

IT LAB REPORT

CAFE

BILLING

SYSTEM



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CAFE BILLING SYSTEM

This program made using C language is based on café billing system which comprises of authentication system which includes SIGN UP and SIGN IN options, and billing system which includes MENU PAGE and BILL.

This program depicts a café (DC CAFE) which is situated in an institute. This is made such that users are categorized into STUDENTS, STAFF and OTHER who gets a discount of 10%, 20% and no discount respectively.

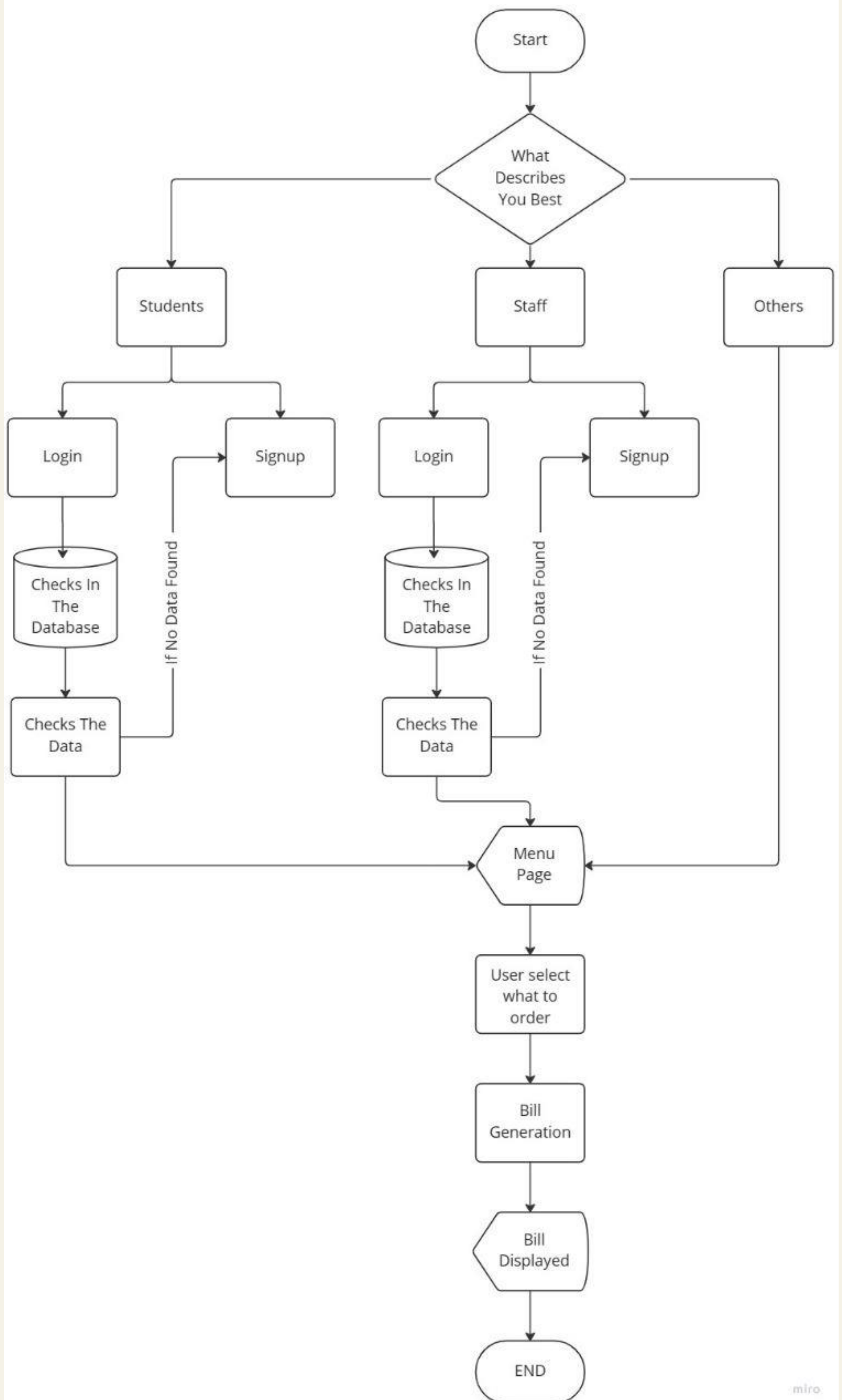
The input data of user is saved and can be reused. It also prints the receipt of items ordered by the user.

