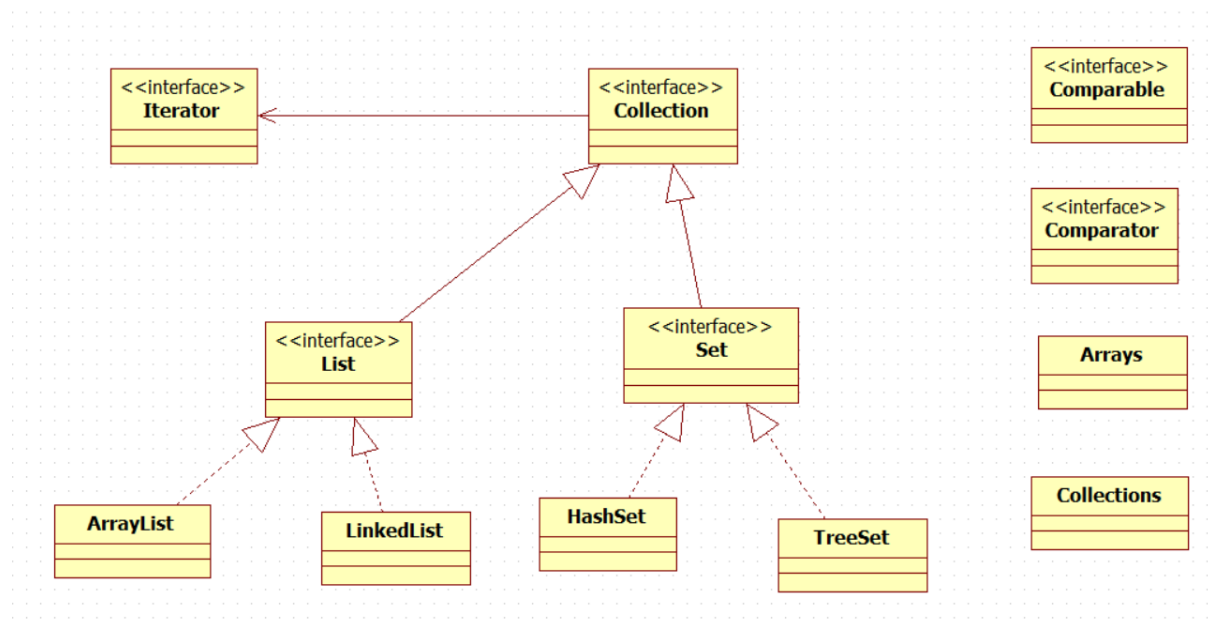
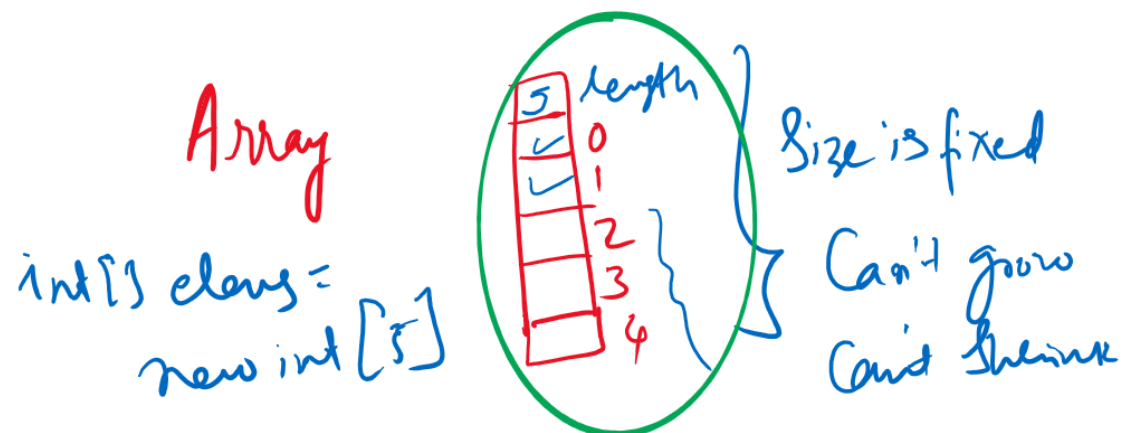


