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#include <stdio.h>
#include <string.h>

#define MAX_ITEMS 100

struct Product {
    char name[50];
    float rate;
    int quantity;
    float amount;
};

void clearItems(int *numItems)
{
    *numItems = 0;
}

void printProductList() {
    printf("\nProduct List\n");
    printf("-----\n");
    printf("1. Tea           Rs.10\n");
    printf("2. Coffee        Rs.15\n");
    printf("3. Cool Drinks   Rs.20\n");
    printf("4. Espresso      Rs.50\n");
    printf("5. Cappuccino    Rs.80\n");
    printf("6. Latte         Rs.90\n");
    printf("7. Hot Chocolate Rs.100\n");
    printf("8. Cold Coffee   Rs.90\n");
    printf("9. Chocolate Milkshake Rs.120\n");
    printf("10. Cookies (2 pcs) Rs.40\n");
    printf("11. French Fries Rs.90\n");
    printf("12. Brownie      Rs.80\n");
    printf("13. Exit\n");
    printf("-----\n");
}

void addItems(struct Product items[], int *numItems) {
    char chyn = 'y';
    while (chyn == 'y' || chyn == 'Y') {
        int prdopt;
        printProductList();
        printf("Enter your Product Option: ");
        int ch2;
        prdopt = 0;
        do {
            ch2 = getchar();
            if (ch2 >= 48 && ch2 <= 57) {
                prdopt = prdopt * 10 + (ch2 - 48);
            } else if (ch2 == '\n') {
                break;
            } else {
                prdopt = 14;
            }
        } while (1);
        if (prdopt == 1) {
            strcpy(items[*numItems].name, "Tea");
            items[*numItems].rate = 10.0;
        } else if (prdopt == 2) {
            strcpy(items[*numItems].name, "Coffee");
            items[*numItems].rate = 15.0;
        } else if (prdopt == 3) {
            strcpy(items[*numItems].name, "Cool Drinks");
            items[*numItems].rate = 20.0;
        } else if (prdopt == 4) {
            strcpy(items[*numItems].name, "Espresso");
            items[*numItems].rate = 50.0;
        } else if (prdopt == 5) {
            strcpy(items[*numItems].name, "Cappuccino");
            items[*numItems].rate = 80.0;
        } else if (prdopt == 6) {
            strcpy(items[*numItems].name, "Latte");
            items[*numItems].rate = 90.0;
        } else if (prdopt == 7) {
            strcpy(items[*numItems].name, "Hot Chocolate");
            items[*numItems].rate = 100.0;
        } else if (prdopt == 8) {
            strcpy(items[*numItems].name, "Cold Coffee");

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        items[*numItems].rate = 90.0;
    } else if (prdopt == 9) {
        strcpy(items[*numItems].name, "Milkshake (Chocolate/Vanilla/Strawberry)");
        items[*numItems].rate = 120.0;
    } else if (prdopt == 10) {
        strcpy(items[*numItems].name, "Cookies (2 pcs)");
        items[*numItems].rate = 40.0;
    } else if (prdopt == 11) {
        strcpy(items[*numItems].name, "French Fries");
        items[*numItems].rate = 90.0;
    } else if (prdopt == 12) {
        strcpy(items[*numItems].name, "Brownie");
        items[*numItems].rate = 80.0;
    } else if (prdopt == 13) {
        break;
    } else {
        printf("Invalid option. Please try again.\n");
        continue;
    }
    int prdqty;
    printf("Enter the number of [%s] quantity: ", items[*numItems].name);
    int ch3;
    prdqty = 0;
    do {
        ch3 = getchar();
        if (ch3 >= 48 && ch3 <= 57) {
            prdqty = prdqty * 10 + (ch3 - 48);
        } else if (ch3 == '\n') {
            break;
        } else {
            prdqty = 101;
        }
    } while (1);
    if (prdqty <= 0 || prdqty > 100) {
        printf("Invalid quantity. Please enter [1 to 100].\n");
        continue;
    }
    items[*numItems].quantity = prdqty;
    items[*numItems].amount = items[*numItems].rate * items[*numItems].quantity;
    (*numItems)++;
}