The billing process is faster, easier and user friendly

FEATURES

- Automatic calculation of tax in the bill receipt.
- Better data management.
- Easy menu setup.
- User-friendly setup.
- Quick processing speed.
- Provides unique ID for customers in billing
- Displays real time in billing.

FLOWCHART



MAIN FUNCTION

Inside main function there are signup and login systems.

In first sight user has to choose between student, staff and other.

We have used switch cases for categorizing the above. After the choice is done, the terminal is cleared using `system("cls")`.

If the user is student or staff program asks for signup or login.

For signup user has to enter a unique username and password, if user enters the already existing username, user gets the message "User already exists! Please try another username". Then program will take the user to signup page again. Password and confirm password are shown in asterisk mode for consumer security.

After signing up their data is stored in a file. If user has already signed up then user has to choose for login, for this we have used `goto()` which directly goes to login page after successful signup.

In login system user has to enter username and password which they have entered during signup.

If username or password is incorrect user will get the message to re-enter it, for this again `goto()` is used to repeat the step again.

after successful login we have call menupage function

`"MenuPage()"`.

MENUPAGE

Now `system("cls")` is used to clear the terminal
an organized menu page is displayed to the user.

menu is categorized into three divisions

1. COFFEE

2. SNACKS

3. BEVERAGES

each category has six items with their price mentioned

now user has to select which items wants to buy in each category
mentioned above.

Also the user has to mention the quantity for each items selected.

Switch case is used for the above user selected items and quantity
and calculated price are stored in "bill.txt".

BILL

Now `system("cls")` is used to clear out the previous data of the terminal.

Data is fetched from the "bill.txt" and is displayed in the terminal.

Total amount, CGST of 6%, SGST of 2%, and Discount of 10% for students, 20% for staff is displayed.

If user selects others than name of the customer is asked.

Total amount to be paid is calculated using CGST, SGST and Discount and is displayed to the user, and is also stored in "bill.txt".

CODE USED FOR PROGRAM

```

72 switch (coffee[i])
73 {
74 case '1':
75     printf("\tEnter Quantity For INSTANT COFFEE : ");
76     scanf("%d", &qty);
77     sum += qty * 30;
78
79     bill = fopen("bill.txt", "a");
80
81     fprintf(bill, "\n\t\t\t\t\t\t\t\t%-16s %4d %5s\n", "Instant-Coffee", qty, "30/-");
82     fclose(bill);
83
84     break;
85 case '2':
86     printf("\tEnter Quantity For ESPRESSO : ");
87     scanf("%d", &qty);
88     sum += qty * 60;
89
90     bill = fopen("bill.txt", "a");
91
92     fprintf(bill, "\t\t\t\t\t\t\t\t%-16s %4d %5s\n", "Espresso", qty, "60/-");
93     fclose(bill);
94
95     break;
96 case '3':
97     printf("\tEnter Quantity For LATTE : ");
98     scanf("%d", &qty);
99     sum += qty * 50;
100
101     bill = fopen("bill.txt", "a");
102
103     fprintf(bill, "\t\t\t\t\t\t\t\t%-16s %4d %5s\n", "Latte", qty, "50/-");
104     fclose(bill);
105
106     break;
107 case '4':
108     printf("\tEnter Quantity For MOCHA : ");
109     scanf("%d", &qty);
110     sum += qty * 80;
111
112     bill = fopen("bill.txt", "a");
113
114     fprintf(bill, "\t\t\t\t\t\t\t\t%-16s %4d %5s\n", "Mocha", qty, "80/-");
115     fclose(bill);
116
117     break;
118 case '5':
119     printf("\tEnter Quantity For CAPPUCCINO : ");
120     scanf("%d", &qty);
121     sum += qty * 80;
122
123     bill = fopen("bill.txt", "a");
124
125     fprintf(bill, "\t\t\t\t\t\t\t\t%-16s %4d %5s\n", "Cappucino", qty, "80/-");
126     fclose(bill);
127
128     break;
129 case '6':
130     printf("\tEnter Quantity For BLACK COFFEE : ");
131     scanf("%d", &qty);
132     sum += qty * 50;
133
134     bill = fopen("bill.txt", "a");
135
136     fprintf(bill, "\t\t\t\t\t\t\t\t%-16s %4d %5s\n", "Black-Coffee", qty, "50/-");
137     fclose(bill);
138
139     break;
140
141 default:
142     break;
143 }

