

Kentico CMS 7 Developer Certification Prep Guide



Kentico CMS 7 Developer Certification Prep Guide

Preface

To sufficiently prepare for the Kentico CMS Certified Developer Exam, please study this Preparation Guide thoroughly in conjunction with the product documentation, Developer's Guide, and other resources available online at <http://devnet.kentico.com>. Passing the Exam requires not only this "head knowledge" and academic understanding of the product's features and functionality, but it also requires practical experience and a high-level of familiarity with the product itself.

To pass the Exam and be recognized as a Kentico expert, it is expected that you have extensive experience in the following:

- Designing, developing, and implementing Kentico CMS web sites
- ASP.NET development and the intricacies of the .NET Framework
- Creating data-driven web user interfaces
- Writing programmatic code in Microsoft Visual Studio

If you pass the Exam and gain acknowledgement for being a Certified Kentico Developer, then you have successfully proven your skills and set yourself apart from the everyday developer. Earning your certification is a mark of approval and distinction that builds your credibility, makes you more marketable, and gives you a competitive advantage over the other developers you will encounter in your career.

For more information about the benefits of being a Kentico Certified Developer, please download and view the Kentico Certified Developer datasheet at http://www.kentico.com/getattachment/Training/Developer-Certification/Certified_developer_datasheet.pdf.

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Overview

Kentico CMS drives over 12,000 web sites in 85 countries around the globe, with 24/7 technical support and over 1,200 partners and consultants to sustain the Kentico CMS ecosystem. Becoming a Kentico Certified Developer is the biggest step towards joining this growing community of technical professionals.

Kentico CMS offers three different editions:

- Kentico CMS Base
- Kentico CMS Ultimate
- Kentico Enterprise Marketing Solution (EMS)

For more information about the features and functionality available in each edition, please visit <http://www.kentico.com/Product/Product-Editions>.

For a list of the hardware and software requirements for installing Kentico CMS, please visit <http://www.kentico.com/Support/Support-files/System-requirements>.

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Test Format

The Kentico CMS 7 Certified Developer Exam is securely administered online and consists of 50 questions to be completed within 60 minutes. The Exam is an open-book test: you may use any resource that you find helpful (have the Kentico CMS running, have the Developer's Guide open, etc.) EXCEPT another person. You must take the Exam individually; sharing or cheating will NOT be tolerated and will result in the disqualification of your current and future Exams.

The Exam contains the following question types.

Question type	Description
Single Answer	You select a single answer. For clarity, each question of this type is marked with "Select the most-correct answer".
Multiple Choice	You select multiple answers. For clarity, each question of this type is marked with "Select all correct answers".
True/False	You select a True/False response option based on a statement provided. For clarity, each question of this type is marked with "True/False".
Yes/No	You select a Yes/No response option based on a statement provided. For clarity, each question of this type is marked with "Yes/No".

The purpose of this study guide is to help you assess your skills in answering each of the four types of questions on the Kentico Certified Developer Exam. The sample questions in this guide are based on real questions from the Exam.

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Score Calculation

To receive the Kentico CMS Developer Certification for Kentico CMS Version 7, a minimum score of 80% is required. The testing and scoring process is designed to be confidential. Completed Exams are not returned and the answers (whether correct or incorrect) are not provided to tested candidates.

This study guide will help you answer the questions, “If the sample questions in this guide are like the real questions on the Kentico Certified Developer Exam, how will I do? Do I have sufficient knowledge and experience to pass the Exam?”

You can then use this information to hone your skills and focus on the areas where you need more understanding and experience before actually taking the Exam.

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Basic Kentico CMS Functionality

This section contains sample questions involving basic Kentico CMS functionality. These questions may cover (but are not limited to) CMS Desk, Site Manager, the Content tree, and document management.

Sample Questions about Basic Kentico CMS Functionality

- 1) To perform on-site editing, you must first login to CMS Desk. (True/False)
 - a) True
 - b) False
- 2) In CMS Desk, when you look at the **Products** document in the Content tree, you see the following:



- What is the current status of the **Products** document? (Select the most-correct answer)
- a) Document is published.
 - b) Document is not published.
 - c) Document is archived.
 - d) Document is currently checked-out.
- 3) In a structured document, each field has its own database column in SQL Server. (True/False)
 - a) True
 - b) False

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Application Programming Interface (API)

This section contains sample questions about the Kentico CMS API (application programming interface). These question may cover (but are not limited to) specific APIs, their syntax, and their function.

Sample Questions about API

1. Which of the following statements best describes the `CMS.TreeEngine.TreePathUtils` API class? (Select the most-correct answer)
 - e) Encapsulates data from the `CMS_Tree` and `CMS_Document` tables and their respective coupled tables.
 - f) Only used to delete tree nodes.
 - g) Represents a relationship between two documents.
 - h) Provides functionality for validating and converting paths, URLs, aliases, and names.