}

void viewPurchasedItems(struct Product items[], int *numItems) {
    if (*numItems == 0) {
        printf("\nNo Purchase Product Available !!!\n");
    } else {
        printf("\nThe products are:\n");
        printf("-----\n");
        printf("%-5s %-15s %15s\n", "Sno", "Product", "Quantity");
        printf("-----\n");
        for (int i = 0; i < *numItems; i++)
        {
            printf("%-5d %-15s %15d\n", i+1, items[i].name, items[i].quantity);
        }
        printf("-----\n");
    }
}

void deletePurchasedItems(struct Product items[], int *numItems) {
    if (*numItems == 0)
    {
        printf("\nNo Purchase Product Available !!!\n");
        return;
    }
    else
    {
        printf("\nThe products are:\n");
        printf("-----\n");
        printf("%-5s %-15s %15s\n", "Sno", "Product", "Quantity");
        printf("-----\n");
        for (int i = 0; i < *numItems; i++)
        {
            printf("%-5d %-15s %15d\n", i+1, items[i].name, items[i].quantity);
        }
        printf("-----\n");
    }
}

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char chynd = 'Y';
while (chynd == 'Y' || chynd == 'Y') {
    int prdsno;
    printf("Enter the Sno number [ 1 to %d ] for Delete [ 0 - for Exit ]: ", *numItems);
    int ch3;
    prdsno = 0;
    do {
        ch3 = getchar();
        if (ch3 >= 48 && ch3 <= 57) {
            prdsno = prdsno * 10 + (ch3 - 48);
        } else if (ch3 == '\n') {
            break;
        } else {
            prdsno = 101;
        }
    } while (1);
    if (prdsno == 0)
    {
        return;
    }
    if (prdsno <= 0 || prdsno > (*numItems))
    {
        printf("Invalid Sno Number.\n");
        continue;
    }

    for (int i = prdsno - 1; i < (*numItems); i++)
    {
        items[i] = items[i+1];
    }
    (*numItems)--;
    printf("|Product Deleted|\n");
    return;
}
}

void PrintBill(struct Product items[], int *numItems) {
    float sum = 0;
    if (*numItems == 0) {
        printf("\nNo Purchase Product Available !!!\n");
    }
    else
    {
        printf("\n          ||L³ CAFE E-INVOICE CREATOR||          \n");
        printf("-----\n");
        printf("%-15s %15s %15s %15s\n", "Product", "Rate", "Quantity", "Amount");
        printf("-----\n");
        for (int i = 0; i < *numItems; i++)
        {
            printf("%-15s %15.2f %15d %15.2f\n", items[i].name, items[i].rate, items[i].quantity, items[i].amount);
            sum += items[i].amount;
        }
        printf("-----\n");
        printf("                      Total: %15.2f\n", sum);
        printf("-----\n");
    }
}

int main() {
    struct Product items[MAX_ITEMS];
    char pro[MAX_ITEMS][50];
    float total[MAX_ITEMS];
    int numItems = 0;
    float sum = 0;
    int opt = 0;
    while (1) {
        printf("\nMain Menu\n");
        printf("=====\n");
        printf("1. Add Product\n");
        printf("2. View Purchased Products List\n");
        printf("3. Print Bill\n");
        printf("4. Delete Product\n");
        printf("5. Clear Bill\n");
        printf("6. Exit\n");
        printf("=====\n");
        printf("Enter your Option [1 to 6]: ");
        int chl;

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opt = 0;
do {
    ch1 = getchar();
    if (ch1 >= 48 && ch1 <= 57) {
        opt = opt * 10 + (ch1 - 48);
    } else if (ch1 == '\n') {
        break;
    } else {
        opt = 12;
    }
} while (1);
if (opt == 1) {
    addItem(items, &numItems);
}
else if (opt == 2) {
    viewPurchasedItems(items, &numItems);
}
else if (opt == 3) {
    PrintBill(items, &numItems);
}
else if (opt == 4) {
    deletePurchasedItems(items, &numItems);
}
else if (opt == 5) {
    clearItems(&numItems);
    printf("|Products are Cleared|\n");
}
else if (opt == 6) {
    printf("||Thank You||\n");
    printf("Visit Again! :)");
    break;
}
else {
    printf("Not a Valid Option, try again\n");
}
}
return 0;
}
```