```

```

142         break;
143     }
144 }
145
146 fflush(stdin);
147
148 char snacks[20];
149
150 printf("\n\n\tWhat do you want from SNACKS (For multiple orders write as : 1,2,...) : \n\t");
151 fgets(snacks, 20, stdin);
152
153 snacks[strcspn(snacks, "\n")] = '\0';
154 int loopend2 = strlen(snacks);
155 for (int i = 0; i < loopend2; i += 2)
156 {
157     switch (snacks[i])
158     {
159     case '1':
160         printf("\tEnter Quantity For VEG. SANDWICH : ");
161         scanf("%d", &qty);
162         sum += qty * 70;
163
164         bill = fopen("bill.txt", "a");
165
166         fprintf(bill, "\t\t\t\t\t\t\t%-16s %4d %5s\n", "Veg.-Sandwich", qty, "70/-");
167         fclose(bill);
168
169         break;
170     case '2':
171         printf("\tEnter Quantity For CHEESE SANDWICH : ");
172         scanf("%d", &qty);
173         sum += qty * 80;
174
175         bill = fopen("bill.txt", "a");
176
177         fprintf(bill, "\t\t\t\t\t\t\t%-16s %4d %5s\n", "Cheese-Sandwich", qty, "80/-");
178         fclose(bill);
179
180         break;
181     case '3':
182         printf("\tEnter Quantity For VEG. BURGER : ");
183         scanf("%d", &qty);
184         sum += qty * 100;
185
186         bill = fopen("bill.txt", "a");
187
188         fprintf(bill, "\t\t\t\t\t\t\t%-16s %4d %5s\n", "Veg.-Burger", qty, "100/-");
189         fclose(bill);
190
191         break;
192     case '4':
193         printf("\tEnter Quantity For CHEESE BURGER : ");
194         scanf("%d", &qty);
195         sum += qty * 120;
196
197         bill = fopen("bill.txt", "a");
198
199         fprintf(bill, "\t\t\t\t\t\t\t%-16s %4d %5s\n", "Cheese-Burger", qty, "120/-");
200         fclose(bill);
201
202         break;
203     case '5':
204         printf("\tEnter Quantity For FRENCH FRIES : ");
205         scanf("%d", &qty);
206         sum += qty * 70;
207
208         bill = fopen("bill.txt", "a");
209
210         fprintf(bill, "\t\t\t\t\t\t\t%-16s %4d %5s\n", "French-Fries", qty, "70/-");
211         fclose(bill);
212
213         break;