- 2) All of the following classes are part of the **CMS.SyncService** namespace, except for: (Select the most-correct answer)
 - a) `SyncClient`
 - b) `SyncServer`
 - c) `SyncLogInfoProvider`
 - d) `WebServiceAuthorization`

- 3) You can register event handlers by creating a custom class in which folder? (Select the most-correct answer)
 - a) `App_Bin`
 - b) `App_Code`
 - c) `App_Data`
 - d) `App_WebReferences`

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Web Parts and Widgets

This section contains sample questions about web parts and widgets. These questions may cover (but are not limited to) specific web parts, their properties, and their functionality.

Sample Questions about Web Parts and Widgets

- 1) Which of the following Twitter web parts is not included with Kentico CMS out-of-the-box? (Select the most-correct answer)
 - a) Twitter email
 - b) Twitter feed
 - c) Twitter follow button
 - d) Twitter tweet button

- 2) Which of the following actions does NOT optimize the performance of a **CMSRepeater** web part in a Portal Engine page template (without modification of any caching or transformation code)? (Select the most-correct answer)
 - a) Check permissions
 - b) Edit the web part title
 - c) Disable the ViewState property
 - d) Reduce the number of columns displayed

- 3) When developing a custom web part, what class do you need to inherit from? (Select the most-correct answer)
 - a) WebPartInfo
 - b) WebPartInfoProvider
 - c) CMSAbstractWebPart
 - d) WebPartInstance

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Kentico CMS Database Repository

This section contains sample questions involving the Kentico CMS database repository in SQL Server. These questions may cover (but are not limited to) database schemas, specific database tables, properties, columns, and foreign keys, as well as SQL scripts and queries.

Sample Questions about Kentico CMS Database

- 1) When a Live site user registers or creates an account, which of the following database tables contains the user account information? (Select the most-correct answer)
 - a) `dbo.CMS_User`
 - b) `dbo.CMS_MembershipUser`
 - c) `dbo.CMS_UserSite`
 - d) `dbo.COM_Customer`

- 2) For each language version of a document, the **CMS_document** table contains which one of the following? (Select the most-correct answer)
 - a) One column of data
 - b) One row of data
 - c) One foreign key
 - d) One database schema

- 3) Which one of the following database tables contains the document type-specific fields for the BlogPost document type? (Select the most-correct answer)
 - a) `Blogs_BlogPost`
 - b) `CMS_BlogPost`
 - c) `CONTENT_Blog`
 - d) `CONTENT_BlogPost`

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Page Templates

This section contains sample questions about page templates in Kentico CMS. These questions may cover (but are not limited to) specific template types and properties, template development models, specific template controls, and template design aspects.

Sample Questions about Page Templates

- 1) Kentico CMS supports all of the following page template types EXCEPT: (Select the most-correct answer)
 - a) ASPX pages
 - b) Dashboard pages
 - c) JSP pages
 - d) Portal pages

- 2) If a specific ASPX page in Kentico CMS is not integrated or registered with the Portal Engine, which of the following document tabs in CMS Desk will be lacking? (Select the most-correct answer)
 - a) Page
 - b) Design
 - c) Form
 - d) Properties

- 3) The `<asp:ContentPlaceHolder../>` control can be placed in a standard page template. (True/False)
 - a) True
 - b) False

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Macro Expressions

This section contains sample questions about macro expressions in Kentico CMS. These questions may cover (but are not limited to) syntax, parameters, and return values.

Sample Questions about Macro Expressions

- 1) All of the following macro expressions will return the string "kenticocertified", EXCEPT for? (Select the most-correct answer)
 - a) `{% "KENTICO" + "certified" |(tolower) %}`
 - b) `{% str = ""; foreach (x in "KENTICOCERTIFIED") { str += x.ToLower() }; str %}`
 - c) `{% kenticocertified %}`
 - d) `{% "kenticocertified" %}`

- 2) The macro expression `{% "6" + "7" %}` returns which one of the following numbers? (Select the most-correct answer)
 - a) 13
 - b) 42
 - c) 76
 - d) 67

- 3) The macro expression `{% z = 0; for (i = 0; i < 8; i++) { z += 1 }; z %}` returns which one of the following numbers?
 - a) 0
 - b) 8
 - c) 12345678
 - d) 87654321

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Transformations

This section contains sample questions about transformations. These questions may cover (but are not limited to) formatting, functions, and methods.

