF Data Services

## References:

<https://docs.microsoft.com/en-us/dotnet/framework/data/wcf/wcf-data-services-overview><https://docs.microsoft.com/en-us/dotnet/framework/data/adonet/populating-a-dataset-from-a-dataadapter><https://docs.microsoft.com/en-us/dotnet/framework/data/adonet/retrieving-data-using-a-datareader>**NO.115** You need to load flight information provided by Consolidated Messenger.

What should you use?

- A.** Office Open XML
- B.** COM interop
- C.** OleDbConnection and OleDbDataReader
- D.** EntityConnection and EntityDataReader

**Answer:** C**NO.116 HOTSPOT**

You plan to create several .NET applications that will read from Microsoft SQL Server 2014 databases by using Microsoft ADO.NET.

The relevant requirements for the applications are described in the following table.

Application name	Requirement
App1	Will populate three lists from a SQL Server table. The returned lists must have a specific sort order.
App2	Will populate the data from a SQL Server table to a custom list of objects.
App3	Will bind to a GridView and will maintain data in view state. Users will modify the data by using the GridView.

Typically, the applications will read thousands of rows of data at a time.

You need to identify which object to use to retrieve data for each application. The solution must minimize the amount of memory used on the application server.

What should you identify? To answer, select the appropriate options in the answer area.

## Answer Area

App1:

DataAdapter
DataReader

App2:

DataAdapter
DataReader

App3:

DataAdapter
DataReader

*Answer:*

## Answer Area

App1:

DataAdapter
DataReader

App2:

DataAdapter
DataReader

App3:

DataAdapter
DataReader

App1: DataReader

App2: DataReader

App3: DataAdapter

Need to use a DataAdapter since the data could be modified.

Note:

You can use the ADO.NET DataReader to retrieve a read-only, forward-only stream of data from a database. Results are returned as the query executes, and are stored in the network buffer on the client until you request them using the Read method of the DataReader. Using the DataReader can increase application performance both by retrieving data as soon as it is available, and (by default) storing only one row at a time in memory, reducing system overhead.

A DataAdapter is used to retrieve data from a data source and populate tables within a DataSet. The DataAdapter also resolves changes made to the DataSet back to the data source. The DataAdapter uses the Connection object of the .NET Framework data provider to connect to a data source, and it uses Command objects to retrieve data from and resolve changes to the data source.

References: <https://docs.microsoft.com/en-us/dotnet/framework/data/adonet/dataadapters-and-datareaders>

## NO.117 DRAG DROP

You have an application that uses an Entity Framework context. Lazy loading is disabled for the context.

The application uses an Azure SQL Database named Students.

You need to retrieve the courses of a student who has an ID of 100. The solution must use lazy loading.

Which five code blocks should you use? Develop the solution by selecting and arranging the required code blocks in the correct order.

NOTE: You will not need all of the code blocks.

## Code Blocks

```
context.Entry(student).Collection(s =>  
    s.Courses).Load();
```

```
Student student = students.Where(s =>  
    s.StudentID == 100).FirstOrDefault<Student>();
```

```
using (var context = new SchoolEntities())  
{
```

```
IList<Student> Students =  
    context.Students.ToList<Student>();
```

```
foreach (var course in student.Courses)  
    Console.WriteLine(student.Course.Name);  
}
```

```
IList<Student> students =  
    context.Students.Include  
        ("Courses").ToList<Student>();
```

```
foreach (var course in student.Courses)  
    Console.WriteLine(course.CourseName);  
}
```

```
context.Entry(student).Collection(s =>  
    s.Courses);
```

## Answer Area



**Answer:**

## Code Blocks

```
foreach (var course in student.Courses)
Console.WriteLine(student.Course.Name);
}
```

```
IList<Student> students =
context.Students.Include
("Courses").ToList<Student>();
```

```
context.Entry(student).Collection(s =>
s.Courses);
```

## Answer Area

```
using (var context = new SchoolEntities())
{
```

```
Student student = students.Where(s =>
s.StudentID == 100).FirstOrDefault<Student>();
```



```
foreach (var course in student.Courses)
Console.WriteLine(course.CourseName);
}
```

```
IList<Student> Students =
context.Students.ToList<Student>();
```

```
context.Entry(student).Collection(s =>
s.Courses).Load();
```



References: <http://www.entityframeworktutorial.net/Querying-with-EDM.aspx>

**NO.118** You are adding a new REST service endpoint to the FlightDataController controller. It returns flights from the consolidated data sources only for flights that are late.

You need to write a LINQ to Entities query to extract the required dat

a.

Which code segment should you use?

- C A. `var historical = LoadHistorical();  
 var query = _Context.FlightInfo.AsQueryable()  
 .Join(historical, x => x.Flight, y => y.Flight, (x, y) => new { Current = x,  
 Historical = y })  
 .Where(x => x.Historical.WasLate)  
 .Select(x => x.Current);`
- C B. `var historical = LoadHistorical();  
 var query = _Context.FlightInfo.AsEnumerable()  
 .Where(x => historical.All(y => y.WasLate && x.Flight == y.Flight))  
 .Select(x => x);`
- C C. `var historical = LoadHistorical();  
 var query = _Context.FlightInfo.AsQueryable()  
 .Where(x => historical.Select(y => y.Flight).Contains(x.Flight))  
 .Where(x => historical.Any(y => y.WasLate))  
 .Select(x => x);`
- C D. `var historical = LoadHistorical();  
 var query = _Context.FlightInfo.AsEnumerable()  
 .Join(historical, x => x.Flight, y => y.Flight, (x, y) => new { Current = x,  
 Historical = y })  
 .Where(x => x.Historical.WasLate)  
 .Select(x => x.Current);`

**A.** Option A**B.** Option B**C.** Option C**D.** Option D**Answer:** D

Explanation/Reference:

D is right because you send result as REST so if you use "AsQueryable" the result is deferred to the next enumeration of your result.

D is not optimized but will works.

A will break at runtime.

Credits to Rem

## NO.119 DRAG DROP

You are developing an ASP.NET MVC Web API application.

The methods of the Web API must return details about the result of the operation.

You need to create methods to update and delete products.

You have the following code:

```

public void PutProduct (int id, Product contact)
{
    contact.Id = id;
    if (!repository.Update(contact))
    {
        throw new Target 1 (
            new Target 2 (
                HttpStatusCode, Target 3 ));
    }
}
public HttpResponseMessage DeleteProduct (int id)
{
    repository.Remove (id);
    return new Target 4 (
        HttpStatusCode, Target 5 );
}

```

Which code segments should you include in Target 1, Target 2, Target 3, Target 4 and Target 5 to complete the code? (To answer, drag the appropriate code segments to the correct targets in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

Code Segments	Answer Area
HttpResponseException	Target 1: <input type="text"/>
HttpResponseMessage	Target 2: <input type="text"/>
NotFound	Target 3: <input type="text"/>
NoContent	Target 4: <input type="text"/>
	Target 5: <input type="text"/>

### Answer:

Target 1:	<input type="text"/> HttpResponseException
Target 2:	<input type="text"/> HttpResponseMessage
Target 3:	<input type="text"/> NotFound
Target 4:	<input type="text"/> HttpResponseMessage
Target 5:	<input type="text"/> NoContent

### NO.120

You are building an ADO.NET Entity Framework application.

You need to validate the conceptual schema definition language (CSDL), store schema definition language (SSDL), and mapping specification language (MSL) files.

Which Entity Data Model tool can you use? (Each correct answer presents a complete solution. Choose all that apply.)

- A.** EDM Generator (EdmGen.exe)
- B.** ADO.NET Entity Data Model Designer
- C.** Entity Data Model Wizard
- D.** Update Model Wizard

**Answer:** AB

**NO.121** Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You develop a REST API that uses Node.js. The API will store data in Azure Cosmos DB. You plan to deploy the API to a new Azure App Services Web App. You create a new Web App by using the Azure portal.

The API must be deployed by using SFTP.

You need to provide the proper deployment credentials to deploy the API.

Solution: Use your assigned Azure Active Directory (Azure AD) credentials.

Does the solution meet the goal?

**A.** Yes

**B.** No

**Answer:** B

Explanation:

Get FTP publishing profile and query for publish URL and credentials.

References: <https://docs.microsoft.com/en-us/azure/app-service/scripts/app-service-cli-deploy-ftp>

## **NO.122 DRAG DROP**

You manage an ASP.NET Core E-Commerce application that is deployed to Azure App Service. You plan to use Application Insights for collecting telemetry data.

You must prepare a report that describes utilization patterns of users. The report must include the following information:

the Country or Region from which users access the application

how often and for how long users browse the catalog

how many Canadian customers visited the offers page

how much time Premium customers spend on the support page

the percentage of users that added items to a shopping cart and completed purchases You need to collect the required data.

Which tool should you use? To answer, drag the appropriate tools to the correct requirements. Each tool may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

NOTE: Each correct selection is worth one point.

**Tools**

Session	Cohorts
Funnels	Retention
Trends	Users

**Answer Area**

Report section	Application insights tool
Geography	Tool
Feature usage	Tool
Canada offers	Tool
Premium support	Tool
Buyer behavior	Tool

**Answer:****Answer Area**

Report section	Application insights tool
Geography	Users
Feature usage	Session
Canada offers	Cohorts
Premium support	Cohorts
Buyer behavior	Funnels

Box 1 Geography: Users

"the Country or Region from which users access the application"

The Users panel allows you to understand important details about your users in a variety of ways. You can use this panel to understand such information as where your users are connecting from, details of their client, and what areas of your application they're accessing.

Box 2: Feature usage: Session

" how often and for how long users browse the catalog"

The Sessions panel is similar to the Users panel. Where Users helps you understand details about the users accessing your application, Sessions helps you understand how those users used your application.

Box 3 Canada Offers: Cohorts

" how many Canadian customers visited the offers page"

A Cohort is a set of users grouped on similar characteristics. You can use cohorts to filter data in other panels allowing you to analyze particular groups of users. For example, you might want to analyze only users who completed a purchase, or users from Canada.

#### Box 4 Premium support: Cohorts

"how much time Premium customers spend on the support page"

A Cohort is a set of users grouped on similar characteristics. You can use cohorts to filter data in other panels allowing you to analyze particular groups of users. For example, you might want to analyze only users who completed a purchase, or users from Canada.

