Solución de Problemas con Programación (TC-1017)

In-class activity 02 – Functions and Control Flow

Name: _____

Student ID: _____ **Date**: 17 de febrero de 2019

1. Functions I

Using MATLAB/Octave to help you, evaluate the following functions over the set $A = \{0, 1, 2, 3, 4\}$. Remember to use the operators we've seen in class (*,+,-,/).

1. $f(x) = 2x + 3$
   a) $f(0) =$
   b) $f(1) =$
   c) $f(2) =$
   d) $f(3) =$
   e) $f(4) =$
2. $g(x, y) = 5x^2 + 3y + 5$
   a) $g(0, 4) =$
   b) $g(1, 3) =$
   c) $g(2, 2) =$
   d) $g(3, 1) =$
   e) $g(4, 0) =$
3. $h(x) = \begin{cases} 2x, & \text{si } x \text{ es par} \\ 3x, & \text{si } x \text{ es impar} \end{cases}$
   a) $h(0) =$
   b) $h(1) =$
   c) $h(2) =$
   d) $h(3) =$
   e) $h(4) =$

2. Functions II and Control Flow I

Before implementing in MATLAB/Octave the functions of the previous section, first we need to formulate some questions:

1. $f(x) = 2x + 3$
   a) How many parameters does $f(x)$ have? _____
   b) Which are those parameters? _____
2. $g(x, y) = 5x^2 + 3y + 5$
   a) How many parameters does $g(x, y)$ have? _____
   b) Which are those parameters? _____
3. $h(x) = \begin{cases} 2x, & \text{si } x \text{ es par} \\ 3x, & \text{si } x \text{ es impar} \end{cases}$
   a) How many parameters does $h(x)$ have? _____
   b) Which are those parameters? _____
   c) How can I control if sometimes the result is $2x$ and sometimes is $3x$? _____
   d) How do I check if the parameter is odd or even? _____

3. Commands

Write a short description of each command listed. If you're not sure about any of these commands, try using them in the Command Window in MATLAB/Octave along with the `help` command.

a) `function`

b) `end`

c) `if`

d) `else`

e) `mod`

f) `eq`

g) `==`

In accordance with the Tecnológico de Monterrey Student Code of Honor, my performance in this activity will be guided by academic honesty.