Multiple Choice Questions (with solutions)

<https://csci-1301.github.io/about#authors>

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Table of Contents

1. Why are the instructors sharing most of the material in odt, docx, pdf, html and md?
   * ☐ To insure compatibility across operating systems (Android, Linux, Windows, MacOs, …).
   * ☐ To make it easier to access the resources in multiple ways (print, screen, etc.)
   * ☒ All of the above.
2. What does “free” software means?
   * ☐ That the software has no value.
   * ☒ That the users can run the software for any purpose and study its source code.
   * ☐ That it is not developed by a company.
   * ☐ That the software can be downloaded at no cost.
3. In your IDE, the shortcut to compile your program is usually…
   * ☒ “Build your solution”, ctrl + shift + B or Cmd + B
   * ☐ “Save”, ctrl + S or Cmd + S
   * ☐ “Exit”, alt + F4 or Cmd + q
   * ☐ “Start without debugging”, Ctrl + F5 or Cmd + F5
4. To share or backup a project, you need to…
   * ☐ share the .sln file.
   * ☐ share the .cs file.
   * ☐ share the .csproj file.
   * ☒ zip the folder containing the .sln file and another folder with multiple files and folders in it.
5. If your IDE returns the message

* Program.cs(21,21): Error CS0117: 'Console' does not contain a definition for 'WiteLine' (CS0117) (Solution)
* This means that…
  + ☒ That you misspelled the word “WriteLine”.
  + ☐ Your program successfully compiled and is ready to be executed.
  + ☐ That the “Console” class does not exist.
  + ☐ Your IDE was not properly installed and you should reboot your computer.

1. Consider the following code:

* int age, defaultChoice = 0;  
  decimal averagePrice;
* Which of the following is correct?
  + ☐ It contains declaration and initialization statements.
  + ☐ It declares variables of two different datatypes.
  + ☐ Only the value of defaultChoice is set.
  + ☒ All of the above.

1. Consider the following code:

* int person = 12;  
  int pie = 5;  
  int piePerPerson = pie / person;  
  Console.WriteLine("Each guest gets " + piePerPerson + " pie(s).");
* What will be displayed by it?
  + ☐ Nothing: an error will prevent from compiling it successfully.
  + ☐ “Each guest gets 2.4 pie(s).”
  + ☐ “Each guest gets 0.41666666666666666666666…” (it will never ends, displaying 6 forever).
  + ☐ “Each guest gets 0.416666666666667 pie(s).”
  + ☒ “Each guest gets 0 pie(s).”

1. Consider the following statement:

* decimal balance = 2.5M;  
  decimal price = 12;  
  decimal remainingBalance = balance - price;
* Which of the following is correct?
  + ☐ This program will not compile because the result of balance - price is not a decimal.
  + ☐ This program will not compile because a decimal cannot be negative.
  + ☒ This program will compile.
  + ☐ This program will not compile because you cannot store an integer value (12) in a decimal.

1. The method used to read a string from the user is called…
   * ☐ ReadString
   * ☐ ReadFrom
   * ☒ ReadLine
   * ☐ ReadInput
2. Consider the following program:

* Console.WriteLine("Enter your age.");  
  string fromUser = Console.ReadLine();  
  int age = \_\_\_\_\_\_\_ (fromUser);
* To correctly be able to store the string in fromUser into age, you should replace \_\_\_\_\_\_\_ with…
  + ☐ (int)
  + ☒ int.Parse
  + ☐ Nothing: as long as the user enters an integer value, we can store it into age just fine.
  + ☐ None of the above.

1. What are, respectively, the return types of a constructor and of a ToString method?
   * ☒ Constructors do not have a return type, and a ToString method returns a string.
   * ☐ Constructors and ToString methods both return strings.
   * ☐ Constructors returns a string, and a ToString method does not return anything (it simply displays a text).
   * ☐ It is impossible to know ahead of time, as this depends of the class they are implemented in.
2. What is the name of a constructor method?
   * ☐ Nothing: an error will prevent from compiling it successfully.
   * ☒ Whatever the name of the class is.
   * ☐ It does not have any.
   * ☐ The name of the instance it creates.
   * ☐ Constructor
3. What are the three logical connectives in C# (that we studied)?
   * ☒ And (&&), or (||) and negation (!).
   * ☐ Equality (==), greater than (>) and less than (<).
   * ☐ And (and), or (or) and negation (not).
4. Which of the following will evaluate to true?
   * ☐ 3 > 1 && 2
   * ☒ (3 > 1) && 1 != 0
   * ☐ !(3 > 1)
   * ☐ 3 > 1 || 2
5. Will the following expression evaluates, and if so, what will it evaluate to?

