DSA

HOW TO KNOW WHEN TO USE WHICH DSA  
**2 pointers:**combination of 2 elements clubbing to a single element(Go from lower value to higher or vice versa)  
Something related to **sorting**(If you feel that sorting the array might solve the problem)

**Sliding window:**Longest/shortest sub-array/sub-string(or anything related to sub array/string)  
Something that is contagious

**Hashing:**Something related to finding duplicates etc(Or something you need to remember)

**Binary search:**

Number of elements greater/smaller than a particular element(lower bound/upper bound/range)  
A problem that says find minimum/maximum  
**book allocation and aggressive cows are the 2 best questions for binary search  
  
Stacks:   
monotonic stack/Next greater element(nge)/Next smaller element(nse)/trapping rain water  
Never** think stack as last in first out.  
Not much questions on stack  
If asked it will be mostly on monotonic stacks only  
  
**Queues**:  
lru cache   
Not much questions on queues

**Bit manipulation:  
power set is the only imp problem**

**Recursion:**Explore all possibilities(**Out of all**, which is the min/max, **out of all** print something)  
Basically try out all and give me the best  
Count the number of ways  
Whenever the contraints are very very less, it has to be recusrion  
**All subset/sub sequences problems,pick and non-pick,count num of ways   
  
Back tracking:  
end queen/rat and a maze/sudoku solver/ colouring problem are the best problems to understand back tracking**