1)Write a java code to store city and the population. Show the population for any given city

Day 6:

Mutable:

Immutable:

* Whenever there is change in data, the new memory is created.
* String is immutable. Therefore use StringBuffer/StringBuilder.
* StringBuffer( asynchronous)  
  StringBuilder(synchronous)

**Threads:**

Every Friday send attendance mail, mail should be automatically generated

* MultiUser:
  + Ex: MySql, Linux, WindowsXP.
* MultiProcessing:
  + More than one CPU for processing is uses
  + Ex:Distributed Apps
* MultiTasking:
  + Switching from one task to another
  + Ex: working on Ms Word and Excel ( without closing either of the apps)
* MultiProgramming:
  + Multiple jobs being executed within the same program
  + Ex: Ms Word( Spell check and execution of process occruing parallely)
* 100 crore cycles/sec
* **Threads**:
  + Are Lightweight process of the same program.
  + The different process will execute parallelly, called as concurrency.
  + **Context Switching:** 
    - When one thread stops and another thread starts execution.
    - Any I/O process is context switching
    - Sleep() is a context switching.
    - Wait() and notify()
    - Sleep() belongs to **Thread** Super class
    - Wait() and notify() belongs to **Object class**
    - Preemptive
    - A thread is created in java by **implementing Runnable** Interface or by **extending a Thread** Super Class.
    - **Runnable Interface**: We have to override a method call run() method
    - Latest version of java supports executor frameworks, which has **callable()** statement, **feature**, **Thread Pool.**
    - Runnable cannot have return type, whereas callable can have return type
    - Defined number of threads in Thread Pool, will execute at a time
    - **Note:** 
      * When we override the run method, we should not call the run method directly (it becomes a normal call, when called directly. there will be no concurrency) .
      * We should call by start method, it becomes concurreny.
    - **Note2:** 
      * Thread can access the data or can call other methods, but they should be synchronized.