

CSCI 1100 – 2016 Laboratory Report 1

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Please mark your lab						
T 8:30 L143	T 8:30 L134	T 8:30 L133	T 11:30 L143	T 11:30 L133	T 11:30 L142	T 2:30 L143
T 5:30 L143	T 5:30 L142	W 11:30 143	W 4:30 143			

DUE: Thursday at 5:00 PM. Remember NO LATE LABS ACCEPTED

Declaration: Please complete this declaration		
1	This document is entirely my own work.	Yes
2	I obtained some help to complete this document.	Yes
3	This document contains some material from the Internet or another document or file or program. Note, your lab should be the efforts of your own work. However, you may need to look something up to help you – you need to acknowledge this. You should not cut and paste solutions.	Yes

*Your task is to complete this report using Word and JGrasp and then to submit the completed document as a **PDF document** on Brightspace. Try to submit this report during the lab because then the TA can check it for you before you submit it. The submission deadline is **Thursday at 5:00PM. Remember NO LATE LABS ACCEPTED.***

Acknowledge any help that you obtained from friends or the TAs or the Learning Centre in the table above. It is okay to obtain help as long as you acknowledge it. But your labs are still to be your own work.

Grading Scheme

Lab Questions: 13 marks and Commenting and Formatting: 2 marks

Notes to Teaching Assistants. Treat the labs like tutorials. Use the projector, bring up the Lab1.doc document and the lab slides and then let the students complete the exercises on their own with help when asked. Repeat this process until all exercises have been covered. Be encouraging and fully helpful. Do not rush them. **Encourage students to bring their class handouts and/or textbooks to the labs.** Tell students nicely that you don't have time to cover work that is included in the handouts.

Help all the students to log on. Any who don't have accounts must go to the help desk and get an account. Help students install JGrasp on their laptops.

Exercise 1. Using Google. As you know Google is a very useful product. As a student you can use Google to find important information. **Remember to record all URLs** that you use to help you answer this question (after all it's about plagiarism!!).

- a. What is plagiarism?
- b. What is academic dishonesty?
- c. How do I avoid plagiarism?
- d. Provide the link to Dalhousie's policy on plagiarism.

[.5 + 1 + 1 + .5 = 3 marks]

Solution.

- a. According to Oxford dictionary, plagiarism is the practice of taking someone's else work or ideas and passing them off as one's own
(<https://en.oxforddictionaries.com/definition/plagiarism>)
- b. According to Wikipedia academic dishonesty is any type of cheating that occurs in relation to a formal academic exercise it can include (cheating, plagiarism, fabrication, deception, impersonation, bribery and sabotage)
(https://en.wikipedia.org/wiki/Academic_dishonesty)
- c. According to writecheck website, the best 6 ways to avoid plagiarism is to paraphrase, cite, quoting, citing quotes, citing your own material and referencing
(<http://en.writecheck.com/ways-to-avoid-plagiarism/>)
- d. http://www.dal.ca/dept/university_secretariat/academic-integrity/plagiarism-cheating.html

Exercise 2. Files and Folders. As a student you will use computers extensively. The files may be in your computer or in some other computer accessible to your computer via a network connection. [Find the solution on the Web and remember **to record all URLs** that you use to help you answer this question]

- a) What is a computer file?
- b) What is a folder?
- c) Give and explain 5 different file extensions.

[.5 + .5 + 1 = 2 marks]

Solution.

- a. According to Wikipedia computer file is a resource for storing information, which mean it is something like container that holds information
(https://en.wikipedia.org/wiki/Computer_file)
- b. Computer folder is a container for files and folders and a way to organize files and folders
- c. .txt: simple text documents
.doc: Microsoft word documents which mean advanced text editing and formatting
.exe: executable files which mean files that will execute once you open it
.java: java files that contain java programs
mp3: compressed audio files

Exercise 3.

- a) Create a folder called CSCI1100 and a folder within CSCI1100 called Week1 in your home directory on the CS network (you will need to use your CS ID). Make sure that you save your work to this directory at least every 20 minutes as a precaution. [No solution required.]
- b) Create a folder called CSCI1100 and a folder within CSCI1100 called Week1 in your home directory on your OneDrive (you access this through myDal using your Dal ID). Make sure that you save your work to this directory at least every 20 minutes as a precaution. [No solution required.]