```

```

214     case '6':
215         printf("\tEnter Quantity For CHEESE NUGGETS : ");
216         scanf("%d", &qty);
217         sum += qty * 90;
218
219         bill = fopen("bill.txt", "a");
220
221         fprintf(bill, "\t\t\t\t\t\t\t\t%-16s %4d %5s\n", "Cheese-Nuggets", qty, "90/-");
222         fclose(bill);
223
224         break;
225
226     default:
227         break;
228 }
229
230
231 char beverages[20];
232 fflush(stdin);
233
234 printf("\n\n\tWhat do you want from BEVERAGES (For multiple orders write as : 1,2,...) : \n\t");
235 fgets(beverages, 20, stdin);
236
237 beverages[strcspn(beverages, "\n")] = '\0';
238 int loopend3 = strlen(beverages);
239 for (int i = 0; i < loopend3; i += 2)
240 {
241     switch (beverages[i])
242     {
243     case '1':
244         printf("\tEnter Quantity For TEA : ");
245         scanf("%d", &qty);
246         sum += qty * 30;
247
248         bill = fopen("bill.txt", "a");
249
250         fprintf(bill, "\t\t\t\t\t\t\t\t%-16s %4d %5s\n", "Tea", qty, "30/-");
251         fclose(bill);
252
253         break;
254     case '2':
255         printf("\tEnter Quantity For HOT MILK : ");
256         scanf("%d", &qty);
257         sum += qty * 30;
258
259         bill = fopen("bill.txt", "a");
260
261         fprintf(bill, "\t\t\t\t\t\t\t\t%-16s %4d %5s\n", "Hot-Milk", qty, "30/-");
262         fclose(bill);
263
264         break;
265     case '3':
266         printf("\tEnter Quantity For CHOCOLATE MILK : ");
267         scanf("%d", &qty);
268         sum += qty * 40;
269
270         bill = fopen("bill.txt", "a");
271
272         fprintf(bill, "\t\t\t\t\t\t\t\t%-16s %4d %5s\n", "Chocolate-Milk", qty, "40/-");
273         fclose(bill);
274
275         break;
276     case '4':
277         printf("\tEnter Quantity For MANGO MILKSHAKE : ");
278         scanf("%d", &qty);
279         sum += qty * 60;
280
281         bill = fopen("bill.txt", "a");
282
283         fprintf(bill, "\t\t\t\t\t\t\t\t%-16s %4d %5s\n", "Mango-Milkshake", qty, "60/-");
284         fclose(bill);

```



```

        fprintf(bill, "\t\t\t\t\t\t\t\t%-16s %4d %5s\n", "Mango-Milkshake", qty, "60/-");
        fclose(bill);

        break;
    case '5':
        printf("\tEnter Quantity For APPLE JUICE : ");
        scanf("%d", &qty);
        sum += qty * 50;

        bill = fopen("bill.txt", "a");

        fprintf(bill, "\t\t\t\t\t\t\t\t%-16s %4d %5s\n", "Apple-Juice", qty, "50/-");
        fclose(bill);

        break;
    case '6':
        printf("\tEnter Quantity For ORANGE JUICE : ");
        scanf("%d", &qty);
        sum += qty * 50;

        bill = fopen("bill.txt", "a");

        fprintf(bill, "\t\t\t\t\t\t\t\t%-16s %4d %5s\n", "Orange-Juice", qty, "50/-");
        fclose(bill);

        break;
    default:
        break;
}

bill = fopen("bill.txt", "a");

fprintf(bill, "\n\t\t\t\t\t\t\t\t\t-----\n\n");
fprintf(bill, "\n\n%5sTOTAL AMOUNT : %d\n", " ", sum);
fprintf(bill, "%5sCGST : %s \n", " ", "6%");
fprintf(bill, "%5sSGST : %s \n", " ", "2%");

if (differentiator == 0)
{
    fprintf(bill, "%5sDISCOUNT : %s\n", " ", "10%");
    fprintf(bill, "%5sTOTAL AMOUNT TO BE PAID : %0.3f\n\n\n", " ", sum - (sum * 0.020));
}
else if (differentiator == 1)
{
    fprintf(bill, "%5sDISCOUNT : %s\n", " ", "20%");
    fprintf(bill, "%5sTOTAL AMOUNT TO BE PAID : %0.3f\n\n\n", " ", sum - (sum * 0.120));
}
else
{
    fprintf(bill, "\n");
    fprintf(bill, "%5sTOTAL AMOUNT TO BE PAID : %0.3f\n\n\n", " ", sum + (sum * 0.080));
}

fprintf(bill, "\t\t\t\t\t\t\t\t\t-----VISIT AGAIN-----\n\n");

fclose(bill);
printf("%d", sum);
system("cls");

printf("\t\t\t\t\t\t\t\t\t-----\n\n");
printf("\t\t\t\t\t\t\t\t\tRECEIPT\n\n");
printf("\t\t\t\t\t\t\t\t\t-----\n\n");

time_t now = time(NULL);
struct tm *local_time = localtime(&now);

char time_str[100];
strftime(time_str, sizeof(time_str), "%Y-%m-%d %H:%M:%S", local_time);

printf("\t\t\t\t\t\t\t\t\t%s\n", time_str);

