



**LaSalle College**  
Montréal

## Assignment 0

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### Course Identification

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Name of program(s) – Code(s):	GENERAL EDUCATION
Course title:	<b>SCRIPTING LANGUAGE</b>
Course number:	420-LS3-AS
Group:	<b>07178</b>
Teacher's name:	Renan Cavalcanti
Duration:	-
Semester:	FALL 2023

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**Deadline: 11/09/2023**

**The purpose of this assignment is a test of basic concepts and programming logic.**

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- **Choose a language of your choice and solve the following problems.**

- 1) Write a computer program that returns "Hello World".
- 2) Write a computer program that performs the sum of two numbers input by the user.
- 3) Write a program that asks the user for 4 numbers and returns the result of the following formula:

$$output = \frac{num1 * (num2 - num3)}{num4}$$

- 4) Write a computer program that the user between one age and the program returns:  
"Child" for ages under 12  
"Young" for ages 12 and under and under 18

"Adult" for ages 18 and under and under 60  
"Senior" for ages 60 and over.

- 5) We know that a triangle is formed by three sides that have a certain measure. These measures must follow the following rule:

$$\begin{aligned} |b - c| < \mathbf{a} < b + c \\ |a - c| < \mathbf{b} < a + c \\ |a - b| < \mathbf{c} < a + b \end{aligned}$$

Write a computer program that takes the 3 sides of a triangle and returns if that triangle exists

- 6) Write a computer program that the user enters a positive number and returns a count of 1 to the entered number.
- 7) Write a computer program that receives a positive integer value representing the number of lines and returns the following output.

Ex.

```
Input = 5
Output =
*
**
***
****
*****
```

- 8) Factorial is a mathematical operation represented by "!" which multiplies the integer predecessors of the number up to 1.

For example:

$$4! = 4 * 3 * 2 * 1 = 24.$$

$$\text{Exception: } 0! = 1.$$

Write a computer program that contains a function called "factorial" that returns the factorial of the number entered by the user.

- 9) Write a function (isContain) that receives an array of size 10 and a digit and returns if that digit is in the array content.
- 10) Brute-force attack consists of an attacker submitting many passwords or passphrases with the hope of eventually guessing correctly. The attacker systematically checks all possible passwords and passphrases until the correct one is found.  
Write a computer program that receives a 4-digit (from 'a' to 'z') password from the user and finds it using brute force.
- 11) Create a person class. The person class must contain the name and age properties. Create a student class that inherits the person class. The student class must have the properties, midterm, final and project. The student class must have a method that calculates the student's average.

Create a list of students, put values for name, age and the 3 grades. After that is done, loop and calculate the overall average of the students on this list.

12) Given the table:

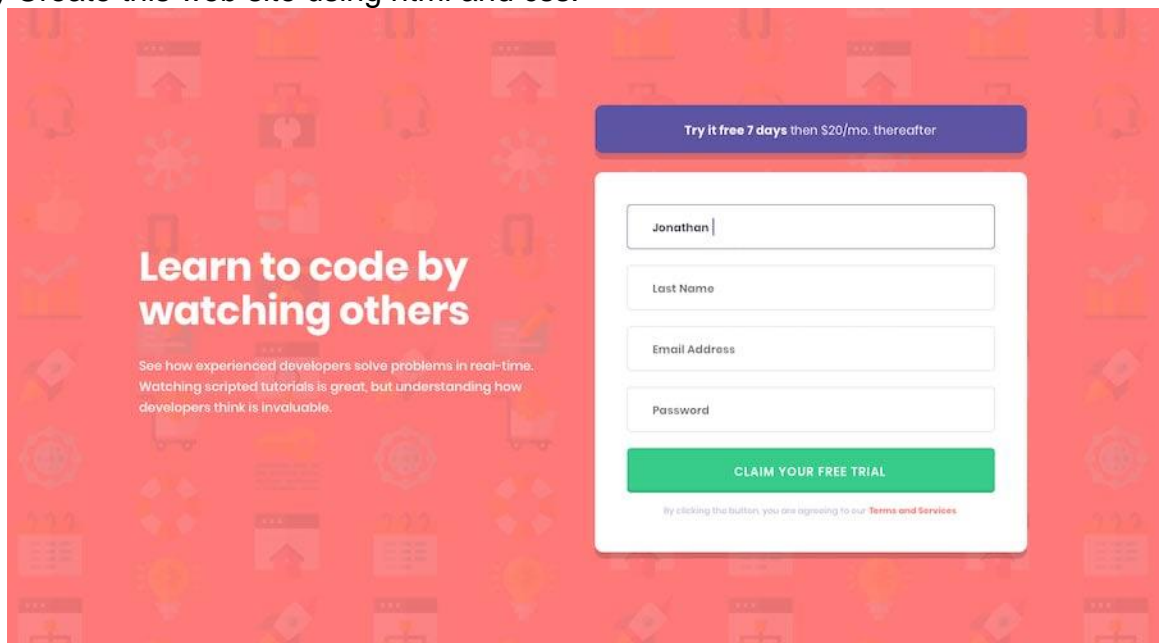
**Employees Table**

IdNum	LName	FName	JobCode	Salary	Phone
1876	CHIN	JACK	TA1	42400	212/588-5634
1114	GREENWALD	JANICE	ME3	38000	212/588-1092
1556	PENNINGTON	MICHAEL	ME1	29860	718/383-5681
1354	PARKER	MARY	FA3	65800	914/455-2337
1130	WOOD	DEBORAH	PT2	36514	212/587-0013

- What sql command would return all data from the table?
- Which sql command would return p First Name of ID 1354?
- Which sql command would return all employees with salary greater than 38500?
- Which sql command would change MARY PARKER's phone number to 514/455-2337?

➔ <https://www.mycompiler.io/new/sql> You can use this online SQL compiler to help you to test your code.

13) Create this web site using html and css:



➔ <https://playcode.io/new/> You can use this web compiler to create your html and css codes.