

**CS 531: Fundamentals of Systems Programming**  
**Spring 2022 Instructor: S M. Sainju.**  
**Homework #3 & #4**

For your Assignment #3 and #4, you will be working in a group of 4. Following are the groups created for the assignment #3 and #4.

|   |                          |   |
|---|--------------------------|---|
| 1 | Group Alpha – $\alpha$   | <ol style="list-style-type: none"> <li>1. Yuan, Wayne (wyuan5)</li> <li>2. Vemula, Sai Krishna Vamshi (svemula6)</li> <li>3. Varadarajan, Gautham (gvaradar)</li> <li>4. Vankana, Nirmal Anand Reddy (nvankana)</li> </ol>                    |
| 2 | Group Phi – $\Phi$       | <ol style="list-style-type: none"> <li>1. Vanam, Varun (vvanam)</li> <li>2. Vallurupalli, Tanuja (Tvalluru)</li> <li>3. Vajjha, Srivalli (svajjha)</li> <li>4. Vaddi, Rishheeka (rvaddi)</li> </ol>   |
| 3 | Group Gamma - $\Gamma$   | <ol style="list-style-type: none"> <li>1. Tiyyagura, Hemanth Kumar Reddy (htiyyagu)</li> <li>2. Surampally, Abhishek Reddy (asurampa)</li> <li>3. Sunkesula, Siva Teja (ssunkesu)</li> <li>4. Somasri, Harshitha (hsomasri)</li> </ol>        |
| 4 | Group Delta - $\Delta$   | <ol style="list-style-type: none"> <li>1. Singh, Gaurav (gsingh33)</li> <li>2. Samson, Joel (jsamson6)</li> <li>3. Pusapati, Siva Satyanarayana Raju (sraju5)</li> <li>4. Poreddy, Saurabh Reddy (sporedd)</li> </ol>                         |
| 5 | Group Psi - $\Psi$       | <ol style="list-style-type: none"> <li>1. Piniseti, Jyothsna Navyasri (jpiniset)</li> <li>2. Palla, Priyanka (ppalla)</li> <li>3. Nguyen, Nick (pnguye56)</li> <li>4. Mudven, Pavan (pmudven)</li> </ol>                                      |
| 6 | Group Pi - $\Pi$         | <ol style="list-style-type: none"> <li>1. Malapati, Rishita Rachel (rmalapat)</li> <li>2. Maddali, Venkata Lakshmi Sri Harshita (vmaddali)</li> <li>3. Kolla, Pranai Nitesh (pkolla)</li> <li>4. Kasukurthi, Lohith (lkasukur)</li> </ol>     |
| 7 | Group Lambda - $\Lambda$ | <ol style="list-style-type: none"> <li>1. Kadali, Sai Ramya (skadali)</li> <li>2. Lyappan, Ramaswamy (riyappan)</li> <li>3. Gomaram Bikshapathireddy, Lakshmi Chetana (lgomaram)</li> <li>4. Ginjupalli, Sai Sucharitha (sginjupa)</li> </ol> |
| 8 | Group Theta - $\Theta$   | <ol style="list-style-type: none"> <li>1. Ermlick, Billy (wermlick)</li> <li>2. Duligunti, Praveen (pduligun)</li> <li>3. Dharmana, Sarat Chandra (sdharman)</li> <li>4. Depa, Madhuri Reddy (mdepa)</li> </ol>                               |

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|    |                        |  |
|----|------------------------|--|
| 9  | Group Omega - $\Omega$ | <ol style="list-style-type: none"><li>1. Dandyala, Sai Srujan (sdandyal)</li><li>2. Cochran, Kevin (kcochra7)</li><li>3. Bhavanam, Anusha (abhavana)</li><li>4. Bathula, Hrithikender Reddy (hbathula)</li></ol> |
| 10 | Group Sigma - $\Sigma$ | <ol style="list-style-type: none"><li>1. Banna, Sai Sujan (sbanna)</li><li>2. Banerjee, Abhijeet (abanerj)</li><li>3. Atluri, Charishma (catluri)</li><li>4. Addagatla, Kushaal (kaddagat)</li></ol>             |

**Assignment #3**

Your group will build a small E-Commerce interface. Data is stored in MySQL database on Zeus Linux Server. You are to use C API to connect to the MySQL server.

|   |
|---|
| <b>Main Menu</b>  |
| <ol style="list-style-type: none"><li>1. Admin</li><li>2. Search for Products</li><li>3. My Shopping Cart</li><li>4. Quit</li></ol> |

|  |
|--|
| <b>Sub Menu – Admin</b>  |
| <ol style="list-style-type: none"><li>1. Insert Product Info</li><li>2. Delete Product Info<ul style="list-style-type: none"><li>• Delete product</li><li>• Delete product item.</li></ul></li><li>3. Display the list of products<ul style="list-style-type: none"><li>• Display number of products (Page at a time)</li><li>• Display product details (Page at a time)</li></ul></li></ol> |

List of Products to be inserted (Example)

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1. Laptop *{table name}* (attributes: Brand name, Processor Brand, Processor model, Operating system, Ram, Price, Storage Capacity, Condition (New, Refurbished, used, Open-box), number of items etc.
2. Camera
3. Phone
4. Watch
5. Refrigerator
6. Laundry Washer
7. Laundry Dryer
8. Microwave
- 9.
- 10.
- 11.
- 12.
- 13.
- 14.
- 15.

| Sub-Menu -Search  |           |                               |           |                            |          |                            |          |
|---|-----------|-------------------------------|-----------|----------------------------|----------|----------------------------|----------|
| <div style="display: flex; justify-content: space-between;"><div style="width: 45%;"><b>Searchable Items.</b><br/><div style="display: flex; justify-content: space-between;"><div>1 Laptop<br/>3.....</div><div>2....<br/>4...</div></div><br/><div>Select the item: _____<br/>_____ Next Screen _____</div><div>Search : Searching for Laptop</div></div><div style="width: 45%;"><div style="display: flex; justify-content: space-between;"><div>Brand:<br/>{apple, ibm, dell....}</div><div>Condition:<br/>{new, used, ....}</div></div><div style="display: flex; justify-content: space-between;"><div>Operating System:<br/>{Mac, Windows, Linux, Chrome...}</div><div>Processor brand:<br/>{Intel, Power PC, A1, M1..}</div></div></div></div> <div style="text-align: center; padding: 10px 0;">Sort by: Price High to Low/Low to High</div> <div style="text-align: center; padding: 10px 0;">-----Display Search result-----</div> <table style="width: 100%; border-collapse: collapse;"><tbody><tr><td style="width: 60%;">1. Mackbook Pro {some detail}</td><td style="text-align: right;">\$1299.00</td></tr><tr><td>2. Dell {detail descriptio</td><td style="text-align: right;">\$790.00</td></tr><tr><td>3. HP {detail description}</td><td style="text-align: right;">\$899.00</td></tr></tbody></table> |           | 1. Mackbook Pro {some detail} | \$1299.00 | 2. Dell {detail descriptio | \$790.00 | 3. HP {detail description} | \$899.00 |
| 1. Mackbook Pro {some detail}   | \$1299.00 |                               |           |                            |          |                            |          |
| 2. Dell {detail descriptio  | \$790.00  |                               |           |                            |          |                            |          |
| 3. HP {detail description}  | \$899.00  |                               |           |                            |          |                            |          |

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**Add to the cart: {1,2}**

**Shopping Cart Menu**

**Display what is on the shopping Cart.**

**Submit to make a purchase. 6% sales tax is added. Generate a statement.**

**Statement is saved as a text file.**