Programming languages (TC-2006)

Activity 06

In this activity, you will practice some basic aspects of the Haskell programming language. Please consider that the purpose of this activity is to allow you to practice and identify strengths and weaknesses. Then, avoid using the Haskell compiler for calculating the output of the following codes.

Analyzing the codes (100%)

Write the output of the following codes.

1. Given the function

```
enigma01 :: [Char] -> Int
enigma01 [_, 'b', c] = 0
enigma01 (_: 'b': c) = 1
enigma01 lst = 2
```

   What would be the output when the function is invoked as `enigma01 "abcde"`?

2. Given the function

```
enigma01 :: [Char] -> Int
enigma01 [_, 'b', c] = 0
enigma01 (_: 'b': c) = 1
enigma01 lst = 2
```

   What would be the output when the function is invoked as `enigma01 "abc"`?

3. Given the function

```
enigma02 :: Int -> Int -> [Int] -> Int
enigma02 x y z = length ((x : z) ++ [y])
```

   What would be the output when the function is invoked as `enigma02 1 2 [3, 4, 5]`?

4. Given the function

```
enigma03 :: [Double] -> Double -> [[Double]]
enigma03 x y = [y] : [x]
```

   What would be the output when the function is invoked as `enigma03 [1.1, 2.2] 3.3`?

5. Given the function

```
enigma04 :: [Double] -> Double -> [Double]
enigma04 x y = x ++ [y]
```

   What would be the output when the function is invoked as `enigma04 [1.1, 2.2] 3.3`?

6. Given the function

```
enigma05 :: Int -> Int -> Int -> Char
enigma05 _ _ n = 'x'
enigma05 0 0 n = 'y'
enigma05 0 0 1 = 'z'
```

   What would be the output when the function is invoked as `enigma05 0 0 1`?

7. Given the function

```
enigma06 :: Int -> Int
enigma06 0 = 1
enigma06 n = enigma06 (n - 1)
```

What would be the output when the function is invoked as `enigma06 10`?

8. Given the function

```
enigma07 :: [Char] -> [Char]
enigma07 [] = "y"
enigma07 [x] = "x"
enigma07 (x:y) = "x" ++ enigma07 (tail y)
```

What would be the output when the function is invoked as `enigma07 "12345"`?

9. Given the function

```
enigma07 :: [Char] -> [Char]
enigma07 [] = "y"
enigma07 [x] = "x"
enigma07 (x:y) = "x" ++ enigma07 (tail y)
```

What would be the output when the function is invoked as `enigma07 "123456"`?

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