#### Box 5: Buyer behavior: Funnels

"the percentage of users that added items to a shopping cart and completed purchases" Funnels focus on what you want users to do. A funnel represents a set of steps in your application and the percentage of users who move between steps. For example, you could create a funnel that measures the percentage of users who connect to your application who search product. You can then see the percentage of users who add that product to a shopping cart, and then the percentage of those who complete a purchase.

**NO.123** You are developing an order processing application that uses the ADO.NET Entity Framework against a SQL Server database. Lazy loading has been disabled. The application displays orders and their associated order details. Order details are filtered based on the category of the product in each order.

The Order class is shown below.

```
public partial class Order
{
    ...
    public int OrderID { get; set; }
    ...
    public virtual ICollection<OrderDetail> OrderDetails { get; set; }
    ...
}
```

The OrderDetail class is shown below.

```
public partial class OrderDetail
{
    [Key, Column(Order = 1)]
    public int OrderID { get; set; }
    [Key, Column(Order = 2)]
    public int ProductID { get; set; }
    ...
    public virtual Order Order { get; set; }
    public virtual Product Product { get; set; }
}
```

The Product class is shown below.

```
public partial class Product
{
    ...
    public int ProductID { get; set; }
    public string ProductName { get; set; }
    ...
    public Nullable<int> CategoryID { get; set; }
    ...
    public virtual Category Category { get; set; }
    ...
}
```

The Category class is shown below.

The **Category** class is shown below.

```
public partial class Category
{
    ...
    public int CategoryID { get; set; }
    public string CategoryName { get; set; }
    ...
    public virtual ICollection<Product> Products { get; set; }
}
```

You need to return orders with their filtered list of order details included in a single round trip to the database.

Which code segment should you use?

- A. `var orders = db.Orders.SelectMany(o => o.OrderDetails.
 Where(od => od.Product.Category.CategoryName == categoryName)).
 Select(od => new { order = od.Order, detail = od }).
 Select(r => r.order);`
- B. `var orders = db.Orders.SelectMany(o => o.OrderDetails.
 Where(od => od.Product.Category.CategoryName == categoryName)).
 Select(od => new { order = od.Order, detail = od }).ToList().
 Select(r => r.order);`
- C. `var orderDetails = db.Orders.SelectMany(o => o.OrderDetails.
 Where(od => od.Product.Category.CategoryName == categoryName)).ToList();
List<int> orderIDs = orderDetails.Select(od => od.OrderID).ToList();
var orders = db.Orders.Where(o => orderIDs.Contains(o.OrderID));`
- D. `var orderDetails = db.Orders.SelectMany(o => o.OrderDetails.
 Where(od => od.Product.Category.CategoryName == categoryName));
List<int> orderIDs = orderDetails.Select(od => od.OrderID).ToList();
var orders = db.Orders.Where(o => orderIDs.Contains(o.OrderID));`

A. Option A

B. Option B

C. Option C

D. Option D

**Answer:** C

Eager loading is the process whereby a query for one type of entity also loads related entities as part of the query. Eager loading is achieved by use of the `Include` method. For example, the queries below will load blogs and all the posts related to each blog.

`using (var context = new BloggingContext())`

```
{
// Load all blogs and related posts
var blogs1 = context.Blogs
Include(b => b.Posts)
ToList();
```

It is also possible to eagerly load multiple levels of related entities.

References: [https://msdn.microsoft.com/en-us/library/jj574232\(v=vs.113\).aspx](https://msdn.microsoft.com/en-us/library/jj574232(v=vs.113).aspx)

**NO.124** Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question

sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You have developed a .NET Standard Library.

You need to produce a NuGet package.

Solution: Run the NuGet pack command

Does the solution meet the goal?

**A.** Yes

**B.** No

**Answer:** A

Explanation:

Package the component with the NuGet pack command, for example:

nuget pack AppLogger.nuspec

This generates AppLogger.YOUR\_NAME.1.0.0.nupkg.

References: <https://docs.microsoft.com/en-us/nuget/guides/create-net-standard-packages-vs2015>

## NO.125 HOTSPOT

You are creating an application that retrieves Microsoft SQL Server data from two tables named Product and ProductModel.

You need to store in two separate lists all the names of the products and the product models for later use by the application.

How should you complete the code? To answer, select the appropriate options in the answer area.

NOTE: Each correct selection is worth one point.

## Answer Area

```

List<string> productNames = new List<string>();
List<string> productModelNames = new List<string>();

using (SqlConnection connection = new SqlConnection
(connectionString))
{
    connection.Open();
    string sql = 
        "SELECT" FROM Product; SELECT" FROM ProductModel";
        "SELECT" FROM PRODUCT UNION SELECT" FROM ProductModel";
        "SELECT" FROM Product UNION ALL SELECT" FROM ProductModel";

    SqlCommand command = new SqlCommand(sql, connection);
    using (SqlDataReader reader = command.ExecuteReader())
    {
        while (reader.HasRows)
        {
            (reader.NextResult())
            (reader.Read())
        }

        productNames.Add(reader[1].ToString());
    }

    reader.GetOrdinal("ProductModel");
    reader.NextResult();
    reader.Read();

    while (reader.HasRows)
    {
        (reader.NextResult())
        (reader.Read())
    }

    productModelNames.Add(reader[1].ToString());
}
}

```

**Answer:**

## Answer Area

```

List<string> productNames = new List<string>();
List<string> productModelNames = new List<string> ();

using (SqlConnection connection = new SqlConnection
(connectionString))
{
    connection.Open();
    string sql =
        "SELECT" FROM Product; SELECT" FROM ProductModel";
        "SELECT" FROM PRODUCT UNION SELECT" FROM ProductModel";
        "SELECT" FROM Product UNION ALL SELECT" FROM ProductModel";

    SqlCommand command = new SqlCommand(sql, connection);
    using (SqlDataReader reader = command.ExecuteReader())
    {
        while (reader.HasRows)
        {
            reader.NextResult();
            (reader.Read());
            productNames.Add(reader[1].ToString());
        }

        reader.GetOrdinal("ProductModel");
        reader.NextResult();
        reader.Read();

        while (reader.HasRows)
        {
            reader.NextResult();
            (reader.Read());
            productModelNames.Add(reader[1].ToString());
        }
    }
}

```

Box 1:

Two Select statements to get two results.

Box 2: (Reader.Read());

The SqlDataReader.Read Method advances the SqlDataReader to the next record. The default position of the SqlDataReader is before the first record. Therefore, you must call Read to begin accessing any data.

Return Value

Type: System.Boolean

true if there are more rows; otherwise false.

Box 3: Reader.NextResult();

The SqlDataReader.NextResult method advances the data reader to the next result, when reading the results of batch Transact-SQL statements. Used to process multiple results, which can be generated

by executing batch Transact-SQL statements.

By default, the data reader is positioned on the first result.

Box 4: (Reader.Read());

References: [https://msdn.microsoft.com/en-us/library/system.data.sqlclient.sqldatareader.nextresult\(v=vs.110\).aspx](https://msdn.microsoft.com/en-us/library/system.data.sqlclient.sqldatareader.nextresult(v=vs.110).aspx)

**NO.126** Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution.

After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You develop a REST API that uses Node.js. The API will store data in Azure Cosmos DB. You plan to deploy the API to a new Azure App Services Web App. You create a new Web App by using the Azure portal.

The API must be deployed by using SFTP.

You need to provide the proper deployment credentials to deploy the API.

Solution: Use your Azure Cosmos DB master key and resource token.

Does the solution meet the goal?

**A.** Yes

**B.** No

**Answer:** B

Explanation:

Get FTP publishing profile and query for publish URL and credentials

References: <https://docs.microsoft.com/en-us/azure/app-service/scripts/app-service-cli-deploy-ftp>

## **NO.127 DRAG DROP**

You are creating a WCF service.

The service endpoints must be exposed to the Windows Azure Service Bus. The service bus has a namespace named RestaurantSB. The key provider is "owner".

You need to modify the web.config file to expose the endpoints.

How should you modify the file? (To answer, drag the appropriate attributes to the correct location or locations in the answer area. Each attribute may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

## Answer Area

```

issuerName
Contract
issuerKey
User
issuerSecret

<services>
  <service name="RestaurantService.MenuService">
    <endpoint Contract="RestaurantService.IMenuService"
               binding="netTcpRelayBinding"
               address="sb://RestaurantServiceBus.servicebus.windows.net/Menu"
               behaviorConfiguration="sbBehavior"/>
  </service>
</services>
<behaviors>
  <endpointBehaviors>
    <behavior name="sbBehavior">
      <transportClientEndpointBehavior>
        <tokenProvider>
          <sharedSecret
            issuerName="owner"
            issuerSecret="1oAFgNsbaN8+UIN737K="/>
        </tokenProvider>
      </transportClientEndpointBehavior>
    </behavior>
  </endpointBehaviors>
</behaviors>

```

**Answer:**

```

<services>
  <service name="RestaurantService.MenuService">
    <endpoint Contract="RestaurantService.IMenuService"
               binding="netTcpRelayBinding"
               address="sb://RestaurantServiceBus.servicebus.windows.net/Menu"
               behaviorConfiguration="sbBehavior"/>
  </service>
</services>
<behaviors>
  <endpointBehaviors>
    <behavior name="sbBehavior">
      <transportClientEndpointBehavior>
        <tokenProvider>
          <sharedSecret
            issuerName="owner"
            issuerSecret="1oAFgNsbaN8+UIN737K="/>
        </tokenProvider>
      </transportClientEndpointBehavior>
    </behavior>
  </endpointBehaviors>
</behaviors>

```

**NO.128** Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You are developing a RESTful API that uses ASP.NET Core. You plan to host the API in Azure App Services.

You provision a development environment in the application service.

Developers must be able to deploy the API to the development environment. You must not share the Azure account credentials with developers.

You need to ensure that developers can deploy the API to the development environment.

Solution: Add the developers to the same Azure Active Directory (Azure AD) as the Azure subscription in which the App Service is provisioned. Use XCopy to deploy to the App Service.

Does the solution meet the goal?

A. Yes

B. No

**Answer:** B

Explanation:

You should use a Publishing Profile with Microsoft Visual Studio Publishing.