* true == false || 2 / 1 > 0 && 3 - 1 != 2 \* 0.5 + 0.5
* evaluates?
  + ☐ It will evaluate to a number.
  + ☐ It will evaluate to false.
  + ☒ It will evaluate to true.
  + ☐ It will not evaluate.
  + ☐ None of the above.

1. What will be displayed by the following code?

* int number = 10;  
  while (number <= 15)  
  {  
   number+=2;  
   Console.Write(number + " ");  
  }
  + ☒ 12 14 16
  + ☐ 10 11 12 13 14 15
  + ☐ 10 11 12 13 14
  + ☐ 10 12 16
  + ☐ 10 12
  + ☐ 10 12 14
  + ☐ 12+14+16
  + ☐ 10+11+12+13+14+15

1. What will be displayed by the following code?

* int i = 0;  
  while(i < 10)  
  {  
   Console.WriteLine(i);  
  }
  + ☒ 0 followed by a new line, forever.
  + ☐ 0 1 2 3 4 5 6 7 8 9
  + ☐ 0 1 2 3 4 5 6 7 8 9 with a new line between each number
  + ☐ Nothing

1. Consider the following code:

* Console.WriteLine("Enter… something!");  
  int answer;  
  bool valid = int.TryParse(Console.ReadLine(), out answer);  
  Console.WriteLine($"returns: {valid}, value:{answer}");
* If the user enters “Train”, then it will display:
  + ☒ returns: False, value: 0
  + ☐ returns: True, value: 0
  + ☐ returns: True, value: Train
  + ☐ returns: False, value: Train
  + ☐ Nothing: the program will crash.

1. Consider the following code:

* string answer;  
  Console.WriteLine("Enter something");  
  answer = Console.ReadLine();  
  while (answer != "yes" || answer !="Yes"){  
   Console.WriteLine("Enter something");  
   answer = Console.ReadLine();  
  }
* What can the user enters to *exit* this loop:
  + ☒ There is nothing the user can enter to exit this loop
  + ☐ Either “Yes” or “yes”
  + ☐ Anything that is different from “Yes” and “yes”
  + ☐ Anything

1. Consider the following code:

* int answer;  
  Console.WriteLine("Enter something");  
  answer = int.Parse(Console.ReadLine());  
  while (answer > 10 && answer < 100){  
   Console.WriteLine("Enter something");  
   answer = int.Parse(Console.ReadLine());  
  }
* What can the user enters to *exit* this loop?
  + ☒ Any number not between 10 and 100 (both included)
  + ☐ Any number between 10 and 100 (both included)
  + ☐ Any number between 10 and 100 (both excluded)
  + ☐ Any number not between 10 and 100 (both excluded)

1. What is the correct way of creating an array of int of size 5 named myArray?
   * ☒ int[] myArray = new int[5];
   * ☐ int[] myArray = int[5];
   * ☐ int[5] myArray = new int[];
   * ☐ int[4] myArray = new int[];
   * ☐ int myArray = new int[5];
   * ☐ int[] myArray = new int[4];
   * ☐ int[] myArray = new int(5);
   * ☐ int[] myArray = int[4];
2. Consider the following code:

* int[] grades = {10, 20, 5, 15};  
  Console.WriteLine(grades[2]);
* What will it display?
  + ☒ 5
  + ☐ Nothing
  + ☐ 20
  + ☐ 15
  + ☐ grades
  + ☐ grades[2]
  + ☐ 10

1. Consider the following code:

* char[] grades = {'A', 'B', 'C', 'D', 'F'};  
  int i = 0;  
  while(i < grades.Length){  
   i++;  
   Console.WriteLine(grades[i]);  
  }
* Something is wrong with it, can you tell what?
  + ☒ There will be an “Index was outside the bounds of the array.” error.
  + ☐ The array is not properly initialized.
  + ☐ The loop is infinite
  + ☐ grades.Length is not declared.

1. What will be displayed by the following code?

* for (int e = -5; e <= 20; e += 5)  
  {  
   Console.Write(e + " ");  
  }
  + ☒ -5 0 5 10 15 20
  + ☐ -5 0 5 10 15
  + ☐ 0 5 10 15
  + ☐ -5 -4 -3 -2 -1 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20
  + ☐ Nothing
  + ☐ 0 5 10 15 20

1. What will be displayed by the following code?

* int variable = 0;  
  for (int e = 1; e <= 5; e += 1)  
  {  
   variable += e;  
  }   
  Console.WriteLine(variable);
  + ☒ 15
  + ☐ 0
  + ☐ Nothing
  + ☐ 1 2 3 4 5