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## 1. A Functional Decomposition Diagram for Each Department of the Restaurant:

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| **1. Functional Decomposition Diagram for the Bar** |
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| **2. Functional Decomposition Diagram for the Dining Room** |
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| **3. Functional Decomposition Diagram for the Kitchen** |
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| **4. Functional Decomposition Diagram for the Back Office** |
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## 2. Eight Fully Dressed Use Case Diagrams, Two for each Restaurant Department:

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| **1. Use Case Diagram for the Bar** | | |
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| Process Name: | *Order of drink* | |
| Primary Actor: | *Bartender (Bruce)* | |
| Primary Actor’s Goal: | *To efficiently handle bar operations including drink mixing, inventory control, and customer service.* | |
| Supporting Actors: | *Server* | |
| Stakeholders: | *Customer* | |
| Stakeholders: | *Server* | |
| Preconditions:  Post-conditions: | *Bar is open for service, supplies are available.* | |
| Main Flow: | 1. *Bartender checks inventory levels.* 2. *Bartender prepares mise en place.* 3. *Bartender mixes drinks according to customer orders.* 4. *Bartender serves drinks to customers.* | |
| Alternate Flow: | 1. *Bartender checks inventory levels.* 2. *Bartender prepares mise en place* 3. *Bartender mixes drinks according to inventory levels* 4. *Bartender serves drinks to customer but letting them know before that their drink is not available* | |
| **2. Use Case Diagram for the Bar** | | |
|  | | |
| Process Name: | Payment process | |
| Primary Actor: | Bartender | |
| Primary Actor’s Goal: | process the customers payment via Credit Card | |
| Supporting Actors: | None | |
| Stakeholders: | Customer | |
| Stakeholders: |  | |
| Preconditions: | Payment terminal available | |
| Post-conditions: | Payment terminal available | |
| Main Flow: | 1. *Customer wants to pay* 2. *Bartender gets the credit card terminal ready* 3. *Customer receives confirmation* 4. *Bartender receives receipt* | |
| Alternate Flow: | 1. Customer wants to pay 2. Bartender gets the credit card terminal ready 3. Customers credit card has been declined 4. Customer has to pay Cash now | |
| **3. Use Case Diagram for the Dining Room** | | |
|  | | |
| Process Name: | | Customer greeting and seating |
| Primary Actor: | | Hostess |
| Primary Actor’s Goal: | | greet & seat the customer and providing a menu and wine list |
| Supporting Actors: | | Server |
| Stakeholders: | | Customer |
| Stakeholders: | |  |
| Preconditions: | | Server is free to help |
| Post-conditions: | | Server is reserved for that table |
| Main Flow: | | 1. Customer enters Dining Room 2. Hostess greets customer 3. Hostess brings customer to table 4. Server is assigned to that table |
| Alternate Flow: | | 1. Customer enters Dining Room 2. Hostess greets customer 3. Hostess brings customer to table 4. Server is not available to Bartender will have to cover for now |
| **4. Use Case Diagram for the Dining Room** | | |
|  | | |
| Process Name: | | Order taking |
| Primary Actor: | | Server |
| Primary Actor’s Goal: | | to take customers’ order |
| Supporting Actors: | | none |
| Stakeholders: | | Customer |
| Stakeholders: | |  |
| Preconditions: | | Server and MOBS is available |
| Post-conditions: | | MOBS is available |
| Main Flow: | | 1. *Customer orders* 2. *Server takes order* 3. *enters order on MOBS* 4. *prints out the order* |
| Alternate Flow: | | 1. *Customer orders* 2. *Server takes order* 3. *enters order on MOBS* 4. *if coffee has been ordered, no printing out needed.* |
| **5. Use Case Diagram for the Kitchen** | | |
|  | | |
| Process Name: | | Order preparation |
| Primary Actor: | | Executive Chef |
| Primary Actor’s Goal: | | supervise kitchen chefs to prepare food |
| Supporting Actors: | | Sous Chef |
| Stakeholders: | | Line Chef |
| Stakeholders: | | Bob |
| Preconditions: | | Stock contains plenty of ingredients |
| Post-conditions: | | Stock contains plenty of ingredients |
| Main Flow: | | 1. Kitchen receives order from MOBS 2. Executive chef gives orders to staff 3. All staff create dishes according to their position and speciality 4. order goes out |
| Alternate Flow: | | none |
| **6. Use Case Diagram for the Kitchen** | | |
|  | | |
| Process Name: | | Food storage & ordering |
| Primary Actor: | | Executive chef |
| Primary Actor’s Goal: | | order and store food correctly |
| Supporting Actors: | | none |
| Stakeholders: | | Supplier |
| Stakeholders: | |  |
| Preconditions: | | Food stock is low |
| Post-conditions: | | Food stock is replenished |
| Main Flow: | | 1. Executive chef checks food stock 2. Executive chef orders food 3. Food supplier delivers food items via backdoor 4. Executive chef controls quantity of food 5. stores food correctly |
| Alternate Flow: | | none |
| **7. Use Case Diagram for the Back Office** | | |
|  | | |
| Process Name: | | Shift end |
| Primary Actor: | | Server/Bartender |
| Primary Actor’s Goal: | | pay what is owed to business and end shift |
| Supporting Actors: | | Bev |
| Stakeholders: | | Bev |
| Stakeholders: | |  |
| Preconditions: | | No cash in Bev’s storage |
| Post-conditions: | | cash in Bev’s storage |
| Main Flow: | | 1. Server/Bartender gathers all credit card slips and cash 2. Server/Bartender calculate total sales made via MOBS 3. Server/Bartender pays owed amount 4. Server/Bartender hands over credit card slips and additional cash to Bev 5. Tips are split and shared |
| Alternate Flow: | | 1. Server/Bartender gathers all credit card slips and cash 2. Server/Bartender calculate total sales made via MOBS 3. Server/Bartender pays owed amount 4. Server/Bartender hands over credit card slips and additional cash to Bev 5. Tips are split and shared 6. If Server/Bartender have more credit card slips than owed cash, they swap slips for cash with other servers 7. In rare cases, if insufficient cash, all credit card slips are handed in and Bev pays the tips the next day. |
| **8. Use Case Diagram for the Back Office** | | |
|  | | |
| Process Name: | | Handle Cash |
| Primary Actor: | | Bev/Bob |
| Primary Actor’s Goal: | | handle the cash of the day and store it safely |
| Supporting Actors: | | Bob/Bev |
| Stakeholders: | | The Bank |
| Stakeholders: | | none |
| Preconditions: | | evening shift has ended and cash has been collected |
| Post-conditions: | | cash is safely stored, either deposited or locked up. |
| Main Flow: | | 1. Bev counts the total cash that has been collected 2. If the cash exceeds $1000, Bev & Bob make a deposit at the bank’s night deposit box on the way home. 3. If the cash is $1000 or less, Bev & Bob lock the cash away in the safe in hte back office. |
| Alternate Flow: | | none |