References: [https://msdn.microsoft.com/en-us/library/dd465337\(v=vs.110\).aspx](https://msdn.microsoft.com/en-us/library/dd465337(v=vs.110).aspx)

**NO.129** Note: This question is part of a series of questions that present the same scenario. Each question in the series contains a unique solution that might meet the stated goals. Some question sets might have more than one correct solution, while others might not have a correct solution. After you answer a question in this section, you will NOT be able to return to it. As a result, these questions will not appear in the review screen.

You need to ensure that testing, development, and end user access requirements are met.

Solution: Move the Web App backend to a private VNet.

Does the solution meet the goal?

A. Yes

B. No

**Answer:** A

Explanation:

Scenario: All testing must interact directly with the Web App backend. Automated testing of the solution is performed using a remote third-party testing solution.

**NO.130 HOTSPOT**

You are developing an ASP.NET MVC application. It is ready for deployment to the production web server.

A local SQL Express .MDF file was used by the application during development. The deployment has the following requirements:

The deployment must merge the assemblies on the local machine with those on the host.

The deployment must publish the local database to the remote Microsoft SQL server.

You need to configure the web package settings for deployment.

Which settings should you use? (To answer, select the appropriate setting or settings in the answer

area.)

Package/Publish enables you to deploy your Web application to Web servers.

[Learn more about Package/Publish Web](#)

Items to deploy (applies to all deployment methods)

Only files needed to run this application	
All files in this project	
All files in this project folder	

- Exclude generated debug symbols
- Exclude files from the App\_Data folder
- Precompile this application before publishing

Items to deploy (applies to Web Deploy only)

- Include all databases configured in Package/Publish SQL tab [Open Settings](#)
- Include IIS settings as configured in IIS Express
- Include application pool settings used by this Web project

### Answer:

Package/Publish enables you to deploy your Web application to Web servers.

[Learn more about Package/Publish Web](#)

Items to deploy (applies to all deployment methods)

Only files needed to run this application	
All files in this project	
All files in this project folder	

- Exclude generated debug symbols
- Exclude files from the App\_Data folder
- Precompile this application before publishing

Items to deploy (applies to Web Deploy only)

- Include all databases configured in Package/Publish SQL tab [Open Settings](#)
- Include IIS settings as configured in IIS Express
- Include application pool settings used by this Web project

**NO.131** You are developing a .NET application that uses the HttpClient type to call an ASP.NET Web API application. The API call returns a list of customers in JSON format and logs the results.

The URI for the API call is in a variable named address.

You need to make the API call without blocking.

Which code segment should you use?

- Ⓐ `HttpClient client = new HttpClient();  
client.GetAsync(address).ContinueWith(  
 (task) =>  
 {  
 task.Result.Content.ReadAsAsync<JsonArray>().ContinueWith(  
 (readTask) =>  
 {  
 foreach (var value in readTask.Result)  
 {  
 Logger(value.ToString());  
 }  
 }  
 );  
 }  
);`
- Ⓑ `HttpClient client = new HttpClient();  
var task = client.GetAsync(address).Result;  
  
var readTask = task.Content.ReadAsAsync<JsonObject>().Result;  
  
foreach (var value in readTask)  
{  
 Logger(value.ToString());  
}`
- Ⓒ `HttpClient client = new HttpClient();  
var task = client.GetAsync(address).Result;  
  
var readTask = task.Content.ReadAsAsync<JsonArray>().Result;  
  
foreach (var value in readTask)  
{  
 Logger(value.ToString());  
}`
- Ⓓ `HttpClient client = new HttpClient();  
client.GetAsync(address).ContinueWith(  
 (task) =>  
 {  
 task.Result.Content.ReadAsAsync<JsonObject>().ContinueWith(  
 (readTask) =>  
 {  
 foreach (var value in readTask.Result)  
 {  
 Logger(value.ToString());  
 }  
 }  
 );  
 }  
);`

- A. Option A  
B. Option B  
C. Option C  
D. Option D

**Answer:** A

Example:

```
// Create an HttpClient instance
```

```
11: HttpClient client = new HttpClient();
12:
13: // Send a request asynchronously continue when complete
14: client.GetAsync(_address).ContinueWith(
15: (requestTask) =>
16: {
17: // Get HTTP response from completed task.
18: HttpResponseMessage response = requestTask.Result;
19:
20: // Check that response was successful or throw exception
21: response.EnsureSuccessStatusCode();
22:
23: // Read response asynchronously as JsonValue and write out top facts for each country
24: response.Content.ReadAsAsync<JsonArray>().ContinueWith(
25: (readTask) =>
```

**NO.132** You need to recommend a data access technology to the contractor to retrieve data from the new data source.

Which data access technology should you recommend?

- A.** LINQ to XML
- B.** ADO.NET Entity Framework
- C.** ADO.NET DataSets
- D.** WCF Data Services

**Answer:** D

**NO.133 DRAG DROP**

You have the following code.

```
String xmlString =
@"C:\file.xml";
```

File.xml contains the following XML markup.

```
<?xml version='1.0'?>
<!-- This is a sample XML document -->
<Items>
    <Item>Item1</Item>
</Items> ;
```

You need to write code to display Item1 in the console output.

Which five code blocks should you use? Develop the solution by selecting and arranging the required code blocks in the correct order.

NOTE: You will need all of the code blocks.

**Code Blocks**

```

while (reader.Read())
{
}

using (XmlReader reader =
XmlReader.Create
(new StringReader(xmlString)))
{
}

while (!reader.Read())
{
}

using (XmlReader reader =
XmlReader.Create (xmlString))
{
}

}

}

Console.WriteLine(reader.Value);

if (reader.NodeType ==
XmlNodeType.Text)

```

**Answer Area****Answer:****Answer Area**

```

using (XmlReader reader =
XmlReader.Create (xmlString))
{

while (reader.Read())
{

if (reader.NodeType ==
XmlNodeType.Text)

Console.WriteLine(reader.Value);

}
}

```

**NO.134** You are developing a library management application that uses the ADO.NET Entity Framework against a SQL Server database. The application has a method that returns check outs filtered by date.

The Book class is shown below.

```

public partial class Book
{
    ...
    public Nullable<System.DateTime> CheckoutDate { get; set; }
    ...
}

```

You must filter the data on the SQL server before it is returned to the application server. You need to return books checked out more recently than the entered date. Which code segment should you use?

- A. `IQueryable<Book> books = db.Books;  
books = books.Where(b => b.CheckoutDate >= date);`
- B. `IEnumerable<Book> books = db.Books.ToList().AsQueryable();  
books = books.Where(b => b.CheckoutDate >= date);`
- C. `IQueryable<Book> books = db.Books.ToList().AsQueryable();  
books = books.Where(b => b.CheckoutDate >= date);`
- D. `IEnumerable<Book> books = db.Books;  
books = books.Where(b => b.CheckoutDate >= date);`

A. Option A

B. Option B

C. Option C

D. Option D

**Answer:** A

The difference is that `IQueryable<T>` is the interface that allows LINQ-to-SQL (LINQ.-to-anything really) to work. So if you further refine your query on an `IQueryable<T>`, that query will be executed in the database, if possible.

For the `IEnumerable<T>` case, it will be LINQ-to-object, meaning that all objects matching the original query will have to be loaded into memory from the database.

---

## Topic 2, ASP.NET MVC

### Background

You are developing an ASP.NET MVC application in Visual Studio 2012 that will be used to process orders.

### Business Requirements

The application contains the following three pages:

- \*A page that queries an external database for orders that are ready to be processed. The user can then process the order.
- \*A page to view processed orders.
- \*A page to view vendor information.

The application consumes three WCF services to retrieve external data.

### Technical Requirements

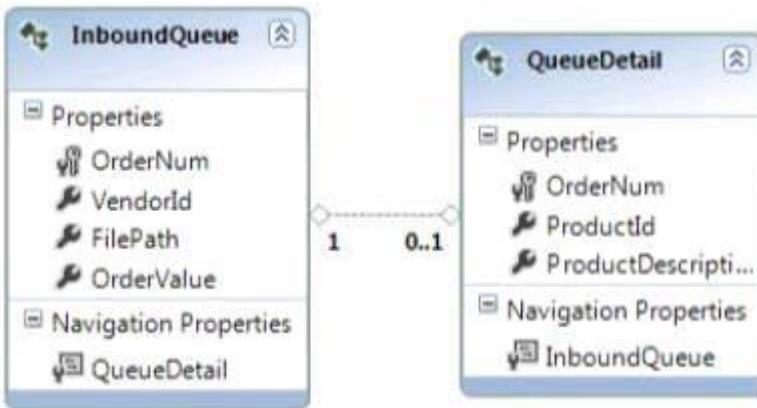
#### Visual Studio Solution:

The solution contains the following four projects.

- \*ExternalQueue: A WCF service project used to communicate with the external order database.
- \*OrderProcessor: An ASP.NET MVC project used for order processing and logging order metadata.
- \*OrderUpload: A WCF service project used to submit order data to an external data source.
- \*Shipping: A WCF service project used to acquire shipping information.

#### ExternalQueue Project:

Entity Framework is used for data access. The entities are defined in the `ExternalOrders.edmx` file as shown in the following diagram.



The project contains two services defined in the following files.

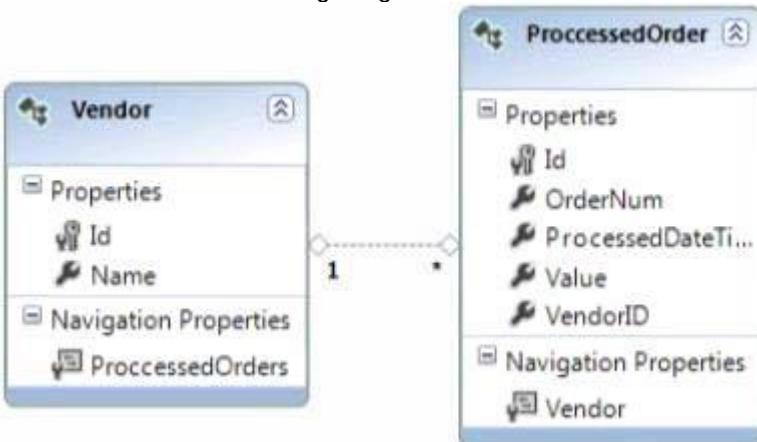
\*IExternalQueueService.es

\*ExternalQueueService.svc

The ExternalQueue.Helpers namespace contains a definition for a class named OrderNotFound Exception.