```



```
printf("\n\n\t\t\t\t\t----- Welcome to the DC cafe ----- \n\n\n\n");
printf("\t\t\n\tENTER USERNAME : \t");
fgets(p.username, 30, stdin);
p.username[strcspn(p.username, "\n")] = '\0';

FILE *store;
store = fopen("data.txt", "a");
char *signupstudp = &p.password[0];
pass(signupstudp, 0);

char *signupstudcp = &p.confirmpassword[0];
pass(signupstudcp, 1);

if (strcmp(p.password, p.confirmpassword) != 0)
{
    printf("\n\n\tPassword and Confirm Password didn't match! Press ENTER key to retry");
    getch();
    goto badwriter;
}

FILE *readin1;
readin1 = fopen("data.txt", "r");
int z = 0;
struct user s;

while (!feof(readin1))
{
    fscanf(readin1, "%s%s", s.username, s.password);
    if (strcmp(s.username, p.username) == 0)
    {
        printf("\n\n\tUser already exists! Please try another username.");
        getch();
        goto takeanother;
        z++;
        break;
    }
}

if (z == 0)
{
    fprintf(store, "\n %s\t\t%s ", p.username, p.password);
    fclose(store);
}

printf("\n\n\n\n\tUSER SUCCESSFULLY SIGNED UP !");
printf("\n\n\tPress ENTER key to Login");
getch();
goto almond;

e 2:
ond;;
system("cls");
struct user q;
fflush(stdin);
printf("\n\n\t\t\t\t\t\t\t\t\t----- Welcome to the DC cafe ----- \n\n\n\n");
printf("\t\t\n\tENTER USERNAME : \t");
fgets(q.username, 30, stdin);
q.username[strcspn(q.username, "\n")] = '\0';

FILE *read;
read = fopen("data.txt", "r");

struct user r;
int t = 0;

char *loginstudcp = &q.password[0];
pass(loginstudcp, 0);

while (!feof(read))
{
    fscanf(read, "%s%s", r.username, r.password);
    if (strcmp(r.username, q.username) == 0)
    {
```

```

495         if (strcmp(r.username, q.username) == 0)
496         {
497             if (strcmp(r.password, q.password) == 0)
498             {
499                 menupage(q.username, 0);
500                 t++;
501                 break;
502             }
503         }
504     }
505     if (t != 1)
506     {
507         printf("\n\n\tIncorrect Username Or Password!");
508         getch();
509         goto almond;
510     }
511
512     case 3:
513         system("cls");
514         goto homepage;
515
516     default:
517         printf("\n\n\n\n\t\tInvalid input! Please choose a valid option\n\t\tPress ENTER key to continue.");
518         getch();
519         system("cls");
520         goto Target;
521     }
522
523     break;
524
525     case 2:
526
527         goto Target2;
528 Target2;;
529
530         struct user p2;
531         printf("\n\n\t\t\t\t\t\t\t----- Welcome to the DC cafe ----- \n\n\n\n");
532         printf("\t\t\t1.Sign Up\n");
533         printf("\t\t\t2.Sign In\n");
534         printf("\t\t\t3.Exit\n\n");
535         printf("\tSelect an option\t");
536
537         int choicel2;
538         scanf("%d", &choicel2);
539
540         switch (choicel2)
541         {
542         case 1:
543             badwriter2;;
544             takeanother2;;
545             system("cls");
546             fflush(stdin);
547             printf("\n\n\t\t\t\t\t\t\t----- Welcome to the DC cafe ----- \n\n\n\n");
548             printf("\t\t\t\n\tENTER USERNAME : \t");
549             fgets(p2.username, 30, stdin);
550             p2.username[strcspn(p2.username, "\n")] = '\0';
551
552             FILE *store2;
553             store2 = fopen("data.txt", "a");
554
555             char *signupprof = &p2.password[0];
556             pass(signupprof, 0);
557
558             char *signupprofcp = &p2.confirmpassword[0];
559             pass(signupprofcp, 1);
560
561             if (strcmp(p2.password, p2.confirmpassword) != 0)
562             {
563                 printf("\n\n\tPassword and Confirm Password didn't match! Press ENTER key to retry");
564                 getch();
565                 goto badwriter2;
566             }