Sample Questions about Transformations

- 1) You can use a transformation to perform all of the following tasks EXCEPT which one? (Select the most-correct answer)
 - a) Retrieve document data
 - b) Transform document data
 - c) Display document data
 - d) Display custom data

- 2) The proper naming format for localizing a transformation named “TransformationA” into French is “TransformationA_Localize_Fr-Fr” or “Fr-Fr_TransformationA”. (True/False)
 - a) True
 - b) False

- 3) Which of the following Kentico CMS administration interfaces support the creation of transformations? (Select all correct answers)
 - a) CMS Desk -> Tools -> Custom Tables
 - b) CMS Site Manager -> Development -> Custom Tables
 - c) CMS Desk -> Document selection -> Properties -> Web Part Properties
 - d) CMS Site Manager -> Development -> Document Types

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Workflow and Versioning

This section contains sample questions about workflow and versioning. These questions may cover (but are not limited to) workflow creation and definition, workflow steps, workflow properties, approval and publication, document versioning, version comparison, and rollback.

Sample Questions about Workflow and Versioning

- 1) You can find the content-locking options for file check-in/check-out in all of the following administration interfaces, EXCEPT for: (Select the most-correct answer)
 - a) CMS Desk -> Document -> **Form** tab
 - b) CMS Desk -> Document -> **Page** tab
 - c) CMS Desk -> Document -> Properties -> **Security** side tab
 - d) CMS Desk -> Document -> Properties -> **Versions** side tab

- 2) In Kentico CMS, you can apply versioning to your custom queries. (True/False)
 - a) True
 - b) False

- 3) To archive documents, a user needs which one of the following permissions? (Select the most-correct answer)
 - a) Manage workflow
 - b) Modify
 - c) Archive
 - d) Destroy

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System Management

This section contains sample questions about Kentico CMS system management. These questions may cover (but are not limited to) the event log, system modules, integration bus, and capacity planning.

Sample Questions about System Management

- 1) When the event log reaches its maximum size, which one of the following occurs by default? (Select the most-correct answer)
 - a) It is cleared by a scheduled task at regular intervals (which you can specify in the web.config file).
 - b) It is reduced to half its maximum size.
 - c) It is reduced by the product of the maximum size multiplied by the coefficient specified in the web.config file.
 - d) The oldest item is deleted before a new item is logged.

- 2) With the Integration bus module, the TaskDataTypeEnum.SimpleSnapshot object contains translation data and child objects. (True/False)
 - a) True
 - b) False

- 3) You cannot configure the smart search module to search within custom tables. (True/False)
 - a) True
 - b) False

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eCommerce

This section contains sample questions about eCommerce in Kentico CMS. These questions may cover (but are not limited to) eCommerce membership objects, product types, currency configuration, shopping cart functionality, and the Kentico CMS Enterprise Marketing Solution (EMS).

Sample Questions about eCommerce

- 1) Which one of the following product types does Kentico CMS eCommerce support? (Select the most-correct answer)
 - a) Bundle
 - b) Donation
 - c) Membership
 - d) All of the above

- 2) For eCommerce, you manage the list of currencies in Site Manager -> Settings tab -> E-Commerce -> Global objects. (True/False)
 - a) True
 - b) False

- 3) When configuring Contacts in On-line marketing, all of the following statements are true EXCEPT for: (Select the most-correct answer)
 - a) You can enable automatic merging of Contacts from different sites if they share the same users.
 - b) You can enable automatic merging of Contacts on the same site if they share the same activities.
 - c) You can personalize the Notes stamp format used in Contact notes.
 - d) You can set rules for automatic deletion of Contacts.

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Windows Azure

This section contains sample questions about deploying a Kentico CMS web site to the Windows Azure cloud computing platform. These questions may cover (but are not limited to) Windows Azure development principles, Windows Azure services and components, and managing the files stored on Windows Azure.

Sample Questions about Windows Azure

- 1) Most modern cloud computing platforms (including Windows Azure) support which one of the following characteristics? (Select the most-correct answer)
 - a) Geographically distributed data centers
 - b) High availability infrastructures with specific Service Level Agreements (SLA)
 - c) Scale on demand
 - d) All of the above

- 2) All of the following cloud service models are supported by Windows Azure EXCEPT for? (Select the most-correct answer)
 - a) Application as a service (AaaS)
 - b) Data as a service (Daas)
 - c) Infrastructure as a service (IaaS)
 - d) Platform as a service (PaaS)

- 3) In the Windows Azure architecture, the allocation of resources between various virtual machines is handled by VMware vSphere and VMware vSphere Hypervisor. (True/False)
 - a) True
 - b) False

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Kentico CMS Security

This section contains sample questions about Kentico CMS security. These questions may cover (but are not limited to) kzc.

