PRG521_SA- Section 1

Started: May 9 at 1:32am

Quiz Instructions

Instructions:

- *Recall to keep a copy of all submitted assignments.*
- *All work must be typed using Microsoft Word and convert the word document to PDF before uploading to COLCampus.*
- *Kindly note that you will be evaluated on your writing skills in all your assignments.*
- *Negative marking will be applied if you are found guilty of plagiarism, poor writing skills or if you have applied incorrect or insufficient referencing.*
- *Each assignment must include a cover page, table of contents and full bibliography, based on Harvard referencing style.*
- *Students are not allowed to offer their work for sale or to purchase the work of other students. This includes the use of professional assignment writers. If this should happen, CTU training Solutions reserves the right not to accept future submissions from a student.*
- *Use Visual studio to create this program and submit a screenshot of your program output and all C# related code per question*
- *Spelling, style, fonts, font size, line spacing*
  - *Please copy the questions onto your answer sheet (single space the questions), and make sure to use numbers to indicate the answers to each question.*
  - *Always use a spell checker before you submit assignments! We reserve the right to deduct point for each obvious misspelling.*
  - *Always double-space your answers.*
  - *Please use Arial (or Calibri (Body)), 12 point as the font for your assignments. Certain fonts have been known not to come across in the PDF files.*
  - *Use only black or blue font face colors. Do not use red!*

Question 1 — 2 pts

Which of the following methods help us to convert string type data into integers? Select two.

- [x] Convert.toInt32();

- [ ] Convert.Int32();
- [x] int.parse();
- [ ] parse.int();

Question 2

2 pts

Suppose you're implementing a method name "Show" that will be able to take an unlimited number of int arguments. How are you going to define its method signature?

- ○ A) void Show(int[] arg)
- ◉ B) void Show(params int[] arg)
- ○ C) void Show(int a)
- ○ D) void Show(ref int a)

Question 3

2 pts

You're developing an application that saves user's information. The application includes the following code segment (line numbers included for reference).

```
01     public bool IsNull(string name)
02     {
03         return true;
04     }
```

You need to evaluate whether a name is null. Which code segment should you insert at line 03

- ○ A) if (name = null) { return true; }
- ◉ B) if (name == null) { return true; }
- ○ C) if (null) { return true; }

○ D) if (!name) { return true; }

Question 4 — 2 pts

Which operator is used to get instance data inside type definition?

○ A) as

○ B) is

◉ C) this

○ D) ?

Question 5 — 2 pts

Which type cannot be instantiated?

○ A) enum type

◉ B) static type

○ C) class type

○ D) System.Object type

Question 6 — 2 pts

Suppose you are developing an application. The application has two classes named Player and Person. The Player class must meet the following requirements:

1. It must inherit from the Person class.
2. It must not be inheritable by other classes in the application.

Which code segment should you use?

- (●) A)sealed class Player : Person { //TODO: }
- ( ) B) Abstract class Player : Person { //TODO: }
- ( ) C)private class Player : Person { //TODO: }
- ( ) D)partial class Player : Person { //TODO: }

Question 7

2 pts

The following code is boxed into object o.

double d = 34.5;

object o = d;

You're asked to cast "object o" into "int ""**.**

- ( ) A) int i = (int)o;
- ( ) B) int i = (int)(double)o;
- (●) C) int i = (int)(float)(double)o;
- ( ) D) int i = (float)o;

Question 8

2 pts

Suppose you're developing an application which stores a user's browser history. Which collection class will help to retrieve information of the last visited page?

- ( ) A) ArrayList
- ( ) B) Queue
- (●) C) Stack
- ( ) D) HashTable

Question 9

2 pts

Suppose you're writing a class that needs a delegate who can refer a method(s) of two input string parameters and return an integer value. Choose the right delegate from the following options.

- ○ A) Action<int, string, string>
- ◉ B) Func<string, string, int>
- ○ C) Predicate<int, string, string>
- ○ D) EventArgs<int, string, string>

Question 10

2 pts

Suppose you're writing a method that has one input string parameter and it returns True if the value of the string input parameter is in upper case. Which of the following delegate(s) will you use to refer this method?