## Java Collection Framework

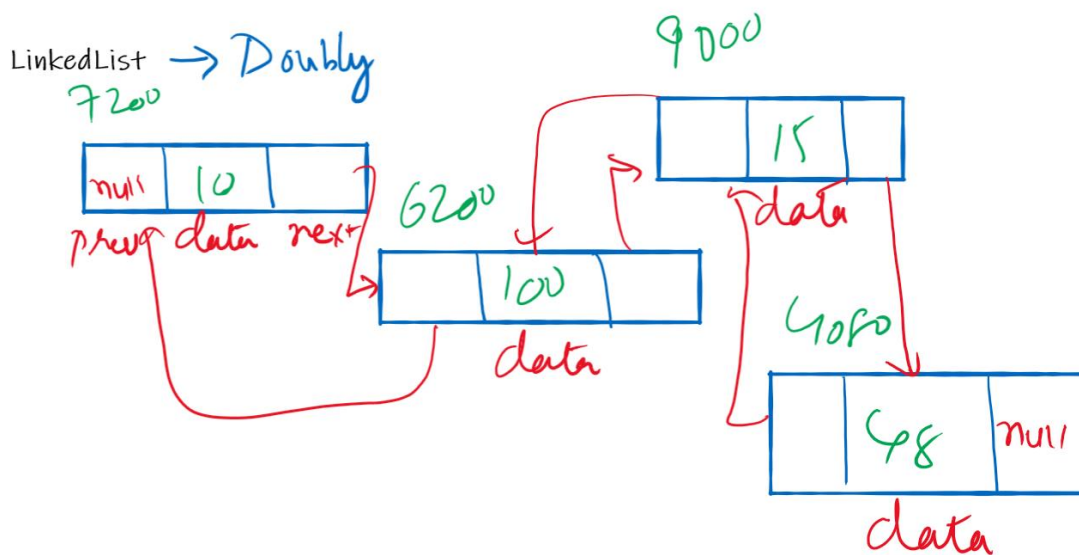
Array Limitation:



