JS-CC-006 : Roman Numerals

- Purpose of the this coding challenge is to write a code that given numbers convert to Roman Numerals. The Romans wrote numbers using letters - I, V, X, L, C, D, M. (notice these letters have lots of straight lines and are hence easy to hack into stone tablets).
- Example

```
1000=M 900=CM 90=XC

2008 is written as MMVIII:

2000=MM 8=VIII
```

Learning Outcomes

At the end of the this coding challenge, students will be able to;

- Analyze a problem, identify and apply programming knowledge for appropriate solution.
- Demonstrate their knowledge of algorithmic design principles by using JavaScript and Python effectively.

Problem Statement

- Write a function that takes normal number(`8, 148, 457`) and convert to Roman Numerals(`VIII, CXLVIII, CDLVII`)
- Please note that, there is no need to be able to convert numbers larger than about 3000. (The Romans themselves didn't tend to go any higher)

JavaScript Solution

```
const roman = {
  M: 1000,
  CM: 900,
  D: 500,
  CD: 400,
  C: 100,
  XC: 90,
  L: 50,
  XL: 40,
  X: 10,
  IX: 9,
  V: 5,
  IV: 4,
  I: 1,
};
function toRoman(n) {
  return Object.keys(roman)
    .map((key) => {
      let res = "";
      while (n ⩾ roman[key]) {
```

```
        res += key;
        n -= roman[key];
      }
      return res;
    })
    .join("");
}

console.log(toRoman(457));
```

Python Solution

```
configuration = {
    1000: "M",
    900: "CM",
    500: "D",
    400: "CD",
    100: "C",
    90: "XC",
    50: "L",
    40: "XL",
    10: "X",
    9: "IX",
    5: "V",
    4: "IV",
    1: "I"
}

def numeral(number):
    roman = []
    for size in sorted(configuration,reverse=True):
        qty = int(number / size)
        number = number % size
        roman.append(configuration[size] * qty)
    return "".join(roman)

print(numeral(148))
```

☺ **Happy Coding** ✍