- ○ A) Action<bool, string>
- ○ B) Func<bool, string>
- ◉ C) Predicate<string>
- ○ D) EventHandler

Question 11

2 pts

You have the following code: int [] Marks = new int[] { 59, 24, 40, 100, 35, 75, 90 }; You need to get all the marks that are greater than 60. Which code snippet should you use? (Select two answers)

- ☐ A) var query = Marks.Take(60);

- [x] B) var query = Marks.Where(s => s > 60);
- [ ] C) var query = Marks.Any(s => s > 60);
- [x] D) var query = from p in Marks where p > 60 select p;

Question 12

2 pts

In order to perform a query, a data source must be implemented by:

- [ ] A) Enumerable or Queryable
- [ ] B) Enumerable and Queryable
- [x] C) IEnumerable or IQueryable
- [ ] D) IEnumerable and IQueryable

Question 13

2 pts

An application includes an object that performs a long-running process. You need to ensure that the garbage collector does not release the object's resources until the process completes. Which garbage collector method should you use?

- [ ] A) WaitForFullGCComplete()
- [ ] B) WaitForFullGCApproach()
- [x] C) KeepAlive()
- [ ] D) WaitForPendingFinalizers()

Question 14

2 pts

Suppose you're writing an application that uses unmanaged resource. You've implemented an IDisposable interface to manage the memory of unmanaged resource.

When implementing Dispose method, which method should you use to prevent garbage collector from calling the object's finalizer?

- (◉) A) GC.SuppressFinalize(this)
- ( ) B) GC.SuppressFinalize(true)
- ( ) C) GC.WaitForFullGCApproach()
- ( ) D) GC.WaitForPendingFinalizers()

Question 15

2 pts

You're instantiating an unmanaged resource; which of the following statements would you use to instantiate an unmanaged resource so that its Dispose method shall always call automatically?

- ( ) A) if-else{}
- ( ) B) try/catch
- (◉) C) using()
- ( ) D) switch()

Question 16

2 pts

Which of the following methods is used to run a LINQ query in parallel?

- (◉) A) AsParallel();
- ( ) B) RunParallel();
- ( ) C) ToParallel();
- ( ) D) Parallel();

Question 17

2 pts

An application uses multiple asynchronous tasks to optimize performance. You create three tasks by using the following code segment. (Line numbers are included for reference only.)

```
01. private void MultipleTasks()
02. {
03.       Task[] tasks = new Task[]
04.     {
05.      Task.Run(()=>Thread.Sleep(2000)),
06.      Task.Run(()=>Thread.Sleep(3000)),
07.      Task.Run(()=>Thread.Sleep(1000)),
08.      };
09.
10. ...
11. }
```

You need to ensure that the MultipleTasks () method waits until all three tasks complete before continuing. Which code segment should you insert at line 09?

- ○ A) task.WaitFor(3);
- ◉ B) tasks.Yield();
- ○ C) tasks.WaitForCompletion();
- ○ D) Task.WaitAll(tasks);

Question 18

2 pts

Which jump statement will you use to start the next iteration while skipping the current iteration of loop?

- ○ A) Break
- ◉ B) Continue
- ○ C) Goto
- ○ D) Return

Question 19

2 pts

You need to use null-coalescing operator to make sure “name” variable must have a value not null. Select theright way to use null-coalescing operator in C#.

- (◉) A) string name = n ?? “No Name”;
- ( ) B) string name = “No Name” ?? null;
- ( ) C) string name = “No Name” ? null;
- ( ) D) string name = null ? “No Name”;

Question 20

2 pts

You need to validate a string which has numbers in 333-456 format. Which pattern would you choose?

- ( ) A) @“\d\d-\d\d”
- ( ) B) @“\n{3}-\n{3}”
- ( ) C) @“[0-9]+-[0-9]”
- (◉) D) @“\d{3}-\d{3}”

Question 21

2 pts

Suppose you have the following C# code.

StringBuilder sb = new StringBuilder(reallyLongString);

The *reallyLongString* variable is a string in which a very long string is stored. You need to identify whether a string stored in an object named *StringToFind* is within the *StringBuilder sb object.* Which code should you use?

- (◉) a) sb.Equals(stringToFind);

- ○ b) sb.ToString().IndexOf(stringToFind);
- ○ c) sb.ToString().CompareTo(stringToFind);
- ○ d) sb.ToString().Substring(stringToFind.Length);

Question 22

2 pts

An application includes a class named Person. The Person class includes a method named *GetData*. You need to ensure that the *GetData()* method can be used only by the Person class and not by any class derived from the Person class. Which access modifier should you use for the GetData() method?

- ○ a) Public
- ○ b) Protected internal
- ○ c) Internal
- ◉ d) Private
- ○ e) Protected

Question 23

2 pts

You are developing an application by using C#. The application includes an object that performs a long running process. You need to ensure that the garbage collector does not release the object's resources until the process completes. Which garbage collector method should you use?

