JS-CC-009 : Convert Numbers

This code challenge has two sub tasks. You are requested to find solutions to convert binary number to decimal and decimal number to binary.

For the purpose of this code challenge, please write your own code rather than using built-in functions to convert numbers to different base systems. Here below built-in functions in JavaScript and Python:

JavaScript:

- Binary to decimal

```javascript
var binNum = "11110";
var decNum = parseInt(binNum, 2);
console.log(decNum);
// outputs 30
```

- Decimal to binary

```javascript
var decNum = 30;
var binNum = decNum.toString(2);
console.log(binNum);
// outputs "11110"
```

Python:

- Binary to decimal

```python
binNum = '0b11110'
int(binNum, 2)
# outputs 30
```

- Decimal to binary

```python
decNum = 30
bin(decNum)
# outputs '0b11110'
```

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 a binary number and converts it to decimal integer.
- Write a function that takes a decimal number and converts it to binary number in string representation.
- Please solve the problem for non-negative values only.

☺ **Happy Coding** ✍

Binary to decimal

JavaScript

```javascript
function bin2dec(binStr) { // binStr is in string type

    // returning value should be in int type.
    return null;
}
```

Python

```python
def bin2dec(binStr): # binStr is in str type

    # returning value should be in int type.
    return None
    pass
```

Decimal to binary

JavaScript

```javascript
function dec2bin(decNum) { // decNum is int type

    // returning value should be in str type.
    return null;
}
```

Python

```python
def dec2bin(decNum): # decNum is int type

    # returning value should be in str type.
    return None
    pass
```