Sample Questions about Kentico CMS Security

- 1) Which one of the following security permissions has the highest priority (takes precedence over the others)? (Select the most-correct answer)
 - a) Deny
 - b) Inherited
 - c) Role
 - d) User

- 2) In Kentico CMS, you can grant/apply security permissions to which one of the following items? (Select the most-correct answer)
 - a) IP addresses
 - b) Roles
 - c) Templates
 - d) Web parts

- 3) In Kentico CMS, the default security on most pages is set to which one of the following configurations? (Select the most-correct answer)
 - a) Requires authentication No, Requires SSL No
 - b) Requires authentication Yes, Requires SSL Yes
 - c) Requires authentication Yes, Requires SSL No
 - d) Requires authentication Inherits, Requires SSL Inherits

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Answer Key

This section provides answers and explanations for the sample test questions.

Answers for Basic Kentico CMS Functionality Questions

- 1) **B (False)**. The purpose of on-site editing is to enable Content Administrators to make content updates directly on the Live site (using the URL <http://<domain>/<virtual directory path>/CMSEdit>). This capability precludes the need to access CMS Desk or establish VPN connectivity to one's corporate network in order to use CMS Desk.
- 2) **C**. When the icon color next to a document name is grey, then the current status of the document is Archived. When a document is Published (Answer A), the document status icon color is green. When a document is Unpublished (Answer B), the icon color is red. When a document is checked-out (Answer D), the icon displays a lock.

Icon	Status	Description
	Published	Published document is rendering on the Live site.
	Not Published/ Unpublished	Unpublished document is not displayed on the Live site. Either the document has expired, or is in a workflow step awaiting publication.
	Archived	Archived document is no longer visible on the live site, but is still present in the content tree and can be restored when needed.
	Checked-Out	Document is checked-out by another user who is editing. You cannot edit these documents until they are checked-in.

- 3) **A (True)**. In a structured document, each field has its own database column in SQL Server that stores submitted form data (such as NewsTitle, NewsReleaseDate, NewsSummary, and NewsText). Each structured document type has its own database table in SQL Server (for example, dbo.CONTENT_News and dbo.CONTENT_Office).

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Answers for API Questions

- 1) **D.** The `CMS.TreeEngine.TreePathUtils` API class provides static helper methods for validating and converting paths, URLs, aliases, and names. For example, you can use this API to check or retrieve the path of a document or its URL.

The `CMS.TreeEngine.TreePathUtils` API class does not encapsulate data (Answer A), cannot be used to delete or manipulate tree nodes (Answer B), and does not apply to operations involving more than one document (Answer C).

- 2) **C.** The `CMS.SyncService` namespace includes the all of the following classes:
- `SyncClient` (Answer A)
 - `SyncServer` (Answer B)
 - `WebServiceAuthorization` (Answer D)
 - `ServerPolicy`
 - `StagingHelper`
 - `X509ClientPolicy`

But the `SyncLogInfoProvider` class (Answer C) is part of the `CMS.Staging` namespace.

- 3) **B.** All of the event handlers (Application, Request, and Session) are located in the `/App_Code/Handlers` folder of a web site project. The `App_Bin` folder (Answer A) contains compiled assemblies (binary .DLL files) for controls, components, and other code referenced by the application. The `App_Data` folder (Answer C) contains application data files, including database (.MDF) files, .XML files, and other data store files. The `App_WebReferences` folder (Answer D) contains web service reference contract (.WSDL) files, schema (.XSD) files, and discovery document (.DISCO and .DISCOMAP) files for creating web references.

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Answers for Web Part and Widget Questions

- 1) **A.** There is no **Twitter email** web part in Kentico CMS. The only Twitter web parts that are included with Kentico by default are: Twitter feed (Answer B), Twitter follow button (Answer C), and Twitter tweet button (Answer D).

- 2) **A.** Checking permissions does not optimize the performance of the **CMSRepeater** web part in a Portal Engine page template, however:
 - Editing the web part title (Answer B) can increase performance because if you remove it, then the system will use the value of the **Web part control ID** property to uniquely identify the web part. The system already has to read the **Web part control ID** anyways, so by making the web part title empty, you eliminate the need/latency for processing this field.
 - Disabling the ViewState property (Answer C) can increase performance by eliminating the need for the **Page** class to gather the collective view states for all of the controls and serialize the state to a base-64 encoded string, each time an ASP.NET web page is requested. Subsequently on postbacks, the view state will not need to load and deserialize the persisted view state data and update the relevant controls. Additionally, the **_VIEWSTATE** hidden form field will not add size/latency to Web page loading. And postback request times are minimized because the **_VIEWSTATE** form field will not need to be sent back to the Web server in the HTTP POST headers.
 - Reducing the number of columns displayed (Answer D) can increase performance by decreasing the amount of data that needs to be retrieved from the database and rendered at run-time.