- ○ a) WaitForFullGCComplete()
- ◉ b) SuppressFinalize()
- ○ c) WaitForFullGCApproach()
- ○ d) WaitForPendingFinalizers()

Question 24

2 pts

You use the *Task.Run()* method to launch a long-running data processing operation. The data processing operation often fails in times of heavy network congestion. If the data processing operation fails, a second operation must clean up any results of the first operation. You need to ensure that the second operation is invoked only if the data processing operation throws an unhandled exception. **What should you do?**

- ○ a) Create a task within the operation, and set the Task.StartOnError property to true.
- ○ b) Create a TaskFactory object and call the ContinueWhenAll() method of the object.
- ◉ c) Create a task by calling the Task.ContinueWith() method.
- ○ d) Use the TaskScheduler class to create a task and call the TryExecuteTask() method on the class.

Question 25

2 pts

You are developing an application by using C#. The application includes an object that performs a long running process. You need to ensure that the garbage collector does not release the object's resources until the process completes. Which garbage collector method should you use?

- ○ a) RemoveMemoryPressure()
- ◉ b) ReRegisterForFinalize()
- ○ c) WaitForFullGCComplete()
- ○ d) KeepAlive()
- ○ e) Collect()

Question 26

2 pts

You have the following C# code. *StringBuilder sb = new StringBuilder(reallyLongString);* The reallyLongString variable is a string in which a very long string is stored. You need to identify whether a string stored in an object named StringToFind is within the StringBuilder sb object. **Which code should you use?**

- (◉) a) sb.Equals(stringToFind);
- ( ) b) sb.ToString().IndexOf(stringToFind);
- ( ) c) sb.ToString().CompareTo(stringToFind);
- ( ) d) sb.ToString().Substring(stringToFind.Length);

Question 27

2 pts

You are creating a class named Game. The Game class must meet the following requirements:

- Include a member that represents the score for a Game instance.
- Allow external code to assign a value to the score member.
- Restrict the range of values that can be assigned to the score member.

You need to implement the score member to meet the requirements

- ( ) a) protected field
- ( ) b) public static field
- ( ) c) public static property
- (◉) d) public property

Question 28

2 pts

You need to write a method that retrieves data from a Microsoft Access 2013 database. The method must meet the following requirements:

- It must be read-only.

- You must be able to use the data before the entire data set is retrieved
- You must minimize the amount of system overhead and the amount of memory usage.

Which type of object should you use in the method?

- ○ a) SqlDataAdapter
- ○ b) DataContext
- ○ c) DbDataAdapter
- ◉ d) OleDbDataReader

Question 29

2 pts

You are developing an application that will parse a large amount of text. You need to parse the text into separate lines and minimize memory use while processing data. Which object type should you use?

- ○ a) DataContractSerializer
- ○ b) StringBuilder
- ◉ c) StringReader
- ○ d) JsonSerializer

Question 30

2 pts

You need to store the values in a collection. The solution must meet the following requirements:

- The values must be stored in the order that they were added to the collection.
- The values must be accessed in a first-in, first-out order.

Which type of collection should you use?

- ○ a) SortedList

- ◉ b) Queue
- ○ c) ArrayList
- ○ d) Hashtable

Question 31 — 2 pts

The System.SystemException class is the base class for all predefined system exception in C#?

- ◉ True
- ○ False

Question 32 — 2 pts

The comparison operators can be overloaded.

- ○ True
- ◉ False

Question 33 — 2 pts

A function can return more than one value.

- ○ True
- ◉ False

Question 34 — 2 pts

In C#, a function needs to be defined using the static keyword, so that it can be called from the Main function.

- (◉) True
- ( ) False

Question 35 — 2 pts

If a function returns no value, the return type must be declared as void.

- (◉) True
- ( ) False

Question 36 — 2 pts

In a function, the return statement is not required if the return type is anything other than void.

- (◉) True
- ( ) False

Question 37 — 2 pts

A local variable declared in a function is not usable outside that function.

- (◉) True

○ False

Question 38 2 pts

A function can have more than one parameter. Values of the parameters are passed to the function when it is called.

◉ True

○ False

Question 39 2 pts

In C#, a function can be overloaded. Overloading a function means you can give the same name to many function, but different in their arguments.

◉ True

○ False

Question 40 2 pts

An object of a derived class cannot access private members of base class.

◉ True

○ False

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