OrderProcessor Project:

Entity Framework is used for data access. The entities are defined in the ProcessedOrders.edmx file as shown in the following diagram.



The classes are contained in the OrderProcessor.Entities namespace. The project contains the following two controllers.

\*InboundQueueController.es

\*ProcessedOrderController.es

WCF service proxies to the ExternalQueue, Shipping and OrderUpload services have been generated by using the command prompt. The ExecuteCommandProcedure() method in the ExternalQueueService.svc file must run asynchronously.

The ProcessedOrderController controller has the following requirements.

The GetVendorPolicy() method must enforce a 10 minute absolute cache expiration policy.

The GetProcessedOrders() method must return a view of the 10 most recently processed orders.

OrderUpload Project:

The project contains two services defined in the following files:

\*IUploadCallbackService.es

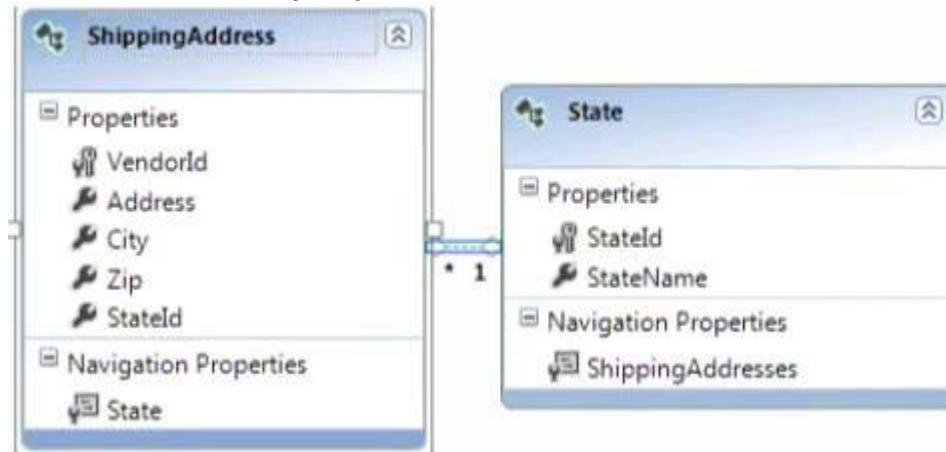
\*UploadCallbackService.svc

Data Access is maintained in a file named UploadOrder.es.

Shipping Project:

Entity Framework is used for data access. The entities are defined in the ExternalOrders.edmx file as

shown in the following diagram.



The Custom Tool property for `ExternalOrders.edmx` has been removed.

POCO classes for the Entity Model are located in the `ShippingAddress.es` file. The POCO entity must be loaded by using lazy loading.

The project contains two services defined in the following files.

`*IShippingService.es`

`*ShippingService.svc`.

The `IShippingService` contract must contain an operation that receives an order number as a parameter. The operation must return a class named `ShippingInfo` that inherits from a class named `State`.

#### Application Structure

##### `Shipping\ShippingAddress.cs`

```

SA01 using System.Collections.Generic;
SA02 using System.Data.Objects;
SA03
SA04 namespace Shipping.POCO
SA05 {
SA06   public class ShippingAddress
SA07   {
SA08     public int VendorId { get; set; }
SA09     public string Address { get; set; }
SA10    public string City { get; set; }
SA11    public int StateId { get; set; }
SA12    public string Zip { get; set; }
SA13    public State State { get; set; }
SA14  }
SA15
SA16  public class State
SA17  {
SA18    public int StateId { get; set; }
SA19    public string StateName { get; set; }
SA20    public List<ShippingAddress> ShippingAddresses { get; set; }
SA21  }
SA22 }
  
```

**NO.135** The `GetExternalOrder()` method in the `ExternalQueueService` service is throwing a runtime error. The method must query the database for a record that matches the `orderNum` parameter passed to the method.

You need to modify the `queryString` string to retrieve the record.

With which code segment should you replace line EQ64?

- A. `string queryString = @"SELECT q.OrderNum, q.VendorId, q.FilePath, q.OrderValue  
FROM ExternalOrdersEntities.InboundQueues AS q WHERE q.OrderNum = @orderNum";`
- B. `string queryString = @"SELECT * FROM ExternalOrdersEntities.InboundQueues  
WHERE OrderNum = @orderNum";`
- C. `string queryString = @"SELECT VALUE q FROM ExternalOrdersEntities.InboundQueues AS q  
WHERE q.OrderNum = @orderNum";`
- D. `string queryString = @"SELECT VALUE FROM ExternalOrdersEntities.InboundQueues  
WHERE OrderNum = @orderNum";`

A. Option A

B. Option B

C. Option C

D. Option D

**Answer:** C

### NO.136 DRAG DROP

The GetExternalOrders() method must use members of the EntityClient namespace to query the database for all records in the InboundQueue entity.

You need to modify the GetExternalOrders() method to return the correct data.

What should you do? (To answer, drag the appropriate code segments to the correct location or locations in the answer area. Each code segment may be used once, more than once, or not at all.

You may need to drag the split bar between panes or scroll to view content.)

Answer Area

ExecuteReader
ExecuteScalar
SequentialAccess
KeyInfo
ExternalOrders
ExternalOrdersEntities

```

public List<Entities.InboundQueue> GetExternalOrders()
{
    EntityConnection connection =
        new EntityConnection("name=" + "Entities");

    connection.Open();
    EntityCommand cmd = connection.CreateCommand ();
    cmd.CommandText = @"select q.OrderNum, q.VendorId,
        q.FilePath, q.OrderValue
        from Entities.InboundQueues as q";

    EntityDataReader rdr =
        cmd.ExecuteReader(CommandBehavior.CloseConnection);

    List<InboundQueue> queueItems = new List<InboundQueue>();
    while (rdr.Read ())
    {
        InboundQueue queueItem = new InboundQueue();
        queueItem.OrderNum = Convert.ToInt32(rdr["OrderNum"]);
        queueItem.VendorId = Convert.ToInt32(rdr["VendorId"]);
        queueItem.FilePath = rdr["FilePath"].ToString();
        queueItem.OrderValue = Convert.ToDecimal(rdr["OrderValue"]);
        queueItems.Add(queueItem);
    }
    rdr.Close();
    connection.Close();
    return queueItems;
}

```

**Answer:**

```

public List<Entities.InboundQueue> GetExternalOrders()
{
    EntityConnection connection =
        new EntityConnection("name=" + "ExternalOrdersEntities");

    connection.Open();
    EntityCommand cmd = connection.CreateCommand();
    cmd.CommandText = @"select q.OrderNum, q.VendorId,
        q.FilePath, q.OrderValue
        from " + "ExternalOrdersEntities" + ".InboundQueues as q";

    EntityDataReader rdr =
        cmd.ExecuteReader(CommandBehavior.SequentialAccess);
}

```

**NO.137 DRAG DROP**

You need to modify the ExecuteCommandProcedure() method to meet the technical requirements.  
Which code segment should you use?

```

private async Task ExecuteCommandProcedure(EntityCommand command)
{
    using (EntityConnection connection
        = new EntityConnection("name=ExternalOrdersEntities"))
    {
        command.Connection = connection;
    }
}

```

**Answer:**

```

private async Task ExecuteCommandProcedure(EntityCommand command)
{
    using (EntityConnection connection
        = new EntityConnection("name=ExternalOrdersEntities"))
    {
        command.Connection = connection;
        await connection.OpenAsync();
        await command.ExecuteNonQueryAsync();
    }
}

```

**NO.138** The DeleteExternalOrder() method in the ExternalQueueService service is not throwing a FaultException exception as defined by the FaultContractAttribute attribute in the IExternalQueueService.cs file.

You need to throw the FaultException exception.

Which code segments can you insert at line EQ45 to achieve this goal? (Each correct answer presents

a complete solution. Choose all that apply)

- A. `throw new FaultException<OrderNotFoundException>(ex.ExceptionMessage);`
- B. `throw new FaultException<OrderNotFoundException>(ex, new FaultReason("Order not found."));`
- C. `throw new FaultException<OrderNotFoundException>(ex);`
- D. `throw new FaultException<OrderNotFoundException>(new OrderNotFoundException(new Exception(ex.ExceptionMessage)), "Order not found.");`

A. Option A

B. Option B

C. Option C

D. Option D

**Answer:** B, C

### NO.139 DRAG DROP

You need to complete the GetProcessedOrders() action in the ProcessedOrderController controller to meet the requirements.

What should you do? (To answer, drag the appropriate code segments to the correct location or locations in the answer area. Each code segment may be used once, more than once, or not at all.

You may need to drag the split bar between panes or scroll to view content.)

**Answer Area**

OrderByDescending

OrderBy

Take

ProcessedOrders

ProcessedDateTime

```
public ActionResult GetProcessedOrders()
{
    using (var context = new ProcessedOrders())
    {
        List<Entities.ProcessedOrder> orders =
            context
                .
                .
                .
                .ToList();
        return View(orders);
    }
}
```

**Answer:**

```
public ActionResult GetProcessedOrders()
{
    using (var context = new ProcessedOrders())
    {
        List<Entities.ProcessedOrder> orders =
            context

            .ProcessedOrders
            .OrderByDescending (i => ProcessedDateTime)
            .Take (10)

            .ToList();
        return View(orders);
    }
}
```

**NO.140** You need to modify the ExecuteCommandProcedure() method to meet the technical requirements.

Which code segment should you use?