Exercise 4. Running an Application. Start JGrasp. Type in the program below. Compile and run the program. [No solution required.]

```
public class E4 {
    public static void main(String[] args) {
        System.out.println("Hello World!");
    }
}
```

Exercise 5. Fix the syntax errors in the following program.

```
Public Class E5 {
    Public Static Void main(String[] args) (
        System.out.print("'Learning to program is fun!'");
    )
}
```

Answer:

- Public, Static, Void, Class. (all should be lower case)
- 2nd and 4th line parentheses should be replaced with {} respectively
- Closing at 3rd line should be double quotes and we should remove one of the parentheses
- **public class E5 {**
- **public static void main(String[] args) {**
- **System.out.print("'Learning to program is fun!');**
- **}**
- **}**

[1 mark]

Exercise 6. In JGrasp make a new Java application program file. Write a program to draw a triangle of stars as follows.

```
*
**
***
****
*****
```

Choose a name for your program and make sure the same name is used as the class name. Compile the program and run it. Place a copy of your working program in the space below, followed by a copy of the actual program output. Include a header comment at the start of your

program that explains what this program will do and a comment in your code to explain explain what a line or set of lines of code does. Format your program properly. **[1 mark]**

Solution (your Java program)

```
/** This program will print a 5 line tall pyramid of stars
 */
public class triangleOfStar {
    public static void main(String[] args) {
        // Outer loop that will print lines
        for (int i=1; i<=5 ; i++) {
            // inner loop that will print the stars
            for (int j=1; j<=i; j++) {
                // print stars based on the number of the line
                System.out.print("*");
            }
            // print a new line
            System.out.println();
        }
    }
}
```

Output (produced by your program)

```
*
**
***
****
*****
```

Exercise 7. Write a java application to display exactly the following. Include a header comment at the start of your program that explains what this program will do and a comment in your code to explain explain what a line or set of lines of code does. Format your program properly.

A "quoted" String is 'much' "better".

[1 mark]

Solution (your Java program)

```
/** This program will print a statment with quotes in it
 */
public class qoutedString {
    public static void main(String[] args) {
        // this will print A "quoted" String is 'much' "better".
        System.out.print("A \"quoted\" String is 'much' \"better\". ");
    }
}
```

Output (produced by your program)

A "quoted" String is 'much' "better".

Remember that

```

\n means add a newline
\t means add a tab
\" means print a "
\\ means print a \

```

Also, "" represents an empty String.

Exercise 8. Write a java application to display the following drawing. Include a header comment at the start of your program that explains what this program will do and a comment in your code to explain explain what a line or set of lines of code does. Format your program properly.

```

*****
*           *
*****
*           *
*****

```

[1 mark]

Solution (your Java program)

```

/** this program will print one full line of stars then a line of two stars and it will print 5 lines
*/

```

```

public class tables {
    public static void main(String[] args) {
        // a loop to create the 5 lines
        for (int i=1; i<=5; i++) {
            // if the number of the line is even then a two star line will be printed
            if (i%2==0) {
                // print a line with a two stars and a tab space between it
                System.out.println("*\t*");
            }
            // if the number of the line is odd a line of 9 stars will be printed
            else {
                System.out.println("*****");
            }
        }
    }
}

```

Output (produced by your program)

```

*****
*           *
*****
*           *
*****

```

Exercise 9. Write a java application to display the following drawing. Include a header comment at the start of your program that explains what this program will do and a comment in your code to explain explain what a line or set of lines of code does. Format your program properly.

[2 mark]

```
public class drawing {  
    public static void main(String[] args) {  
        //print the first line of drawing with a tab space  
        System.out.println("////^\\\\\\\\\\\\\\\\\\\\\\\\\\t\\\\\\\\^\\\\\\\\\\\\\\\\\\\\\\\\");  
        //print the second line of drawing with a tab space in it  
        System.out.println("\\\\\\\\\\\\\\\\\\\\\\\\/////^t\\\\\\\\\\\\\\\\\\\\\\\\\\/////");  
    }  
}
```

Exercise 10. Write a java application to display exactly the following drawing. Include a header comment at the start of your program that explains what this program will do and at least one comment in your code especially what a line or set of lines of code does. Format each program properly.

```
public class trophy {
    public static void main(String[] args) {
        System.out.println("  /\  ");
        System.out.println(" /  \ ");
    }
}
```

Output (produced by your program)

Complete all the exercises in this report. Remove all unnecessary information from this report including this paragraph. Include exercise requirements and solutions and program output. Save your report as a PDF. Ask the TA to check your report if you complete it during the lab time.

- Write your name, id, marked the lab session you are in and filled in the form at the start.
- Have you included a comment in each program? Have you formatted each program neatly? Have you saved your report as a pdf? (Ask a T.A.)

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