**SI SESSION PLANNING FORM**

**SI Leader: Josh Booth**

**Session Dates: 2/15/2021**

**Course: CMPE 320**

**Course Instructor: Thomas Briggs**

**Warm-up/ Opening: (5-10 min.)**

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| **Content to cover:**  **Ch 1 vocab refresher** | **Collaborative Learning Technique:**  **Group discussion** | **Strategy to be used:**  **Around the world** |

**Please provide a DETAILED BREAKDOWN of warm-up activity OR attach corresponding document(s)**

**Define kernel, device driver, interrupt, Von Neumann architecture, SMP, NUMA, Daemons, Timer, Program counter, cache, cache coherency**

**Kernel – Portion of the operating system’s code that always resides in memory that facilitates interactions between hardware and software**

**Device driver – Piece of software that communicates with specific hardware**

**Interrupt – pausing a program to go to another task, then resuming the program where you left off**

**Interrupt request line – wire the CPU senses after every instruction to check for an interrupt**

**Difference between an unmaskable interrupt and a maskable interrupt**

**Von Neumann architecture – Separate memories for instructions and data**

**Daemons – programs that run the entire time the system is running**

**Timer – times/used to trigger interrupts at fixed intervals**

**Trap – interrupt create by an error**

**Program counter – counter that keeps track of where you are in a program**

**Cache – Fast, temporary storage**

**Cache coherency – the cache is the same across the entire system**

**Difference between free and OSS - free**

**Multi-programming – switching programs while waiting for I/O**

**Multi-tasking – switching programs while waiting for user input**

**SMP – multi-processor system where each CPU has its own registers and local cache, but all other memory is shared**

**NUMA – Each CPU or group of CPUs is assigned a local portion of memory that is theirs to use**

**Cooldown/ Closing: (5-10 min.)**

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| **Content to cover:**  **Differences between SMP and NUMA** | **Collaborative Learning Technique:**  **Group survey** | **Strategy to be used:**  **Matrices (advantages vs disadvantages)** |

**Please provide a DETAILED BREAKDOWN of cool-down activity OR attach corresponding document(s)**

**SI SESSION PLANNING FORM (CONT.)**

**Workout: (30-40 min.)**

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| **Content to cover:**  **SMP vs NUMA (pg. 16)** | **Collaborative Learning Technique:**  **Visuals** | **Strategy to be used:**  **KWL** |
| **Linked lists** | **Visuals (code example)** | **KWL** |
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**Please provide a DETAILED BREAKDOWN of each workout activity OR attach corresponding document(s)**

[2/15/2021](onenote:https://d.docs.live.net/0b445f442a58a65d/Documents/Spring%202021/CMPE%20320.one#2/15/2021&section-id={CA4CFB70-561C-489B-98C8-76492624AA7F}&page-id={64F0C6E4-1F6F-4FF7-8589-114FEBF21FA6}&end)  ([Web view](https://onedrive.live.com/view.aspx?resid=B445F442A58A65D%21164&id=documents&wd=target%28CMPE%20320.one%7CCA4CFB70-561C-489B-98C8-76492624AA7F%2F2%5C%2F15%5C%2F2021%7C64F0C6E4-1F6F-4FF7-8589-114FEBF21FA6%2F%29))