Lab 1 Report

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Question 1

Python:

```python
def printall(list):
    for i in list:
        for j in i:
            print(j, sep='')
```

JavaScript:

```javascript
function printall(list)
{
    for (let i=0; i<list.length;i++)
    {
        for (let n=0; n<list[i].length;n++)
        {
            console.log(list[i][n]);
        }
    }
}
```

Comparison:

In terms of readability, JavaScript wins over Python because of how for loops in JavaScript lists exactly what's happening in the loop and it's easier to follow the logic of the loop than the loops in Python. For the writability of the program, I would say that Python would win since it is an easier and less complex language then JavaScript.

Question 2

Python:

```python
def kalkul(n):
    if n<1:
        return("Please input a non-negative number")
    else:
        i=1
        summation = 0
        while i<=n:
            summation += ((i/(i+1))+((n+1)/(n+2)))
            i+=1
        print('Answer for',n,':',summation)
```

JavaScript:

```javascript
function kalkul(n)
{
    if (n<1)
    {
        console.log("Please input a non-negative number");
    }
    else
    {
        let i=1;
        let summation = 0;
        while (i<=n)
        {
            summation += ((i/(i+1))+((n+1)/(n+2)));
            i+=1;
        }
        console.log("Answer for",n,":",summation);
    }
}
```

Comparison:

For kalkul, I would say that the language with the best readability would go to Python since it has less lines of code overall and its easier to understand what “print” means rather than “console.log” for a person not experienced with programming. Python wins in writability because a simpler language than JavaScript, but its pretty even overall since both programs share the same fundamental logic.

Question 3

Python:

```python
def dsum(n):
    if n<1:
        print("Please input an non-negative number")
    else:
        summation = 0
        i=1
        j=1
        while i<=n:
            while j<=n:
                summation += 3*i
                j+=1
            i+=1
            j=1
        print("Answer for",n,":",summation)
```

JavaScript:

```javascript
function dsum(n)
{
    if (n<1)
    {
        console.log("Please input a non-negative number");
    }
    else
    {
        let summation = 0;
        let i = 1;
        let j = 1;
        while (i<=n)
        {
            while (j<=n)
            {
                summation += 3*i;
                j+=1;
            }
```

```
        i+=1;
        j=1;
        }
    console.log("Answer for",n,":",summation);
    }
}
```

Comparison:

The readability of JavaScript for dsum is superior to Python since it is more spaced out and easier to understand to the average person as compared to the Python code which is shorter but not as laid out. The writability however would go to Python since it is shorter overall and easier to write in than JavaScript.