- 3) **C.** When developing a custom web part, you must inherit from the **CMSAbstractWebPart** class because it contains the methods and constructors needed to initialize the parent portal manager and required controls for web parts.

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The **WebPartInfo** class (Answer A) creates a new web part object but does not provide the members required to initialize the controls for web parts. The **WebPartInfoProvider** class (Answer B) provides management functionality for web parts (such as get, set, and delete web part), but does not create or instantiate them. The **WebPartInstance** class (Answer D) initializes an instance of a web part, but does not provide the members required to initialize the controls for web parts.

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Answers for Kentico CMS Database Questions

- 1) **A.** When a Live site user registers or creates an account, the user account information (such as User name, First name, E-mail address, and password) is stored in the **dbo.CMS_User** table.

The **dbo.CMS_MembershipUser** table (Answer B) assigns users to memberships, where each record associates the user as a member of a specified membership.

The **dbo.CMS_UserSite** table (Answer C) assigns users to sites for login purposes.

The **dbo.COM_Customer** table (Answer D) only stores user account information when a user makes an online purchase and creates an account during the checkout (or Add to Shopping Basket) process.

- 2) **B.** The **CMS_document** table contains one row of data for each language version of a document. Each column in this table (Answer A) represents one specific document, where a row is added for each localized version of the document. The nine foreign keys in this table (Answer C) contain various fields that specify background or supplementary properties about a particular document, such as DocumentCreatedByUserID, DocumentCheckedOutByUserID, DocumentModifiedByUserID, DocumentPageTemplateID, and DocumentWorkflowStepID. The database schema (Answer D) defines the structure of all database tables, and the **CMS_Document** table resides within the dbo schema.
- 3) **D.** The **CONTENT_BlogPost** database table defines the fields for the BlogPost document type. The **Blogs_BlogPost** table (Answer A) and **CMS_BlogPost** table (Answer B) do not exist. The **CONTENT_Blog** table (Answer C) defines the fields for the Blog document type (an entirely new blog with its own, separate blog posts).

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Answers for Page Template Questions

- 1) **C.** By default, Kentico CMS does not support JSP (JavaServer Pages) as a page template type. However, it supports ASPX pages (Answer A), Dashboard pages (Answer B), and Portal Engine pages (Answer D) as template types.
- 2) **B.** If you do not integrate or register an ASPX page with the Portal Engine in Kentico CMS, you will not be able to use the features and functionality (such as adding and removing web parts and widgets) provided by the **Design** tab in CMS Desk. The **Page** tab (Answer A) is available for editing the text on a page. The **Form** tab (Answer C) is available for modifying the fields of a document. The **Properties** tab (Answer D) is available for viewing various document properties, such as the specific CSS stylesheet applied to a document, the document type on which a document is based, who (which user account) created a document, and the alias path for a document.
- 3) **B (False).** The `<asp:ContentPlaceHolder../>` control cannot be placed in a standard page template. This control can be placed in a Master page template (only once on each page template), can display a page in different language cultures, and is a placeholder for content in pages that inherit from the template.

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Answers for Macro Expressions Questions

- 1) **C.** The macro expression `{% kenticocertified %}` is a context (data) macro that will not render anything because the value(s) to display must be enclosed within quotation marks.

The `{% "KENTICO" + "certified" |(tolower) %}` macro expression (Answer A) will render the string “kenticocertified” because the values are properly enclosed within quotation marks; although the value “KENTICO” has all capital letters, this macro includes the “tolower” function that converts all characters to lowercase.

The `{% str = ""; foreach (x in "KENTICOCERTIFIED") { str += x.ToLower(); } str %}` macro expression (Answer B) will render the string “kenticocertified” because again, the value to display is properly enclosed within quotation marks; although the value “KENTICOCERTIFIED” has all capital letters, this macro performs a cycle where each iteration converts one letter in the value to lowercase.

The `{% “kenticocertified” %}` macro expression (Answer D) will render the string “kenticocertified” because the values are properly enclosed within quotation marks.

- 2) **D.** Although the `{% "6" + "7" %}` macro expression uses the “+” (addition/sum) operator, it renders as “67” because the values are enclosed within quotation marks and thus, concatenated. The number “13” (Answer A) would be rendered if the values were not enclosed within quotation marks. The number “42” (Answer B) would be rendered if the “*” (multiplication) operator were used instead of the “+” (addition/sum) operator. The number “76” (Answer C) cannot be rendered using this macro expression because there is no operator for transposing values.
- 3) **B.** The `{% z = 0; for (i = 0; i < 8; i++) { z += 1 }; z %}` macro expression uses the **for** flow control command to specify 8 iterations of a cycle (as defined by the expressions “i = 0; i < 8; i++”). Since the value **z** starts at 0 and gets incremented by 1 (as defined by the expression “z += 1”) for each iteration, the final **z** value returned is “8”.