C A. `private async Task ExecuteCommandProcedure(EntityCommand command)`  
`{`  
 `using (EntityConnection connection = new EntityConnection`  
`("name=ExternalOrdersEntities"))`  
 `{`  
 `command.Connection = connection;`  
 `await connection.OpenAsync();`  
 `await command.ExecuteNonQueryAsync();`  
 `}`  
`}`

C B. `private void ExecuteCommandProcedure(EntityCommand command)`  
`{`  
 `using (EntityConnection connection = new EntityConnection`  
`("name=ExternalOrdersEntities"))`  
 `{`  
 `command.Connection = connection;`  
 `command.ExecuteNonQueryAsync();`  
 `}`  
`}`

C C. `private void ExecuteCommandProcedure(EntityCommand command)`  
`{`  
 `using (EntityConnection connection = new EntityConnection`  
`("name=ExternalOrdersEntities"))`  
 `{`  
 `command.Connection = connection;`  
 `connection.OpenAsync();`  
 `command.ExecuteNonQueryAsync();`  
 `}`  
`}`

C D. `private async Task ExecuteCommandProcedure(EntityCommand command)`  
`{`  
 `using (EntityConnection connection = new EntityConnection`  
`("name=ExternalOrdersEntities"))`  
 `{`  
 `command.Connection = connection;`  
 `connection.OpenAsync();`  
 `command.ExecuteNonQueryAsync();`  
 `}`  
`}`

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Answer:** A

**NO.141** The DeleteExternalOrder() method in the ExternalQueueService service is not throwing a FaultException exception as defined by the FaultContractAttribute attribute in the IExternalQueueService.cs file.

You need to throw the FaultException exception.

Which code segment can you insert at line EQ45 to achieve this goal? (Each correct answer presents

a complete solution. Choose all that apply.)

- A. `string queryString = @"SELECT q.OrderNum, q.VendorId, q.FilePath, q.OrderValue  
FROM ExternalOrdersEntities.InboundQueues AS q WHERE q.OrderNum = @orderNum";`
- B. `string queryString = @"SELECT * FROM ExternalOrdersEntities.InboundQueues  
WHERE OrderNum = @orderNum";`
- C. `string queryString = @"SELECT VALUE q FROM ExternalOrdersEntities.InboundQueues AS q  
WHERE q.OrderNum = @orderNum";`
- D. `string queryString = @"SELECT VALUE FROM ExternalOrdersEntities.InboundQueues  
WHERE OrderNum = @orderNum";`

A. Option A

B. Option B

C. Option C

D. Option D

**Answer:** C

**NO.142** The GetExternalOrder() method in the ExternalQueueService service is throwing a runtime error. The method must query the database for a record that matches the orderNum parameter passed to the method.

You need to modify the queryString string to retrieve the record.

With which code segment should you replace line EQ64?

- A. `string queryString = @"SELECT VALUE q FROM ExternalOrdersEntities.InboundQueues AS q  
WHERE q.OrderNum = @orderNum";`
- B. `string queryString = @"SELECT VALUE * FROM ExternalOrdersEntities.InboundQueues  
WHERE OrderNum = @orderNum";`
- C. `string queryString = @"SELECT q.OrderNum, q.VendorId, q.FilePath, q.OrderValue  
FROM ExternalOrdersEntities AS q WHERE q.OrderNum = @orderNum";`
- D. `string queryString = @"SELECT q FROM ExternalOrdersEntities.InboundQueues  
WHERE q.OrderNum = @orderNum";`

A. Option A

B. Option B

C. Option C

D. Option D

**Answer:** C

**NO.143 DRAG DROP**

The GetVendorPolicy() private method in the ProcessedOrderController controller is returning a CacheItemPolicy object with default values. The returned policy must expire if the external file located at C:\Triggers\VendorTrigger.txt has been modified or the timeout outlined in the technical requirements is reached.

You need to return the policy.

How should you build the method? (To answer, drag the appropriate code segments to the correct location or locations in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

**Answer Area**

```
private CacheItemPolicy GetVendorPolicy()
{
    CacheItemPolicy vendorPolicy = new CacheItemPolicy();

    vendorPolicy. [ ] = [ ] (10);

    vendorPolicy. [ ]

    .Add(new HostFileChangeMonitor(GetTriggerPaths()));

    return vendorPolicy;
}
```

**Answer:**

```
private CacheItemPolicy GetVendorPolicy()
{
    CacheItemPolicy vendorPolicy = new CacheItemPolicy();

    vendorPolicy. [ ] AbsoluteExpiration = [ ] (10);

    vendorPolicy. [ ] ChangeMonitors = [ ] (10);

    .Add(new HostFileChangeMonitor(GetTriggerPaths()));

    return vendorPolicy;
}
```

<http://msdn.microsoft.com/en-us/library/system.runtime.caching.cacheitempolicy.aspx>

**NO.144 DRAG DROP**

The UploadOrder() method in the UploadCallbackService service is not implementing the callback behavior defined in the IUploadCallBackService interface.

You need to modify the class to implement the required callback behavior.

What should you do? (To answer, drag the appropriate code segments to the correct location or locations in the answer area. Each code segments may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

Multiple

Single

GetOrderValue

UploadCallbackService

IUploadCallback

**Answer Area**

```
[ServiceBehavior(ConcurrencyMode =
    ConcurrencyMode. Single )]
public class UploadCallbackService : IUploadCallbackService
{
    public void UploadOrder(int orderNum)
    {
        IUploadCallback callback = OperationContext
            .Current.GetCallbackChannel< IUploadCallback >();
        decimal value = callback. GetOrderValue(orderNum);

        UploadDB.UploadOrder.Upload(orderNum, value);
    }
}
```

**Answer:**

```
[ServiceBehavior(ConcurrencyMode =
    ConcurrencyMode. Single )]
public class UploadCallbackService : IUploadCallbackService
{
    public void UploadOrder(int orderNum)
    {
        IUploadCallback callback = OperationContext
            .Current.GetCallbackChannel< IUploadCallback >();
        decimal value = callback. GetOrderValue(orderNum);

        UploadDB.UploadOrder.Upload(orderNum, value);
    }
}
```

**NO.145 DRAG DROP**

You add a class named ShippingInfo.

You need to modify the IShippingService interface and the ShippingInfo class to meet the technical requirements.

What should you do? (To answer, drag the appropriate code segments to the correct location or locations in the answer area. Each code segment may be used once, more than once, or not at all.

You may need to drag the split bar between panes or scroll to view content.)

**[DataMember]****[CollectionDataContract]****[DataContract]****[ServiceContract]****[OperationContract]****Answer Area**

```
public interface IShippingService
{
    [DataMember]
    ShippingInfo GetShippingInfo(int orderNum);
}

public class State
{
    [DataMember]
    public string StateName { get; set; }
}

public class ShippingInfo : State
{
    [DataMember]
    public string StreetAddress { get; set; }

    [DataMember]
    public string ZipCode { get; set; }
}
```

**Answer:****[DataMember]****[CollectionDataContract]****[DataContract]****[ServiceContract]****[OperationContract]****Answer Area**

```
[ServiceContract]
public interface IShippingService
{
    [OperationContract]
    ShippingInfo GetShippingInfo(int orderNum);
}

[DataContract]
public class State
{
    [DataMember]
    public string StateName { get; set; }
}

[DataContract]
public class ShippingInfo : State
{
    [DataMember]
    public string StreetAddress { get; set; }

    [DataMember]
    public string ZipCode { get; set; }
}
```

<http://msdn.microsoft.com/en-us/library/system.servicemodel.servicecontractattribute.aspx>

**NO.146** The GetVendors() action in the ProcessedOrderController controller is querying the database each time it is run. The GetVendors() action must query the database only if the cache is null.

You need to add code to the action at line PC33 to cache the data.

Which code segment can you use? (Each correct answer presents a complete solution. Choose all that apply.)

- A. cache.Set(new CacheItem("vendorKey", vendors), GetVendorPolicy());
- B. cache.Add("vendors", vendors, new CacheItemPolicy());
- C. cache.Add(new CacheItem("vendorKey", vendors), GetVendorPolicy());
- D. cache.AddOrGetExisting("vendorKey", context, new CacheItemPolicy());

**Answer:** A, C

**NO.147** You need to regenerate the service proxies to include task-based asynchronous method signatures.

Which command should you use?

- A. aspnet\_regiis.exe /t:code http://localhost:62965/UploadCallbackService.svc
- B. svchost.exe /t:code http://localhost:62965/UploadCallbackService.svc
- C. aspnet\_compiler.exe /t:code http://localhost:62965/UploadCallbackService.svc
- D. aspnet\_regiis.exe /t:code http://localhost:62965/UploadService.svc
- E. svchost.exe /t:code http://localhost:62965/UploadService.svc

**Answer:** B

<http://msdn.microsoft.com/en-us/library/aa347733.aspx>

### NO.148 DRAG DROP

You need to create the ShippingContext class in the ShippingAddress.es file to meet the requirements.

What should you do? (To answer, drag the appropriate code segments to the correct location or locations in the answer area. Each code segment may be used once, more than once, or not at all.

You may need to drag the split bar between panes or scroll to view content.)

Answer Area

```
public class ShippingContext : ObjectSet<ShippingAddress>
{
    public ShippingContext()
        : base("name=ShippingAddressEntities")
    {
        this.ContextOptions.
    }

    public ObjectResult<ShippingAddress> Addresses
    {
        get { return CreateObjectSet<ShippingAddress>(); }
    }

    public ObjectResult<State> States
    {
        get { return CreateObjectSet<State>(); }
    }
}
```

ObjectSet

ObjectContext

ObjectResult

LazyLoadingEnabled = true;

LazyLoadingEnabled = false;

**Answer:**

```

public class ShippingContext : ObjectContext
{
    public ShippingContext()
        : base("name=ShippingAddressEntities")
    {
        this.ContextOptions.LazyLoadingEnabled = true;
    }
    public ObjectSet<ShippingAddress> ShippingAddresses
    {
        get { return CreateObjectSet<ShippingAddress>(); }
    }
    public ObjectSet<State> States
    {
        get { return CreateObjectSet<State>(); }
    }
}

```

**NO.149** The QueueDetail entity type must inherit from the InboundQueue entity type in the ExternalQueue service project using table-per-type inheritance.

You need to modify the entities in the designer.

What should you do? (Each correct answer presents part of the solution. Choose all that apply.)

- A. Remove the OrderNum property in InboundQueue.
- B. Remove the OrderNum property in QueueDetail.
- C. Set the QueueDetail BaseType to InboundQueue.
- D. Remove the association between the entities.
- E. Right-click the entities and validate the table mapping.
- F. Set the InboundQueue BaseType to QueueDetail.

**Answer:** B, C, D, E

<http://www.robbagby.com/entity-framework/entity-framework-modeling-table-per-type-inheritance/>

**NO.150 DRAG DROP**

The GetQueueItems() action in the InboundQueueController controller is not populating the view with data. The action must populate the view with data by calling the GetExternalOrders() method in the ExternalQueueService service using the ChannelFactory class.

