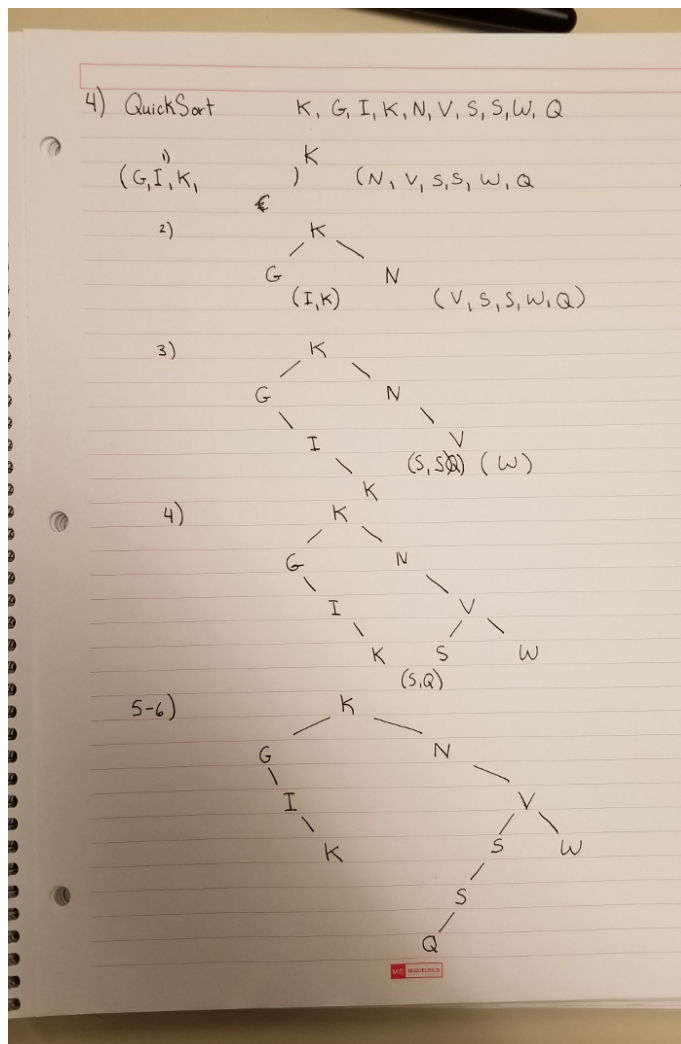


WinterFinal

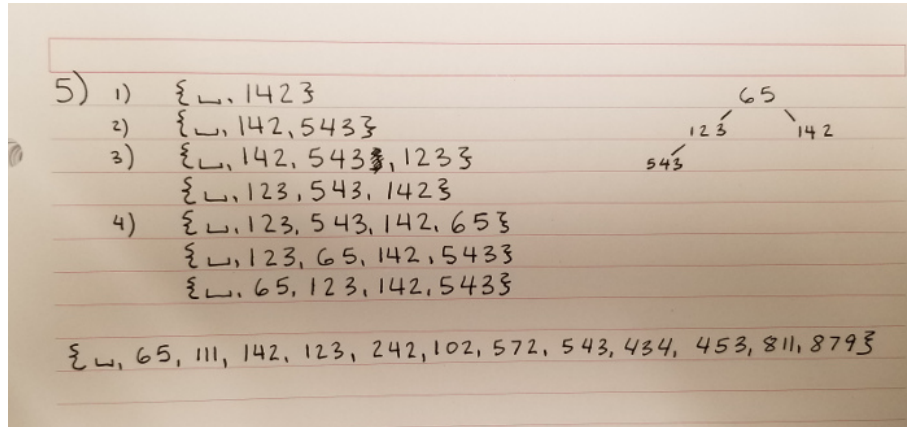
michellejbergin

March 2018

1 Question 4



2 Question 5



3 Question 6

- Prove that any comparison-based algorithm to sort 4 elements requires 5 comparisons.
 Each comparison has a true/false outcome.
 Each branch of that outcome will have another true/false outcome.
 For a decision tree it will require a tree the size of 2^n size
- Give an algorithm to sort 4 elements in 5 comparisons.
 Here is a sort of sudo code?

```

result = items[0]
for(int i = 1; i < items.size(); i++)
    if
  
```