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The macro expression does not return the number "0" (Answer A) because the **z** value is incremented by 1 (as defined by the expression "**z += 1**") for each iteration through the cycle, and there are 8 iterations (as defined by the expressions "**i = 0; i < 8; i++**").

To return the number "12345678" (Answer C), the macro expression would not display only the final **z** value; it would simply display a concatenated list of numbers for each iteration through the cycle using **{% z = 0; for (i = 0; i < 8; i++) { z += 1 } %}**.

To return the number "87654321" (Answer D), the macro expression would have to be rewritten as **{% z = 9; for (i = 8; i > 0; i--) { z -= 1 } %}**.

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Answers for Transformations Questions

- 1) **A.** Transformations do not retrieve data from a database. They are typically applied to data that has been retrieved from a database (to transform that data for presentation and rendering). You apply transformations by predefining the transformation code and saving them as system objects, then assign them to web part or controls through the appropriate properties.

The purpose of a transformation is to change and control how data gets displayed. So transformations can transform document data (Answer B), display document data (Answer C), or display custom data (Answer D). They can also be used to perform other tasks such as displaying XML data, processing field values, converting data into a specific format, and specifying different output formats for individual items based on document type or hierarchy level (in the case of hierarchical transformations).

- 2) **B (False).** To localize a transformation named "TransformationA" into French, you must use the naming format of "TransformationA_Fr-Fr".
- 3) **B and D.** You can create transformations in Site Manager [on the **Development** tab, in the **Custom tables** section (Answer B) or the **Document types** section (Answer D)], but not in CMS Desk (Answers A and C).

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Answers for Workflow and Versioning

- 1) **C.** In CMS Desk, when you select a document in the Content tree and click the **Properties** tab in the right pane, the **Security** side tab only lets you set **Permissions** and **Access** rights for the document; there are no content-locking options in this particular administration interface.

When workflow is enabled, content-locking options appear in CMS Desk at the top of the page on the **Form** tab (Answer A), **Page** tab (Answer B), and **Versions** side tab (Answer D).

- 2) **A (True).** You can apply Kentico CMS versioning to your custom queries using Site Manager: click the **Development** tab, click **Document types** or **Custom tables**, edit/select a specific query, click the **Versions** tab.
- 3) **A.** To be able to archive documents, a user needs **Manage workflow** permissions. To grant this permission, open Site Manager, click the **Administration** tab, in the left pane tree view, click **Permissions**, in the right pane, from the **Site** drop-down list, select the appropriate site; from the first **Permissions for** drop-down list (on the left), select **Module**, and from the second **Permissions for** drop-down list (on the right), select **Content**; and from the **Report for user** drop-down list, select the appropriate user, and then in the permissions matrix/table below, under the **Manage workflow** column, check the box for the selected user.

The **Modify** permission (Answer B) allows a user to perform many actions (such as creating a new document, editing a document, copying a document, and approving/rejecting a document), but to archive a document, the user must also have the **Manage workflow** permission granted. The **Archive** permission (Answer C) does not exist in Kentico CMS. The **Destroy** permission (Answer D) allows a user to delete particular versions of a document, or the entire version history.

For more information about document permissions, please visit

http://devnet.kentico.com/docs/6_0/devguide/index.html?document_library_security.htm.

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Answers for System Management Questions

- 1) **C.** When the event log reaches its maximum size, by default, it is reduced by the product of the maximum size multiplied by the **CMSLogKeepPercent** value/coefficient that you can specify in the web.config file.

While you can create a scheduled task that clears the event log at regular intervals (Answer A), this configuration is not the default setting. The system does not automatically purge half of the events (Answer B) in the event log when maximum capacity is reached. And the system does not delete an old event for each new event logged (Answer D).

- 2) **B (False).** The TaskDataTypeEnum.SimpleSnapshot object in the Integration bus module does NOT contain translation data nor child objects. In the **CMS.Synchronization** namespace, the TaskDataTypeEnum enumeration task has three member objects that specify the type of data to process/synchronize:
- Simple - process the main object only.
 - SimpleSnapshot - process the main object with translation information.
 - Snapshot - process the object with child objects and bindings.
- 3) **B (False).** By default, the smart search module is already configured to search within custom tables (for the sample Corporate Site). You can configure the settings and specify which custom tables to index by opening Site Manager, click the **Administration** tab, and in the left pane tree view, click **Smart search**.

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Answers for eCommerce Questions

- 1) **D (All of the above)**. By default, eCommerce in Kentico CMS supports all of the following product types:
- Bundle (Answer A)
 - Donation (Answer B)
 - E-product
 - Membership (Answer C)
 - Product (basic product type from which the four types above are derived)

To define a product and set special properties for a particular product type, open CMS Desk and click the **E-commerce** tab at the top.

