CLASS NOTES –30th January 2001

1) Submit Queue: contain state , if the job asks for more memory or devices, then are available in the system, then the job gets booted.
2) Display command emphasizes the term <u>Readable</u>: The form of output doesn't matter, if readable it's ok.
   > Question: Is by job id OK?
   > Answer: By job id, queue ... are OK.
3) In the middle of running of a process, another job arrives. Then the running process gets interrupted.
4) Suggestion:
   > Submit Queue Hold Q Ready Q :
   > |_____^ |_____^
   > Put jobs first into hold queue, then from hold Q to Ready Q. In this way, it can simplify your code.
5) We can put jobs in increasing run time order into hold Q1 and Q2, and put jobs into Q3 with increasing time order.
6) No external events occur at the same time.
7) About ready Q:
   > When job goes from holdQ to readyQ, priority goes away, becomes no meaning.
   > Quantum = time slice (the same thing)
   > In class, we assume infinitly small time quantum, but it's different from our project. We have no headway in the programming assignment.
8) Question: If a process is not the multiple times of the whole quantum,
   Answer: In this case, after the run time of process is reached, the process completes and the remainder of the timeslice goes away.
   A new time quantum will begin for the next process in front of the readyQ.
9) Question: What's the smallest time quantum we will use
    Answer: 0.001!
10) Question: about context switch time
   Answer: Assume no time to do context switch.
11) Question: Is it possible that two internal events happen at the same time.
   Answer: Yes!
12) Question: Can I implement use the concept of clock ticks?
   Answer: No need.
13) About event:
   External Event: i. Arrival ii. Display
   Internal Event: i.Completion   ii. End of time slice iii. Going long

   End of time slice: Throw the process to the end of the ready Q, get next process into Cpu. The cpu will serve the next process.

   Going long: When some process reach 0.6 cpu time, the mem and device are not deallocated, but the process doesn't get cpu time.

"Arrival" event, the running process is interrupted, and goes back to the readyQ, and loses the rest of the time slice. This is processed prior to the arrival being processed.

14) All events cause the Cpu to be interrupted.
15) When internal event and external event occur at the same time, internal event goes first.
16) Question: A display and an internal event occur at the same time, then...?
    Answer: Internal event gets handled first, then display the new state!
17) Meganode: A meganode is a node that has all the information.
18) Information Hiding – no method should be having an ability to change information that it does not need. There is a difference between "does not change" and "can not change".
19) About design work: Students should submit paper with description of data structure, inheritance hierarchy, method description, and communications links.