Mobile Application Development for BlackBerry Devices

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Introduction

This booklet contains a series of quizzes that will test your knowledge of programming applications for the BlackBerry handheld device. It is assumed that you have a good understanding of the Java programming language and perhaps J2ME. The quizzes are based on the content from tutorials and lecture slides provided.

These quizzes were created with the intention of integrating mobile devices and specifically the BlackBerry handheld into conventional computer science curriculums. Combined with other learning content and resources produced by CMER, educational institutions should be better able to incorporate a mobile approach to the computing environment and, in turn, generate programs that put students in the forefront of the industry.

Quiz 1: Java ME

1. Which of the following platforms can be used for mobile application development

   a) Symbian

   b) BREW

   c) Android

   d) JavaME

   e) All of the Above

2. MIDP stands for:

   a) Mobile Information Device Profile

   b) Mobile Interaction Device Protocol

   c) Mobile Information Device Protocol

   d) None of the above

3. The following is not a core API defined by the CDLC:

   a) Javax.microedition.rms

   b) Javax.microedition.io

   c) Javax.microedition.lcdui

   d) Javax.microedition.connection

4. KVM stands for:

   a) Kilo Visualization Machine

   b) Kilobyte Visualization Mechanism

   c) Kilo Virtual Machine

   d) None of the above

5. KVM provides which of the following security levels:

   a) VM Level Security

b) Application Level Security

c) Mobile Connection Security

d) A and B

e) B and C

6. Which of the following is offered in the CDLC supporting JVM?

a) Support for Reflection

b) Weak References

c) Limited Error Handling

d) Finalization

7. The profiles implemented on top of the CDLC specify APIs for:

a) User Interface Support

b) Event Handling

c) Persistent Support

d) All of the above

8. The MIDP specifies APIs for:

a) User Interface

b) Event Handling

c) High Level Application Model

d) Persistent Support

9. True or False: MIDP is a subset of Swing

False

10. True or False: The central abstraction in the MIDP UI Programming Model is the Screen

True

11. Java Application Descriptor file provides information on:

a) Configuration Properties

b) Discovery Properties

c) Pre-download Properties

d) A and C

Quiz 2: Java ME for the Blackberry

1. In order to allow for the use of commands, a MIDlet must implement which class?

   a) ActionListener

   b) CommandListener

   c) SelectionListener

   d) None of the above

2. The following is not a reason why J2SE and J2EE are not suitable networking APIs for handheld devices:

   a) Coding J2SE and J2EE is difficult to work with

   b) Require several megabytes of memory to run

   c) Other devices have specific mechanisms for communications

   d) All of the above

   e) None of the above

3. How are CDLC connections created?

   a) Connector.open()

   b) Connector.establish()

   c) Connector.create()

   d) Connector.begin()

4. True or False: MIDP does not provide a database mechanism, one must be implemented with MIDP.

   False

5. RMS stands for:

   a) Record Management System

   b) Record Management Store

   c) Records Maintenance System

d) Record Management Service

6. True or False: Timers in MIDP are used for handling queuing and delivery.

   True
7. The following is not a Java ME Configuration/Profile:

   a) PDA Profile

   b) Foundation Profile

   c) Personal Profile

   d) Mobile Connection Profile

8. When converting J2ME files to Blackberry Application files the following is generated:

   a) .debug file

   b) .cod file

   c) .jar file

   d) A and B

9. True or False: Blackberry applications have a lifecycle

   False
10. In order to convert your J2ME application to a Blackberry application you must run which command line command:

   a) rpac

   b) rapc

   c) rpc

   d) rac

Quiz 3: Blackberry Mobile Data System

1. True or False: CLDC, MIDP, and Blackberry APIs may not be used in the same application.

   False
2. MDS stands for:

   a) Mobile Development Service

   b) Mobility Development Service

   c) Mobile Data Specification

   d) Mobile Data System

3. The ability to proactively send data to Blackberry users is called:

   a) Pull Technology

   b) Send Technology

   c) Push Technology

   d) Forward Technology

4. Which of the following is not an application model?

   a) Browser Model

   b) Web Service Model

   c) Client/Server Model

   d) All of the Above

5. The MDS Studio Application utilizes the following model:

   a) Browser Model

   b) Web Service Model

   c) Client/Server Model

   d) All of the Above

6. Creation of web based applications that are accessible over the wireless network through the Blackberry:

   a) Browser Model

   b) Web Service Model

   c) Client/Server Model

   d) All of the Above

7. Creation of lightweight applications that provide mobile access to enterprise services:

   a) Browser Model

   b) Web Service Model

   c) Client/Server Model

   d) All of the Above

8. Creation of custom java applications for the Blackberry device that provides a sophisticated UI interface:

   a) Browser Model

   b) Web Service Model

   c) Client/Server Model

   d) All of the above

9. True or False: A benefit of the MDS is that it simplifies development through transparencies.

   True

10. True or False: MDS offers Triple DES/AES and RSA/DSA keys for security.

    True

11. Some design considerations developers need to keep in mind when designing applications on the Blackberry:

    a) Display Size

    b) Processor Speed

    c) Network

d) Amount of Code

e) All of the Above

Quiz 4: GUI Components Part I

1. A UI Application maintains a stack of:

   a) Screen Objects

   b) Display Objects

   c) Memory Objects

   d) Coordinate Objects

2. True or False: A UI Application may have more than one thread at a time gain access to an interface component at once.

   False

3. This type of file is the most efficient file format for Blackberry devices:

   a) GIF

   b) BMP

   c) JPG

   d) PNG

4. A BitmapField is centered using the following method:

   a) Center

   b) setSpace

   c) setCenter

   d) None of the Above

5. To display an alert box to the user the following method is used:

   a) Dialog.alert()

   b) Dialog.inform()

   c) Dialog.ask()

   d) Dialog.message()

6. To ask a question to the user the following method is used:

a) Dialog.alert()

b) Dialog.inform()

c) Dialog.ask()

d) Dialog.message()

7. True or False: A RadioButtonField can belong to only one RadioButtonGroup.

    True
8. True or False: Only the screen on top of the stack can receive input events.

    True
9. True or False: A screen may appear more than once in a display stack.

    False
10. True or False: RadioButtonFields are assigned indices by the order which they appear on the screen.

    False

Quiz 5: GUI Components Part II

1. True or False: The ApplicationMenuItemRepository class lets you add or remove menu items from BlackBerry Java Applications.

    True
2. To arrange components on a screen you should use the following BlackBerry Manager.

    a) BlackBerry API Layout Manager

    b) BlackBerry API Screen Manager

    c) BlackBerry API Coordinate Manager

    d) None of the Above

3. The following class does not extend the Manager class to provide predefined layouts.

    a) VerticalFieldManager

    b) HorizontalFieldManager

    c) BlockFieldManager

    d) DialogFieldManager

4. True or False: You can only add custom context menu items and custom layouts to a custom field.

    True
5. The manager of the field invokes the following method to determine how the field arranges its contents in the available space.

    a) Arrangement()

    b) Layout()

    c) Style()

    d) None of the Above

6. To let users select multiple items in a list you should declare lists as:

    a) MULTI_LIST

    b) MULTI_CHOICE

  c) MULTI_PICK

  d) MULTI_SELECT

7. True or False: To create a custom layout manager you must extend the Layout class.

  False

8. True or False: To create a custom context menu you must override the makeContextMenu() method.

  True

9. True or False: The Application Menu Item API, in the *net.rim.blackberry.api.menuitem* package, lets you add menu items to BlackBerry Java Applications.