- 2) **B (False)**. While you can enable and disable global settings for currencies in Site Manager -> Settings tab -> E-Commerce -> Global objects, you cannot manage the list of currencies in Site Manager. To manage currencies, open CMS Desk, click the **E-commerce** tab at the top, and in the ribbon toolbar, click the **Configuration** button (far right), and then click the **Currencies** side tab.
- 3) **B**. For Contact management in On-line marketing, you cannot enable automatic merging of Contacts on the same site if they share the same activities; you can only enable automatic merging of Contacts from different sites if they share the same users (Answer A). You can also personalize the format of the Notes stamp for Contact notes (Answer C) and set rules for the automatic deletion of Contacts (Answer D).

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Answers for Windows Azure Questions

- 1) **D (All of the above).** Most modern cloud computing platforms (including Windows Azure) support geographically distributed data centers (Answer A) mostly for fault tolerance; high availability infrastructures with specific Service Level Agreements (Answer B) that articulate the particular thresholds for expected uptime and acceptable downtime (among many other measures of service); scale on demand (Answer C) where additional resources can be added, removed, and adjusted in real-time based on various factors such as consumption and expected peaks.

- 2) **A.** In terms of cloud service models, Windows Azure does not support the Application as a service (AaaS) model, which is why Kentico CMS is strategically positioned to provide integration services for the web sites and applications running on Kentico. By default, Windows Azure provides database storage and hosting in the cloud through its Data as a service (Daas) model (Answer B); virtual infrastructure, hardware, networking, and data center services through its Infrastructure as a service (IaaS) model (Answer C); and hosted Windows Server in the cloud services through its Platform as a service (PaaS) model (Answer D).

- 3) **B (False).** In the Windows Azure architecture, the allocation of resources between various virtual machines is NOT handled by VMware vSphere and VMware vSphere Hypervisor. Windows Azure monitors and manages the Hypervisor (Hyper-V) lifecycle and virtual machines using System Center Virtual Machine Manager (VMM) 2012.

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Answers for Kentico CMS Security Questions

- 1) **A.** The **Deny** permission has the highest priority because Kentico CMS supports the industry-standard approach of the role-based security model that restricts system access and actions to authorized users. As such, you must explicitly grant permissions for users to perform specific actions, else they are denied access by default. The system favors on the side of safety/security/denial over the susceptibility and vulnerability exposed by an open/allow model. Therefore, even if users are explicitly granted specific permissions, such as Inherited permissions (Answer B), Role-level permissions (Answer C), and User-level permissions (Answer D), any **Deny** permissions will override what is granted. In terms of Kentico CMS security and permissions, denial ALWAYS trumps allow.

- 2) **B.** You grant permissions to security objects such as user accounts, memberships, and roles. You can also set permissions such that these objects can access specific documents, modules, and different areas of CMS Desk.

By default, you cannot grant security permissions at the IP address level (Answer A), template level (Answer C), or web part level (Answer D).

- 3) **D.** The default security on most pages is set to inherit both authentication and SSL requirements/properties from the parent documents. Security on most pages do not automatically bypass authentication and SSL (Answer A), nor do they automatically require authentication and SSL (Answer B). Lastly, most pages do not automatically require authentication and bypass SSL (Answer C).

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Appendix A – Functional Areas to Study