You need to modify the action to populate the view with data.

What should you do? (To answer, drag the appropriate code segments to the correct location or locations in the answer area. Each code segment may be used once, more than once, or not at all.)

You may need to drag the split bar between panes or scroll to view content.)

**Answer Area**

```

InboundQueue
IExternalQueueService
BasicHttpBinding
GetExternalOrders
CreateChannel

```

```

ChannelFactory< IExternalQueueService > qFactory =
    new ChannelFactory< IExternalQueueService >(
        new BasicHttpBinding(),
        new EndpointAddress(
            "http://localhost:62965/ExternalQueueService.svc"));

```

```

IExternalQueueService qService =
    qFactory.CreateChannel();

```

```

IEnumerable< InboundQueue > inboundOrders =
    qService.GetExternalOrders();

```

```

return View(inboundOrders);

```

**Answer:**

```

ChannelFactory< IExternalQueueService > qFactory =
    new ChannelFactory< IExternalQueueService >(
        new BasicHttpBinding(),
        new EndpointAddress(
            "http://localhost:62965/ExternalQueueService.svc"));

```

```

IExternalQueueService qService =
    qFactory.CreateChannel();

```

```

IEnumerable< InboundQueue > inboundOrders =
    qService.GetExternalOrders();

```

```

return View(inboundOrders);
=====
```

**Topic 3, Online Bookstore****Background**

You are developing an online bookstore web application that will be used by your company's customers.

**Technical Requirements**

General requirements:

- \*The web store application must be an ASP.NET MVC application written in Visual Studio.
- \*The application must connect to a Microsoft SQL database.
- \*The GetTop100Books() method is mission critical and must return data as quickly as possible. It should take advantage of fast, forward-only, read-only methods of reading data.
- \*The ImportBooks() method must keep a copy of the data that can be accessed while new books are being imported without blocking reads.
- \*The CreateMonthlyTotalsReport() method must lock the data and prevent others from updating or inserting new rows until complete.
- \*The college textbook area of the web application must get data from a daily updated CSV file.
- \*The children's book area of the web application must get data directly from a local database. It must use a connection string. It must also support access to the stored procedures on the database. Further, it is required to have strongly typed objects. Finally, it will require access to databases from multiple vendors and needs to support more than one-to-one mapping of database tables.
- \*The cookbook functionality is contained within a client-side application that must connect to the server using HTTP and requires access to the data using JavaScript.
- \*The BookApiController class must have a method that is able to perform ad-hoc queries using OData.

The RESTful API of the bookstore must expose the following endpoints.

Action: Get a list of all books

HTTP method: GET

Relative URI: /books

Action: Get a book by id

HTTP method: GET

Relative URI: /books/id

Action: Create a new book

HTTP method: POST

Relative URI: /books

Action: Update a book

HTTP method: PUT

Relative URI: /books/id

Action: Delete a book

HTTP method: DELETE

Relative URI: /books/id

## Application Structure

```

private static void CreateMonthlyTotalsReports()
{
    using (SqlConnection connection = new SqlConnection(_connectionString))
    {
        connection.Open();
        SqlCommand command = connection.CreateCommand();
        SqlTransaction transaction = connection.BeginTransaction();
        command.Connection = connection;
        command.Transaction = transaction;
        try
        {
            command.CommandText = _reportCommandText;
            command.ExecuteNonQuery();
            transaction.Commit();
        }
        catch (Exception ex)
        {
            transaction.Rollback();
        }
    }
}

```

## PurchaseOrders.xml

```

<?xml version="1.0"?>
<aw:PurchaseOrder
    aw:PurchaseOrderNumber="99503"
    aw:OrderDate="1999-10-20"
    xmlns:aw="http://www.adventure-works.com">
    <aw:Address aw:Type="Shipping">
        <aw:Name>Ellen Adams</aw:Name>
        <aw:Street>123 Maple Street</aw:Street>
        <aw:City>Mill Valley</aw:City>
        <aw:State>CA</aw:State>
        <aw:Zip>10999</aw:Zip>
        <aw:Country>USA</aw:Country>
    </aw:Address>
    <aw:Address aw:Type="Billing">
        <aw:Name>Tai Yee</aw:Name>
        <aw:Street>8 Oak Avenue</aw:Street>
        <aw:City>Old Town</aw:City>
        <aw:State>PA</aw:State>
        <aw:Zip>95819</aw:Zip>
        <aw:Country>USA</aw:Country>
    </aw:Address>
    <aw:DeliveryNotes>Please leave packages in shed by driveway.</aw:DeliveryNotes>
    <aw:Items>
        <aw:Item aw:PartNumber="872-AA">
            <aw:ProductName>Lawnmower</aw:ProductName>
            <aw:Quantity>1</aw:Quantity>
            <aw:USPrice>148.95</aw:USPrice>
            <aw:Comment>Confirm this is electric</aw:Comment>
        </aw:Item>
        <aw:Item aw:PartNumber="926-AA">
            <aw:ProductName>Baby Monitor</aw:ProductName>
            <aw:Quantity>2</aw:Quantity>
            <aw:USPrice>39.98</aw:USPrice>
            <aw:ShipDate>1999-05-21</aw:ShipDate>
        </aw:Item>
    </aw:Items>
</aw:PurchaseOrder>

```

**FeaturedBooks.xml**

```
<?xml version="1.0" encoding="utf-8" ?>
<featured>
  <book>
    <id>1</id>
    <title>Science</title>
  </book>
  <book>
    <id>1</id>
    <title>Math</title>
  </book>
  <book>
    <id>1</id>
    <title>History</title>
  </book>
</featured>
```

**NO.151** You need to return the list of the top 100 books for the GetTopBooks() method.

Which type should you use to retrieve the data?

- A.** SqlDataReader
- B.** DataSet
- C.** DataTable
- D.** Data View

**Answer:** A

**NO.152** You need to choose the appropriate data access strategy for the college textbook area of the web application.

Which data access technology should you implement?

- A.** ADO.NET
- B.** Entity Data Model (EDM)
- C.** WCF Data Services
- D.** LINQ to SQL

**Answer:** A

\* Scenario: The college textbook area of the web application must get data from a daily updated CSV file.

\* ADO.NET reads the CSV file in a very similar way as table in database.

**NO.153** You need to configure the server to self-host the bookstore's Web API application.

Which code segment should you use?

- A. 

```
var config = new HttpSelfHostConfiguration(_baseAddress);
config.Filters.Add(
    name: "DefaultApi",
    routeTemplate: "api/{controller}/{id}",
    defaults: new { id = RouteParameter.Optional }
);
var server = new HttpSelfHostServer(config);
server.Wait().OpenAsync();
```
- B. 

```
var config = new HttpSelfHostConfiguration(_baseAddress);
config.Routes.MapHttpRoute(
    name: "DefaultApi",
    routeTemplate: "{controller}s/{id}",
    defaults: new { id = RouteParameter.Optional }
);
var server = new HttpSelfHostServer(config);
server.OpenAsync().Wait();
```
- C. 

```
var config = new HttpSelfHostConfiguration(_baseAddress);
config.Routes.MapHttpRoute(
    name: "DefaultApi",
    routeTemplate: "api/{controller}s/{id}",
    defaults: new { id = RouteParameter.Optional }
);
var server = new HttpSelfHostServer(config);
server.OpenAsync().Wait();
```
- D. 

```
var config = new HttpSelfHostConfiguration(_baseAddress);
config.Routes.MapHttpRoute(
    name: "DefaultApi",
    routeTemplate: "{controller}/{id}",
    defaults: new { id = RouteParameter.Optional }
);
var server = new HttpSelfHostServer(config);
server.Wait().OpenAsync();
```

A. Option A

B. Option B

C. Option C

D. Option D

**Answer:** C

MapHttpRoute Method

Maps the specified route template.

Use the option with "api/..."

**NO.154** The PurchaseOrders.xml file contains all of the purchase orders for the day.

You need to query the XML file for all of the billing addresses.

Which code segment should you use?

- A. XElement root = XElement.Load("PurchaseOrders.xml");  
 XNamespace aw = "http://www.adventure-works.com";  
 IEnumerable< XElement > address =  
   from el in root.Elements(aw + "Items")  
   where (string)el.Attribute(aw + "Type") == "Shipping"  
   select el;  
 foreach ( XElement element in address)  
 {  
   Console.WriteLine(element);  
 }
- B. XElement root = XElement.Load("PurchaseOrders.xml");  
 XNamespace aw = "http://www.adventure-works.com";  
 IEnumerable< XElement > address =  
   from el in root.Elements(aw + "Address")  
   where (string)el.Attribute(aw + "Type") == "Shipping"  
   select el;  
 foreach ( XElement element in address)  
 {  
   Console.WriteLine(element);  
 }
- C. XElement root = XElement.Load("PurchaseOrders.xml");  
 XNamespace aw = "http://www.adventure-works.com";  
 IEnumerable< XElement > address =  
   from el in root.Elements(aw + "Items")  
   where (string)el.Attribute(aw + "Type") == "Billing"  
   select el;  
 foreach ( XElement element in address)  
 {  
   Console.WriteLine(element);  
 }
- D. XElement root = XElement.Load("PurchaseOrders.xml");  
 XNamespace aw = "http://www.adventure-works.com";  
 IEnumerable< XElement > address =  
   from el in root.Elements(aw + "Address")  
   where (string)el.Attribute(aw + "Type") == "Billing"  
   select el;  
 foreach ( XElement element in address)  
 {  
   Console.WriteLine(element);  
 }

A. Option A

B. Option B

C. Option C

D. Option D

**Answer:** D

**NO.155** You need to implement the Get() method in the bookstore Web API application to be able to find books by using an ad hoc query.

Which method should you use?

- A. `public Book Get(int id)`  
`{`  
 `var book = bookRepository.Find(id);`  
 `if (book == null)`  
 `{`  
 `throw new HttpResponseMessage(HttpStatusCode.NotFound);`  
 `}`  
 `return new List<Book> { book };`  
`}`
- B. `public List<Book> Get(int id)`  
`{`  
 `var book = bookRepository.Find(id);`  
 `if (book == null)`  
 `{`  
 `throw new HttpResponseMessage(HttpStatusCode.NotFound);`  
 `}`  
 `return new List<Book> { book };`  
`}`
- C. `public IEnumerable<Book> Get()`  
`{`  
 `return bookRepository.All;`  
`}`
- D. `public IQueryable<Book> Get()`  
`{`  
 `return bookRepository.All;`  
`}`

- A. Option A  
B. Option B  
C. Option C  
D. Option D

**Answer:** D

**NO.156** You need to update the CreateMonthlyTotalsReports() method to use database transactions.

Which code segment should you use?

