Practical 5

1 Question 1

0	1	2	3	4	5	6	7	8	9
			Sandy				George	Alan	Amy

2 Question 2

A function indexing at 0 is not as good as indexing as one because there would be a disproportionate number of names at index 0 because any name including an a would be at that index.

3 Question 3

```
def hash(d):
    #initialize table
    table = ["-"]*13
    #now you do the rest
    for item in d:
        itemsto=item
        if item in table:
            continue
        if '-' not in table:
            break
        while(True):
            index=itemsto%13
                if table[index]=='-':
                    table[index]=item
                    break
                else:
                    itemsto+=1
    return(table)
```

4 Question 4

```
modulus(m,n)
    if m<n then
        return m
    else
        return modulus(m-n,n)
    end if
```

5 Question 5

```
DigitSum(n)
if length(n)=1 then
    return n
else
    return n mod 10 + digitsum(n/10)
end if
```

For any number n, doing n mod 10 will provide the last number in the number. Then by calling digitsum(n/10) as pseudocode floors all decimal numbers, n/10 will be the number, excuding the last digit.