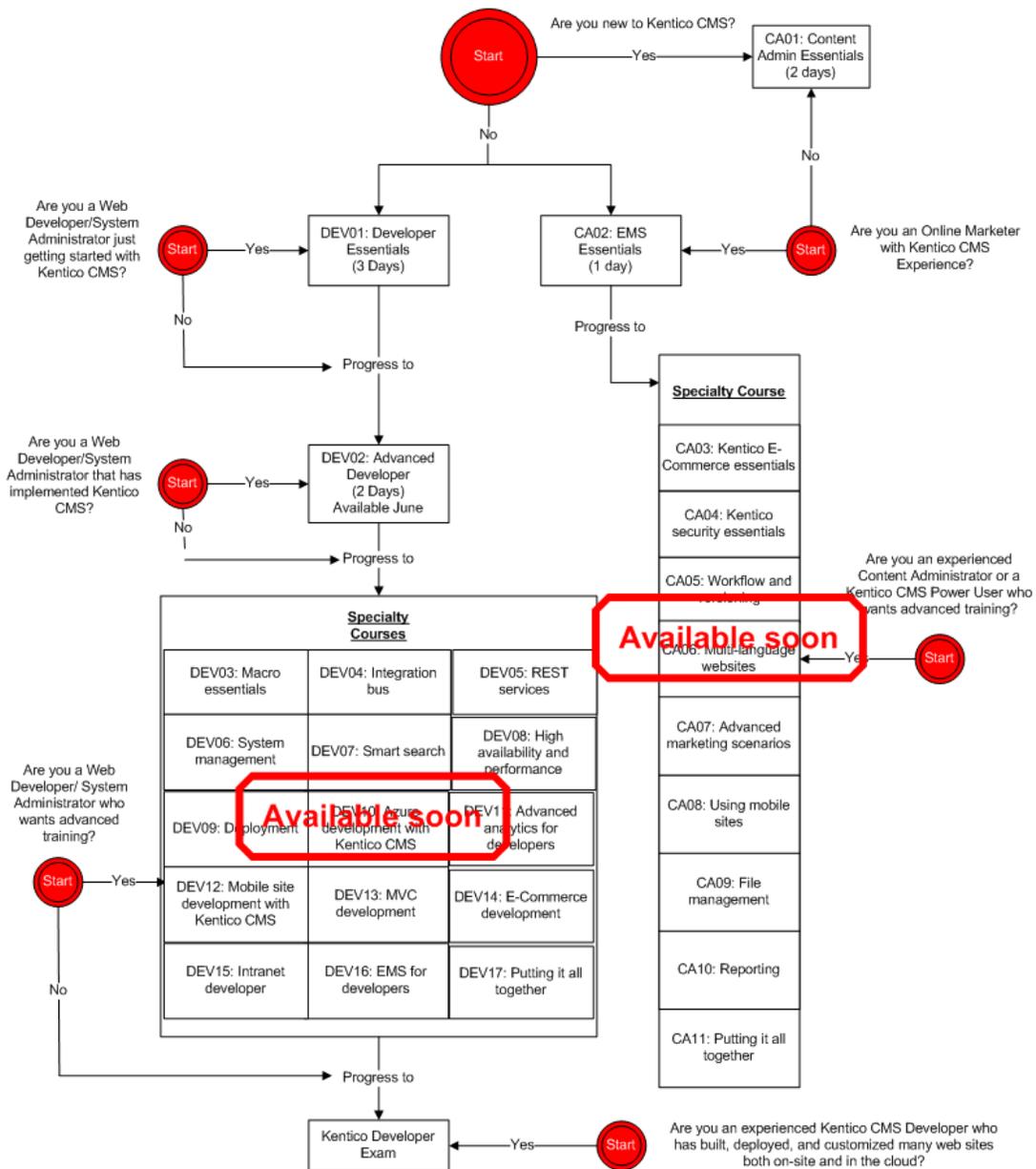
The Kentico CMS Certified Developer Exam consists of questions related to the following product and technology categories.

General Kentico CMS knowledge	Security with Kentico CMS
Kentico CMS E-Commerce	Kentico CMS Document types
Kentico CMS Application programming interface (API)	Kentico Enterprise Marketing Solution (EMS)
Using web parts/widgets with Kentico CMS	Using Macro expressions with Kentico CMS
Representational State Transfer (REST) Services with Kentico CMS	Kentico CMS Page templates
Kentico CMS system management	Kentico CMS System integration bus
Using transformations with Kentico CMS	Workflow and versioning
Web.Config parameters with Kentico CMS	Intranet development
Kentico CMS repository storage	Windows Azure and Kentico CMS

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Appendix B – Learning Paths

The following diagram defines the learning paths for Kentico CMS training and technical proficiency. (CTRL+Click to enlarge)



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Appendix C - Additional Resources

The following list of additional resources can help you prepare for the Kentico CMS Certification Exam.

- Kentico CMS Developer Network
<http://devnet.kentico.com>
- Kentico CMS Knowledge Base
<http://devnet.kentico.com/Knowledge-Base.aspx>
- Kentico CMS Product Documentation
<http://devnet.kentico.com/Documentation.aspx>
- Kentico CMS Developer's Guide
<http://devnet.kentico.com/docs/devguide/index.html>
- Kentico CMS Controls Guide
<http://devnet.kentico.com/docs/controls/index.html>
- Kentico CMS API Reference
http://devnet.kentico.com/docs/kenticocms_api.zip
- Kentico CMS Database Reference
http://devnet.kentico.com/docs/kenticocms_database.zip
- Kentico CMS Web Parts
<http://devnet.kentico.com/docs/webparts/index.html>
- Kentico CMS Widgets
<http://devnet.kentico.com/docs/widgets/index.html>
- Kentico CMS E-commerce Guide
<http://devnet.kentico.com/docs/ecommerceguide/index.html>
- Kentico CMS On-line Marketing Guide
<http://devnet.kentico.com/docs/onlinemarketingguide/index.html>
- Kentico CMS Windows Azure Deployment Guide
<http://devnet.kentico.com/docs/azureguide/index.html>