- A. `SqlConnection.BeginTransaction(IsolationLevel.ReadCommitted);`  
B. `SqlConnection.BeginTransaction(IsolationLevel.ReadUncomwited);`  
C. `SqlConnection.BeginTransaction(IsolationLevel.Chaos);`  
D. `SqlConnection.BeginTransaction(IsolationLevel.Serializable);`

**Answer:** D

\* Scenario: The Create MonthlyTotalsReport() method must lock the data and prevent others from updating or inserting new rows until complete.

\* Serializable:

A range lock is placed on the DataSet, preventing other users from updating or inserting rows into the dataset until the transaction is complete.

**NO.157** You need to choose the appropriate data access technology for the children's book area of the web application.

Which data access technology should you choose?

- A. Web Service
- B. LINQ to SQL
- C. ADO.NET Entity Framework
- D. WCF Data Services

**Answer:** C

**NO.158** You are preparing to write the data access code for the children's book area of the web site. You need to review the requirements and identify the appropriate data access technology. What should you do?

- A. Use ADO.NET Entity Framework.
- B. Use a Web Service.
- C. Use the WCF Data Services.
- D. Use LINQ to SQL.

**Answer:** A

**NO.159** You need to update the ImportBooks() method to use database transactions.

Which code segment should you use?

- A. SqlConnection.BeginTransaction(IsolationLevel.RepeatableRead);
- B. SqlConnection.BeginTransaction(IsolationLevel.ReadUncommitted);
- C. SqlConnection.BeginTransaction(IsolationLevel.Serializable);
- D. SqlConnection.BeginTransaction(IsolationLevel.Snapshot);

**Answer:** B

\* scenario: The ImportBooks() method must keep a copy of the data that can be accessed while new books are being imported without blocking reads.

\* ReadUncommitted

A dirty read is possible, meaning that no shared locks are issued and no exclusive locks are honored.

**NO.160 DRAG DROP**

You need to update the GetBook() method to retrieve book data by using ADO.NET.

You have the following code:

```

public Book GetBook(int id)
{
    using (var conn = new SqlConnection(_connectionString))
    using (var cmd = conn.CreateCommand())
{ Target 1
cmd.CommandText = Target 2
Target 3
using (var reader = cmd.ExecuteReader ())
{
    if (!reader.Read())
    {
        return null;
    }
    return new Book
    { Target 4
        Name = Target 5
    };
}
}
}

```

Which code segments should you include in Target 1, Target 2, Target 3, Target 4 and Target 5 to complete the code? (To answer, drag the appropriate code segments to the correct targets in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.)

#### Code Segments

```

conn.Open();
conn.Read();
"SELECT id, name FROM Books WHERE id = @id";
"SELECT id, name FROM Books WHERE id = id";
cmd.Parameters.AddWithValue("@id", id);
cmd.Parameters.AddWithValue("@id", "id");
Id = reader.GetInt32(reader.GetOrdinal("id"));
Id = reader.GetGuid(reader.GetOrdinal(@id));
reader.GetString(reader.GetOrdinal("name"));
reader.GetString(reader.GetOrdinal(@name))

```

#### Answer Area

Target 1:

Code Segment

Target 2:

Code Segment

Target 3:

Code Segment

Target 4:

Code Segment

Target 5:

Code Segment

#### Answer:

Target 1:

```
conn.Open();
```

Target 2:

```
"SELECT id, name FROM Books WHERE id = id";
```

Target 3:

```
cmd.Parameters.AddWithValue("@id", id);
```

Target 4:

```
Id = reader.GetGuid(reader.GetOrdinal(@id)),
```

Target 5:

```
reader.GetString(reader.GetOrdinal(@name))
```

**NO.161** You need to create an OData query expression to return the ten books with the largest number of sales.

- A. /books?\$orderby=sales desc&\$count=10
- B. /search?\$orderby=sales asc&\$count=10
- C. /books?\$orderby=sales desc&\$top=10
- D. /search?\$orderby=sales asc&\$top=10

Which query expression should you use?

- A. Option A
- B. Option B
- C. Option C
- D. Option D

**Answer:** C

Order by desc(ending) to get the posts with the largest number of sales at the top. Specify to display the top 10 posts.

**NO.162** You need to create an OData filter expression that returns books that match the following characteristics:

Published after 1/1/2000

Have "Science" as the first word

Which filter statement should you use?

- A. /books?\$filter=PublishDate greaterthan datetime'2000-1-1'  
and startswith>Title, 'Science'
- B. /search?\$filter=PublishDate greaterthan datetime'2000-1-1'  
and beginswith>Title, 'Science'
- C. /search?\$filter=PublishDate gt datetime'2000-1-1'  
and beginswith>Title, 'Science'
- D. /books?\$filter=PublishDate gt datetime'2000-1-1'  
and startswith>Title, 'Science'

A. Option A

B. Option B

C. Option C

D. Option D

**Answer:** D

\* gt

Greater than

Example:

filter=Entry\_No gt 610

Query on GLEntry service. Returns entry numbers 611 and higher.

\* startswith

filter=startswith(Name, 'S')

Query on Customer service. Returns all customers names beginning with "S".

**NO.163** You need to choose the appropriate data access technology for the cookbook area of the web application.

Which data access technology should you choose?

A. WCF Data Services

B. LINQ to SQL

C. Entity Framework

D. ADO.NET

**Answer:** A

\* Scenario: The cookbook functionality is contained within a client-side application that must connect to the server using HTTP and requires access to the data using JavaScript.

\* WCF Data Services (formerly known as "ADO.NET Data Services") is a component of the .NET Framework that enables you to create services that use the Open Data Protocol (OData) to expose and consume data over the Web or intranet by using the semantics of representational state transfer (REST). OData exposes data as resources that are addressable by URIs. Data is accessed and changed by using standard HTTP verbs of GET, PUT, POST, and DELETE

\* WCF Data Services uses the OData protocol for addressing and updating resources. In this way, you can access these services from any client that supports OData. OData enables you to request and write data to resources by using well-known transfer formats: Atom, a set of standards for exchanging and updating data as XML, and JavaScript Object Notation (JSON), a text-based data exchange format used extensively in AJAX application.

**NO.164 DRAG DROP**

An XML file must be produced by the SaveFeaturedBooks() method of the Book class. The schema of the resulting XML file must be identical to the FeaturedBooks.xml file.

You need to write the code to produce the file.

You have the following code:

```
XDocument document = new XDocument ();
 XElement root = new XElement ("Target 1");
 foreach (var book in books)
 {
     XElement bookElement = new XElement ("book");
     bookElement.Add(new XElement ("id", book.Id) );
     bookElement.Add(new XElement ("Target 2", book.Title));
     root.Add (bookElement);
 }
 document.Add (root);
 document.Save (Target 3);
```

Which code segments should you include in Target 1, Target 2 and Target 3 to complete the code?  
 (To answer, drag the appropriate code segments to the correct targets in the answer area. Each code segment may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content)

Code Segments	Answer Area
featured	Target 1: <input type="button" value="Code"/>
books	Target 2: <input type="button" value="Code"/>
title	Target 3: <input type="button" value="Code"/>
name	
file	
output	

**Answer:**

Target 1: <input type="button" value="featured"/>
Target 2: <input type="button" value="title"/>
Target 3: <input type="button" value="file"/>

**NO.165** The PurchaseOrders.xml file contains all of the purchase orders for the day.

You need to query the XML file for all of the shipping addresses.

Which code segment should you use?

A. XElement root = XElement.Load("PurchaseOrders.xml");  
 XNamespace aw = "http://www.adventure-works.com";  
 IEnumerable< XElement > address =  
 from el in root.Elements(aw + "Items")  
 where (string)el.Attribute(aw + "Type") == "Billing"  
 select el;  
 foreach ( XElement element in address)  
 {  
 Console.WriteLine(element);  
 }

B. XElement root = XElement.Load("PurchaseOrders.xml");  
 XNamespace aw = "http://www.adventure-works.com";  
 IEnumerable< XElement > address =  
 from el in root.Elements(aw + "Address")  
 where (string)el.Attribute(aw + "Type") == "Shipping"  
 select el;  
 foreach ( XElement element in address)  
 {  
 Console.WriteLine(element);  
 }

C. XElement root = XElement.Load("PurchaseOrders.xml");  
 XNamespace aw = "http://www.adventure-works.com";  
 IEnumerable< XElement > address =  
 from el in root.Elements(aw + "Address")  
 where (string)el.Attribute(aw + "Type") == "Billing"  
 select el;  
 foreach ( XElement element in address)  
 {  
 Console.WriteLine(element);  
 }

D. XElement root = XElement.Load("PurchaseOrders.xml");  
 XNamespace aw = "http://www.adventure-works.com";  
 IEnumerable< XElement > address =  
 from el in root.Elements(aw + "Items")  
 where (string)el.Attribute(aw + "Type") == "Shipping"  
 select el;  
 foreach ( XElement element in address)  
 {  
 Console.WriteLine(element);  
 }

**A. Option A****B. Option B****C. Option C****D. Option D****Answer:** B

---

**Topic 4, Adventure Works Cycles****General Overview**

Adventure Works Cycles is a travel agency for cycling enthusiast. In recent years, Adventure Works Cycles has begun renting exotic cars to its clients.

You are developing a new web application that will provide Adventure Works Cycles customers with the ability to locate and rent exotic throughout the world.

**Application Overview**

The web application will be hosted in Azure. The application will provide users with the ability to search for a car by using advanced filtering options, such as the car brand, model, year, and price. All of this information will be stored as strings and will be displayed as drop-down lists.

The brand and model lists that will be displayed on the home page of the web application will be retrieved from Windows Communication Foundation (WCF) services hosted in the on-premises environment.

The home page will be named home.aspx and will be developed by using Microsoft ASP.NET MVC. The business logic will be developed by using ASP.NET Web API.

The MVC front-end layer and the Web API will communicate by using JSON. The business logic will have a call to an assembly named CarBusinessLogic.dll.

