“FINAL PROJECT REPORT”

National University
of computer and emerging sciences

COURSE NAME: OPERATING SYSTEMS

COURSE CODE: CS - 2006

SUBMITTED BY: AMNA SHAFIQ

ROLL NO: 19I-1978

SECTION: ‘A’

INSTRUCTOR’S NAME: Ms. SIDRA KHALID

DUE DATE: 24TH DECEMBER 2021

FINE DINERS' FAST FOOD

My project includes the implementation of first seven steps as required in the project statement. I have tried to incorporate maximum concepts of OS course that fit the requirements of my implemented logic. I have created two separated and unrelated processes of "MANAGER" and "CUSTOMER" and established communication between them using named pipes. For customer credentials I have created two classes for ease of implementation; order class that contains number of items in an order and their description and customer class that contains customer's name, ID, and an instance of order class to store the customer's order details. Furthermore, I have used multi-threading to fulfill the requirement of multiple cooks working on single order to save time and I have achieved synchronization in this using separate mutex locks for each thread of cook. Finally, I have used sleep call to create delays for preparation times of each item as mentioned in the displayed menu to the user. Lastly, the concept of file handling is also used where manager sends the menu file name to the customer through named pipe and customers read the file name first and then reads and displays the file to the customer after which the customer enters their order and the rest of simulation carries on. The requirement of all the steps implemented steps is smooth and fulfilled and meaningful prompts are also provided to the user after each step.