## List Vs Set

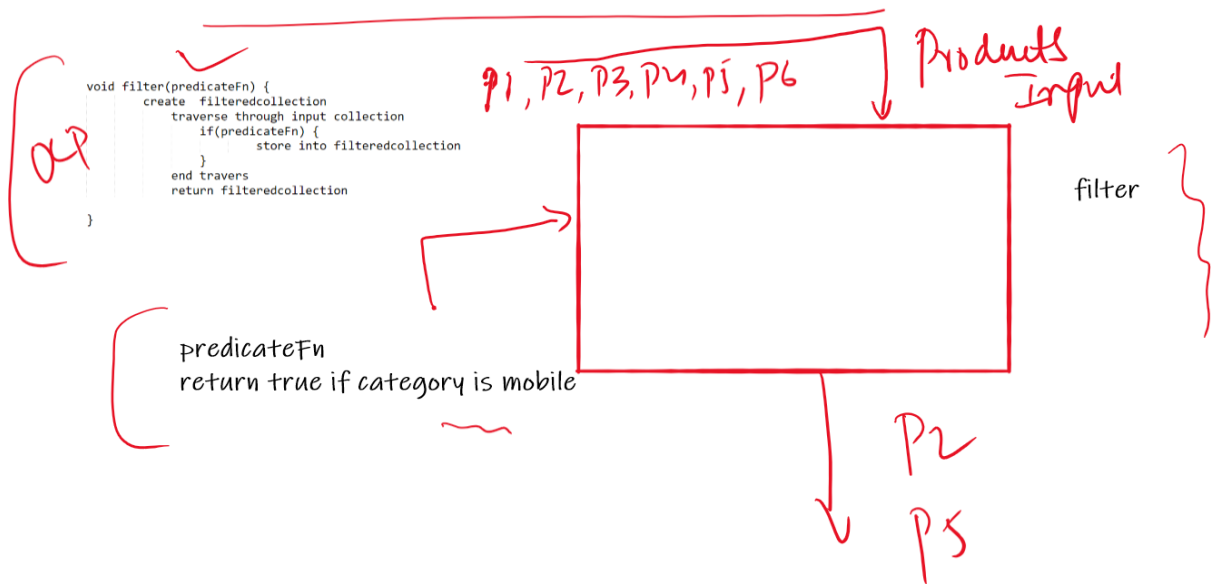
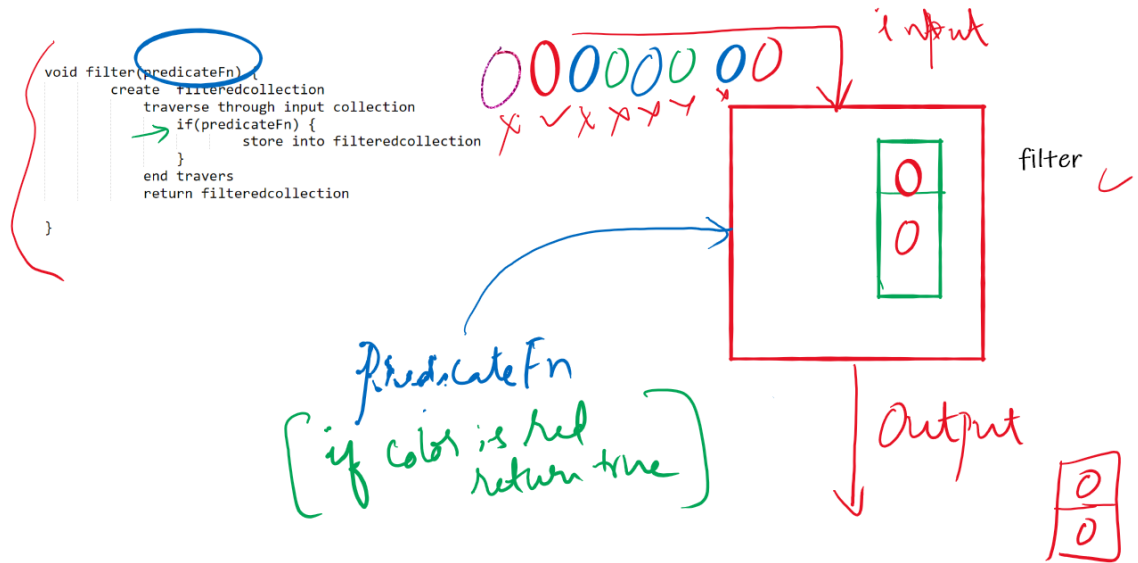
List  
✓ supports duplicates  
✓ supports index based operation  
ordered  
re-ordered

Set  
unique elements  
won't  
not ordered  
can't



Java 8 Stream APIS:

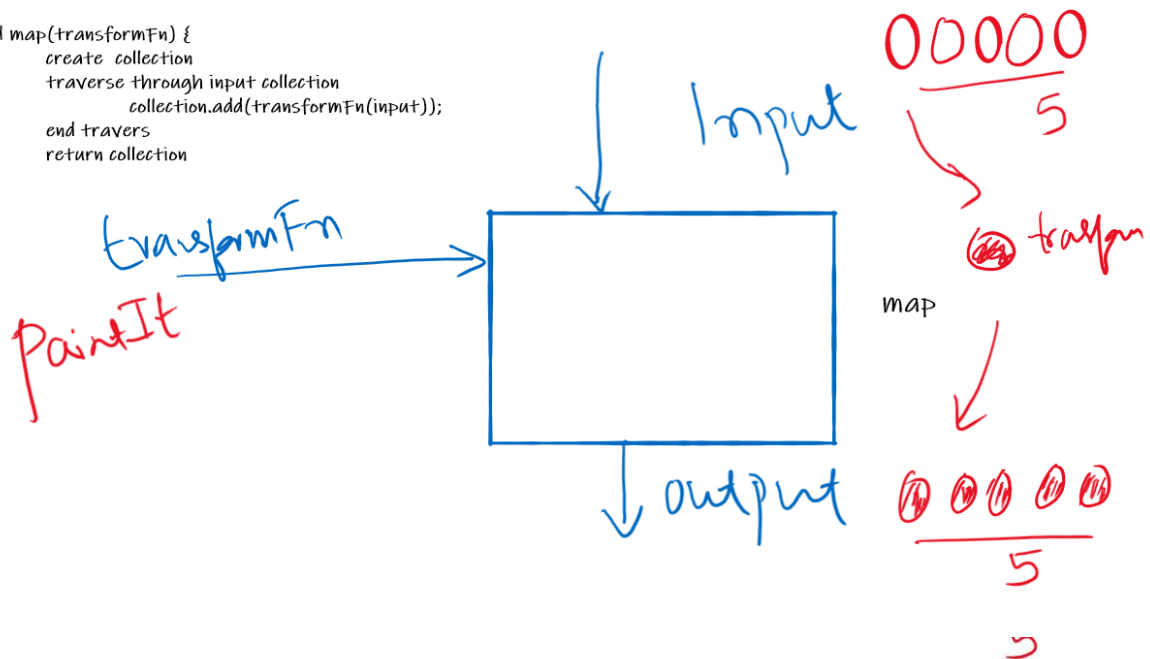
Filter



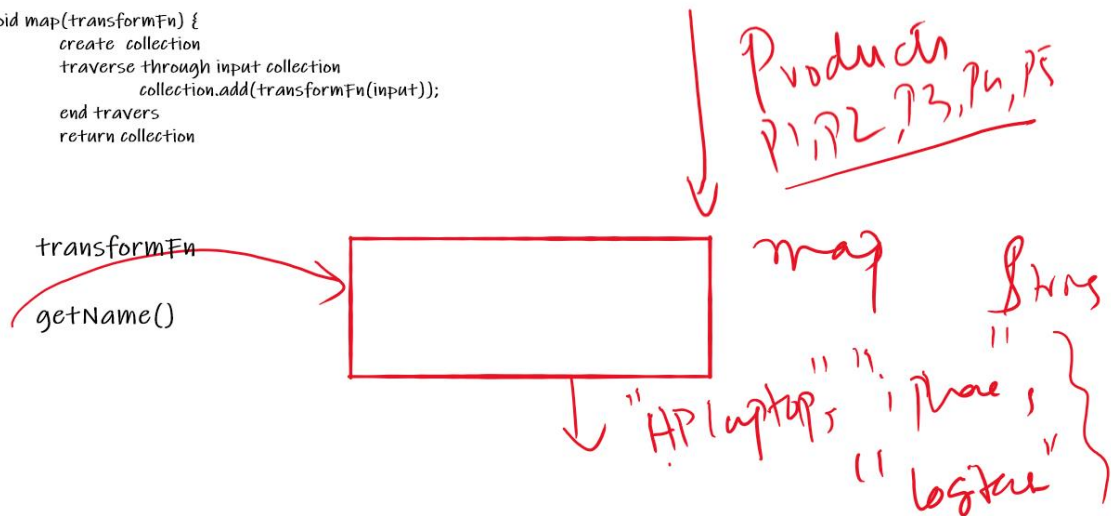
Map:

filter HOF is used to get a subset  
map HOF is used to transform data

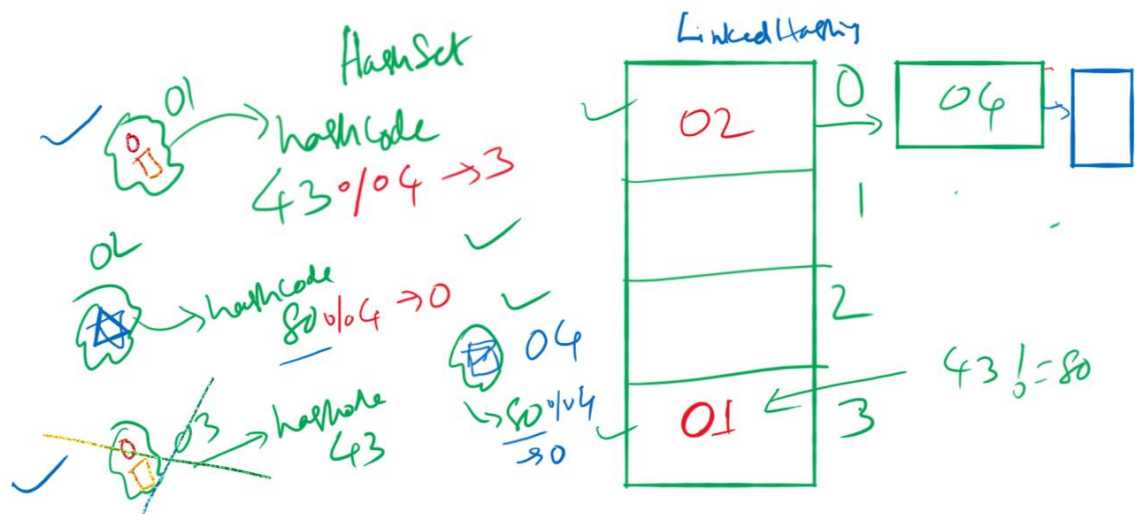
```
void map(transformFn) {
  create collection
  traverse through input collection
  collection.add(transformFn(input));
  end travers
  return collection
}
```



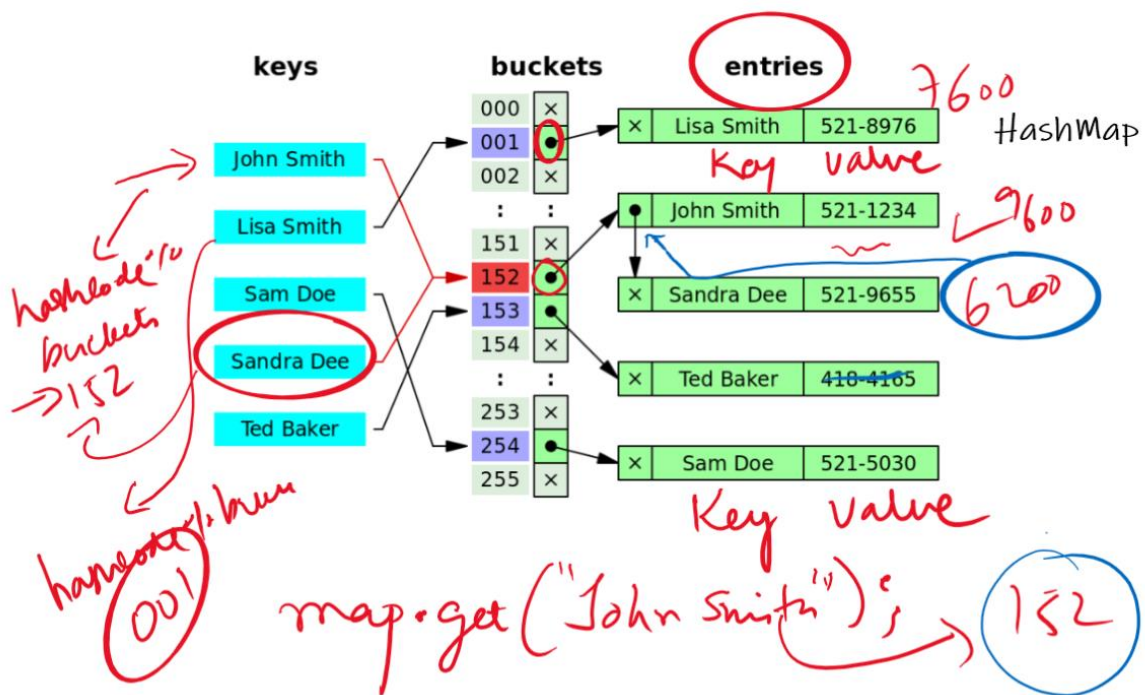
```
void map(transformFn) {
  create collection
  traverse through input collection
  collection.add(transformFn(input));
  end travers
  return collection
}
```