For responding, you are creating a worker role named ReportApp in Azure that will collect data from all of the searches made by using the web application. The application will communicate with ReportApp by using messages.

#### Requirements

##### Security Requirements

Adventure Works Cycles identifies the following security requirements for the web application:

\*The Web API must only accept one data format.

\*The CarBusinessLogic.dll assembly must be strongly-named.

\*Communication between the on-premises WCF service and Azure must be encrypted.

##### Logging Requirements

In the Web API, you plan to create a controller named CarController. Before any action in CarController is executed, the following line of code must execute first.

```
Debug.WriteLine("pre-processing logging");
```

##### Performance Requirements

Adventure Works Cycles identifies the following performance requirements for the web application:

\*After the initial deployment, any changes to the business logic of the Web API must cause minimal downtime to the web application in the production environment.

\*The action in the Web API that returns the car brand must be asynchronous, while all other actions must be synchronous.

\*When home.aspx is displayed, the rendered page must be cached for 10 minutes.

\*The web application will be deployed to multiple instances.

##### Financial Requirements

ReportApp will shut down every night. However, data from the searches performed during the night must still be collected.

**NO.166** ReportApp will shut down every night. However, data from the searches performed during the night must still be collected.

You need to recommend a solution to meet the performance requirements for home.aspx.

What should you recommend?

- A. ViewState
- B. MemoryCache
- C. OutputCache
- D. ApplicationCache

**Answer:** C

Explanation:

Scenario: When home.aspx is displayed, the rendered page must be cached for 10 minutes.

### Page output caching

The output of an action method on a controller can be cached using the [OutputCache]attribute on the method. Actions methods that return views will have the rendered page cached, while methods returning JSON data will have that data saved. A number of properties on the OutputCacheAttribute class control how data is cached.

CacheProfile- If a number of methods will have the same cache settings, it makes sense to use the web.config file to create a cache profile that can be used across all these methods.

The Duration attribute of the CacheProfile determines how long, in seconds, the output should be cached. To save an item for 10 minutes, duration would be set to 600.

[OutputCache(Duration=600)]

References: <http://failedturing.blogspot.se/2014/10/microsoft-70-486-design-caching-strategy.html>

**NO.167** You are developing a WCF service that compares several data sources. The service takes a long time to complete.

The service must meet the following requirements:

The client must be able to continue processing while the service is running.

The service must initiate communication with the client application when processing is complete.

You need to choose a message pattern to meet the requirements.

Which message pattern should you choose?

- A.** Duplex
- B.** One Way
- C.** Streaming
- D.** Request/Reply

**Answer:** A

**NO.168** You need to implement a solution that meets the logging requirements.

Which class should you use?

- A.** RouteAttribute
- B.** RoutePrefixAttribute
- C.** AcceptVerbsAttribute
- D.** ActionFilterAttribute

**Answer:** D

**NO.169** You need to compile CarBusinessLogic.dll by using Microsoft Visual Studio.

Which attribute should you add before you compile the dynamic-link library (DLL)?

- A.** System.Reflection.AssemblyConfigurationAttribute
- B.** System.Reflection.AssemblyKeyFileAttribute
- C.** AssemblyFlagsAttribute
- D.** System.Reflection.AssemblyAlgorithmIdAttribute

**Answer:** B

Explanation:

Scenario: The CarBusinessLogic.dll assembly must be strongly-named.

One way to sign an assembly with a strong name is by using assembly attributes to insert the strong name information into your code. You can use either the AssemblyKeyFileAttribute or the AssemblyKeyNameAttribute attribute, depending on where the key file to be used is located.

Note: To sign an assembly with a strong name by using attributes

References: [https://msdn.microsoft.com/en-us/library/xc31ft41\(v=vs.110\).aspx](https://msdn.microsoft.com/en-us/library/xc31ft41(v=vs.110).aspx)

**NO.170** You need to identify a solution to display the car brands.

What should you include in the solution?

- A. Azure Automation
- B. Azure RemoteApp
- C. the Service Bus queue
- D. a virtual private network (VPN)
- E. the Service Bus topics
- F. the Service Bus relay
- G. ExpressRoute

**Answer:** C

Explanation:

Azure Service Bus Messaging can safely use the QueueClient object for sending messages from concurrent asynchronous operations and multiple threads.

Scenario: The action in the Web API that returns the car brand must be asynchronous, while all other actions must be synchronous.

References: <https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-performance-improvements>

**NO.171 HOTSPOT**

ReportApp will shut down every night. However, data from the searches performed during the night must still be collected.

Based on the security requirements, which line of code should you insert into the WebApiConfig file? To answer, select the appropriate options in the answer area.

#### Answer Area

config.	<input type="button" value="Filters."/> <input type="button" value="Formatters."/> <input type="button" value="Initializer."/>	<input type="button" value="Add"/> <input type="button" value="Remove"/>	(config.	<input type="button" value="Filters."/> <input type="button" value="Formatters."/> <input type="button" value="Initializer."/>	<input type="button" value="JsonFormatter"/> <input type="button" value="XmlFormatter"/>	) ;
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**Answer:**

#### Answer Area

config.	<input type="button" value="Filters."/> <input type="button" value="Formatters."/> <input type="button" value="Initializer."/>	<input type="button" value="Add"/> <input type="button" value="Remove"/>	(config.	<input type="button" value="Filters."/> <input type="button" value="Formatters."/> <input type="button" value="Initializer."/>	<input type="button" value="JsonFormatter"/> <input type="button" value="XmlFormatter"/>	) ;
---------	--	--	----------	--	--	-----

Scenario: The Web API must only accept one data format.

The MVC front-end layer and the Web API will communicate by using JSON.

The most common approach to support JSON only is to clear other formatters and leave only

JsonMediaTypeFormatter around.

Given an instance of `HttpConfiguration` you'd simply clear all and re-add `JsonMediaTypeFormatter`:

```
configuration.Formatters.Clear();
```

```
configuration.Formatters.Add(new JsonMediaTypeFormatter());
```

References: <http://www.strathweb.com/2013/06/supporting-only-json-in-asp-net-web-api-the-right-way/>

## NO.172 DRAG DROP

ReportApp will shut down every night. However, data from the searches performed during the night must still be collected.

You need to identify the return types for the car year, price, brand and model. The solution must minimize the number of round trips between the clients and the web servers.

What should you identify? To answer, drag the appropriate return types to the correct objects. Each return type may be used once, more than once, or not at all. You may need to drag the split bar between panes or scroll to view content.

Return Types	Answer Area
<code>List&lt;String&gt;</code>	<code>Brand:</code> <span style="border: 1px dashed #ccc; padding: 2px;">Return type</span>
<code>String</code>	<code>Model:</code> <span style="border: 1px dashed #ccc; padding: 2px;">Return type</span>
<code>Task&lt;List&lt;String&gt;&gt;</code>	<code>Price:</code> <span style="border: 1px dashed #ccc; padding: 2px;">Return type</span>
<code>Task&lt;String&gt;</code>	<code>Year:</code> <span style="border: 1px dashed #ccc; padding: 2px;">Return type</span>

**Answer:**

## Answer Area

<code>Brand:</code>	<code>Task&lt;String&gt;</code>
<code>Model:</code>	<code>Task&lt;String&gt;</code>
<code>Price:</code>	<code>String</code>
<code>Year:</code>	<code>String</code>

Note: A round trip occurs when an object is deserialized and re-serialized in one operation.

From scenario: The application will provide users with the ability to search for a car by using advanced filtering options, such as the car brand, model, year, and price. All of this information will be stored as strings and will be displayed as drop-down lists.

The brand and model lists that will be displayed on the home page of the web application will be retrieved from Windows Communication Foundation (WCF) services hosted in the on-premises environment.

**Target 1: Task<String>**

Though Performance blocking and Sluggishness are the tailbacks for any application, we can easily overcome these bottlenecks by using asynchronous programming. But old-style practice for asynchronous programming is not way easy enough. Target 2: Task<String> Target 3: String Target 4: String References: <https://rashimuddin.wordpress.com/2013/05/07/task-based-asynchronous-operation-in-wcf/>

**NO.173 DRAG DROP**

You need to build the connection from ReportApp to read the search data.

a. The solution must minimize development effort.

Which three actions should you perform in sequence? To answer, move the appropriate actions from the list of actions to the answer area and arrange them in the correct order.

**Actions**

Obtain the shared secret issuer name from the Service Bus Connection Information.

Use a SubscriptionClient object to receive messages.

Use an HttpClient object to receive messages.

Obtain the Shared Access Signature (SAS) key from the Service Bus Connection Information.

Create a service namespace.

Update the .cscfg file.

**Answer Area****Answer:**

## Actions

Obtain the shared secret issuer name from the Service Bus Connection Information.

Use an HttpClient object to receive messages.

Update the .cscfg file.

## Answer Area

Create a service namespace.

Obtain the Shared Access Signature (SAS) key from the Service Bus Connection Information.

Use a SubscriptionClient object to receive messages.



### References:

- <https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-dotnet-get-started-with-queues>
- <https://docs.microsoft.com/en-us/azure/service-bus-messaging/service-bus-queues-topics-subscriptions>

**NO.174** You are developing an ASP.NET MVC application. Deployment administrators do not have access to Visual Studio 2012, but will have the elevated permissions required to deploy the application to the servers. You need to select a deployment tool for use by the deployment administrators. Which tool should you use?

- A.** Publish Web Site Tool
- B.** Web Deployment Package
- C.** One-Click Publish
- D.** Deployment Package Editor

**Answer:** B

**NO.175** You need to perform the initial deployment of the web application. You must ensure that the application meets the performance requirements.

Which file should you modify before you deploy the application?

- A.** the service definition file (.csdef)
- B.** the application configuration file (app.config)
- C.** the packages configuration file (packages.config)
- D.** the Global.asax file (.asax)

**Answer:** A

**Explanation:**

You use cscfg file to define various settings related to your cloud application (in ConfigurationSettings section). Like app.config file, you get to define other things (e.g.number of instances of your cloud application) in the cscfg file. You could change the settings in a cscfg file on the fly using either the portal or Service Management API without having to repackage and redeploy the application.

**Scenario:** After the initial deployment, any changes to the business logic of the Web API must cause minimal downtime to the web application in the production environment.