  True

10. True or False: To get the preferred field width for the manager you must override the getWidth() method.

  False

Quiz 6: Handling Events

1. Event handling is accomplished via:

   a) Blackberry event listeners

   b) Blackberry event containers

   c) Blackberry event exceptions

   d) None of the above

2. Instead of implementing the TrackwheelListener one must instead use:

   a) Navigation methods

   b) Direction methods

   c) Page methods

   d) Only the TrackwheelListener will work

3. True or False: keyChar notification will become useful to support different locales for applications.

   True

4. True or False: The NotificationListener provides functionality for receiving alerts.

   False

5. True or False: To identify whether the Blackberry is in the holster one should implement the HolsterListener.

   True

6. To listen to system events implement:

   a) EventListener

   b) SystemListener

   c) NotificationListener

   d) ActionListener

7. To identify when the focus of a field changes one should implement:

   a) FieldListener

b) ChangeListener

c) FocusListener

d) FocusChangeListener

8. To listen to I/O port events one should implement:

a) PortListener

b) IOListener

c) IOPortListener

d) None of the above

9. True or False: To respond to UI event you have two options, override the onMenu() method or extend the MenuObject class

False

10. True or False: The GlobalEventListener is the interface that can listen for global events.

True

Quiz 7: Networking

1. BlackBerry Java Applications can use which of the following socket protocols to establish connections:

   a) HTTP and HTTPS

   b) TCP, HTTP, and HTTPS

   c) TCP and HTTP

   d) TCP and HTTPS

2. To determine the name of the wireless network, one should use the following method:

   a) getCurrentNetworkName()

   b) getNetworkName()

   c) getName()

   d) getNetwork()

3. True or False: The CoverageInfo class is used to determine that the BlackBerry is in network coverage.

   True
4. How many types of gateways can be setup for a BlackBerry:

   a) 1

   b) 2

   c) 3

   d) 4

   e) Unlimited

5. True or False: Traffic is not encrypted between your application and the BES automatically.

   False
6. The following is a type of encryption used between an application and the BES:

   a) Blowfish

b) Cipher Block Chain

c) One Time Pad

d) Triple DES

7. True or False: If a BlackBerry is associated with a BES and uses an HTTPS proxy server that requires authentication you will be able to use end-to-end TLS.

False

8. True or False: Socket connections support BlackBerry MDS feature push.

False

9. When opening a socket connection the following parameter specifies the use of MDS Services.

a) deviceservices

b) MDSServices

c) deviceside

d) None of the Above

10. True or False: Connections through the MDS Services are automatically routed to the device.

True

11. If the BlackBerry device is not connected to an access point, the WLANInfo.getAPInfo() method returns:

a) -1

b) 0

c) Exception

d) Null

Quiz 8: Data Management

1. To store custom object types, the class of the custom type must use which interface:

    a) Storable

    b) Persistable

    c) Saveable

    d) Holdable

2. True or False: If the Blackberry JVM performs an emergency garbage collection operation due to low memory, outstanding transactions are not committed.

    False
3. Each PersistantObject has a _____ key:

    a) Long

    b) Int

    c) Random

    d) None of the Above

4. If a commit() command within a batch transaction fails, then:

    a) All transactions after the failure are not completed

    b) The failed transactions is not committed

    c) The entire batch fails

    d) An error message appears prompting the user for input

5. When retrieving a record from a MIDP record store which of the following are not one of the required parameters:

    a) Record ID

    b) Byte Array

    c) Offset

    d) None of the Above

6. Which of the following is not a type of data synchronization:

    a) Wireless (BES)

    b) Wireless (XML data)

    c) Desktop-Based(Blackberry Desktop Manager Plug-in)

    d) Desktop-Based(USB Protocols)

    e) None of the Above

7. True or False: By default, the wireless backup is active on the Blackberry Enterprise Server.

    True

8. True or False: To setup the BES to back up application data using automatic wireless backup we must implement the OTASyncCapable and CollectionEventSource interfaces.

    True

9. To add support for backing up data with desktop software an application must implement which of the following:

    a) SyncCollection

    b) SyncConverter

    c) Both

    d) Neither

10. True or False: Deleting a .cod file will not affect the persistent objects that were created by that .cod file.

    False