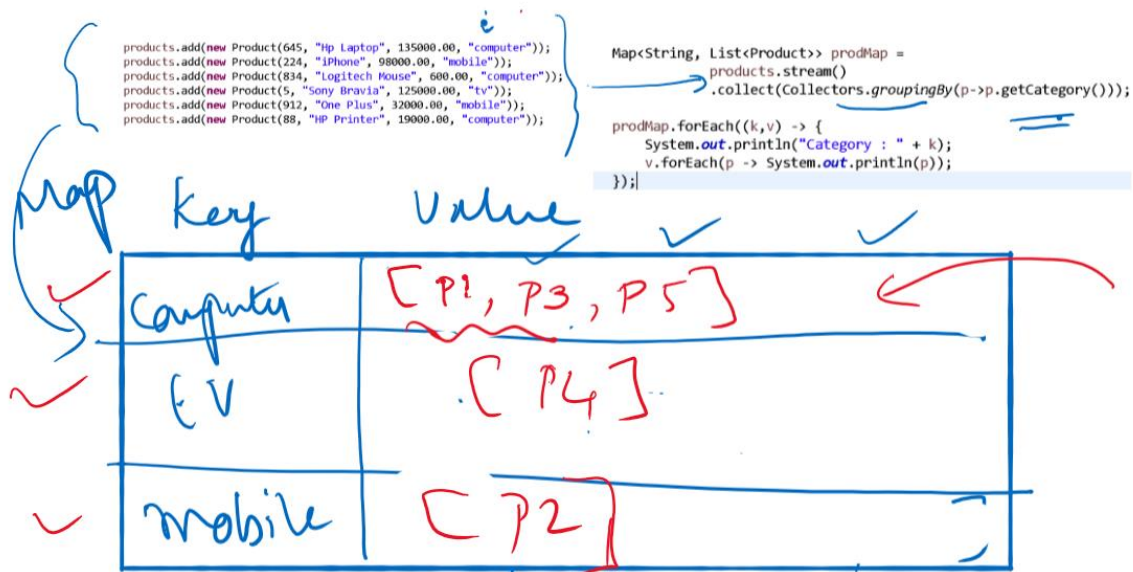


HashSet:

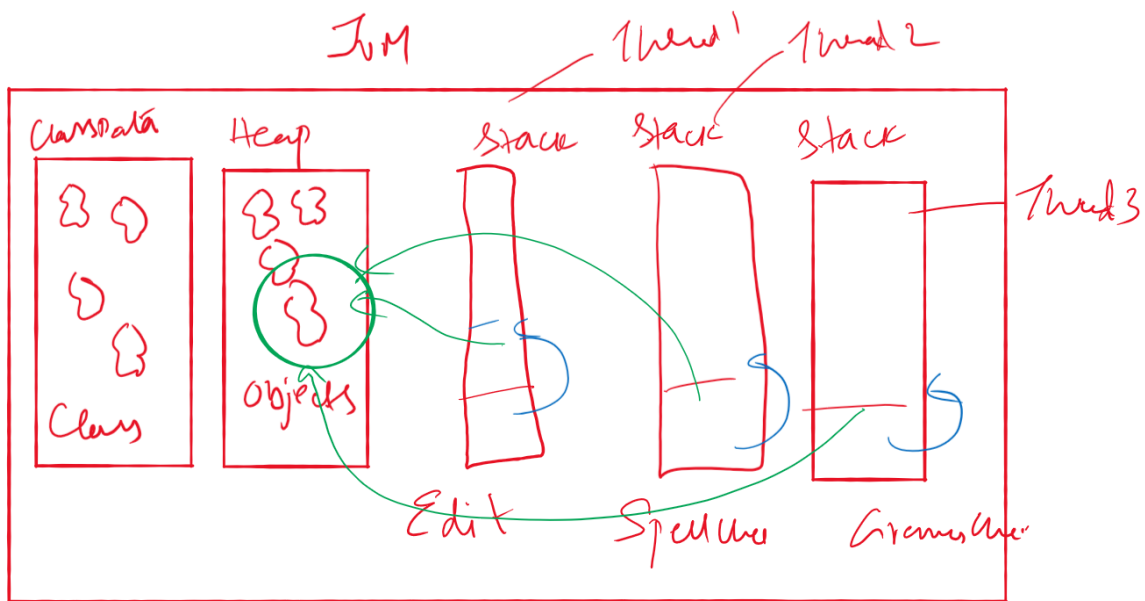


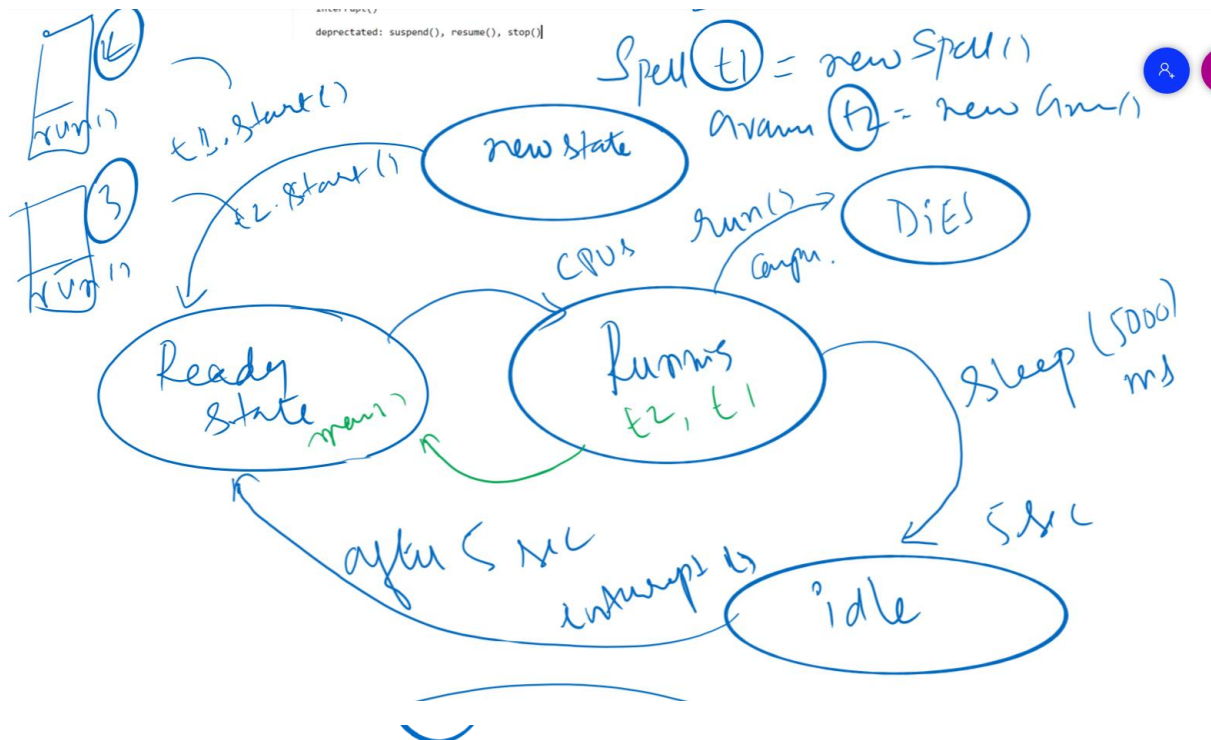
HashMap:





Multi threading:





ThreadExample Java Application

- ThreadExample at localhost:58723
  - Thread [main] (Suspended (breakpoint at line 19 in ThreadExample))
    - ThreadExample.someTask() line: 19
    - ThreadExample.main(String[]) line: 15
  - Thread [Thread-0] (Suspended (breakpoint at line 18 in Numbers))
    - Numbers.doTask() line: 18
    - Numbers.run() line: 12
  - Thread [Thread-1] (Suspended (breakpoint at line 18 in Numbers))
    - Numbers.doTask() line: 18
    - Numbers.run() line: 12
  - Thread [Thread-2] (Suspended (breakpoint at line 18 in Numbers))
    - Numbers.doTask() line: 18
    - Numbers.run() line: 12

C:\Program Files\Java\jdk1.8.0\_152\bin\javaw.exe (10-Jun-2020, 3:54:14 pm)