```



```

567     FILE *readin12;
568     readin12 = fopen("data.txt", "r");
569
570
571     struct user s2;
572
573     while (!feof(readin12))
574     {
575         fscanf(readin12, "%s%s", s2.username, s2.password);
576         if (strcmp(s2.username, p2.username) == 0)
577         {
578             printf("\n\n\tUser already exists! Please try another username.");
579             getch();
580             goto takeanother2;
581             break;
582         }
583     }
584
585     fprintf(store2, "\n %s\t\t%s ", p2.username, p2.password);
586     fclose(store2);
587
588     printf("\n\n\n\n\tUSER SUCCESSFULLY SIGNED UP !");
589     printf("\n\n\tPress ENTER key to Login");
590     getch();
591     goto almond2;
592
593     break;
594 case 2:
595 almond2;;
596     system("cls");
597     struct user q2;
598     fflush(stdin);
599     printf("\n\n\t\t\t\t\t\t\t----- Welcome to the DC cafe ----- \n\n\n\n");
600     printf("\t\t\t\t\tENTER USERNAME : \t");
601     fgets(q2.username, 30, stdin);
602     q2.username[strcspn(q2.username, "\n")] = '\0';
603
604     FILE *read2;
605     read2 = fopen("data.txt", "r");
606
607     char *loginprofp = &q2.password[0];
608     pass(loginprofp, 0);
609
610     struct user r2;
611     int t = 0;
612
613     while (!feof(read2))
614     {
615
616         fscanf(read2, "%s%s", r2.username, r2.password);
617         if (strcmp(r2.username, q2.username) == 0)
618         {
619             if (strcmp(r2.password, q2.password) == 0)
620             {
621                 menupage(q2.username, 1);
622                 t++;
623                 break;
624             }
625         }
626     }
627     if (t != 1)
628     {
629         printf("\n\n\tIncorrect Username Or Password!");
630         getch();
631         goto almond2;
632     }
633 case 3:
634     system("cls");
635     goto homepage;
636
637 default:
638     printf("\n\n\n\n\t\tInvalid input! Please choose a valid option\n\t\tPress ENTER key to continue.");

```

```

613     while (!feof(read2))
614     {
615
616         fscanf(read2, "%s%s", r2.username, r2.password);
617         if (strcmp(r2.username, q2.username) == 0)
618         {
619             if (strcmp(r2.password, q2.password) == 0)
620             {
621                 menupage(q2.username, 1);
622                 t++;
623                 break;
624             }
625         }
626     }
627     if (t != 1)
628     {
629         printf("\n\n\tIncorrect Username Or Password!");
630         getch();
631         goto almond2;
632     }
633 case 3:
634     system("cls");
635     goto homepage;
636
637 default:
638     printf("\n\n\n\n\t\tInvalid input! Please choose a valid option\n\t\tPress ENTER key to continue.");
639     getch();
640     system("cls");
641     goto Target2;
642 }
643
644 break;
645
646 case 3:
647
648     goto Target3;
649 Target3:;
650
651     fflush(stdin);
652
653     char othername[50];
654     printf("\n\n\t\t\t\t\t----- Welcome to the DC cafe ----- \n\n\n\n");
655     printf("\n\n\n\t\t\t\t\tEnter Your Name : ");
656     fgets(othername, 50, stdin);
657     othername[strcspn(othername, "\n")] = '\0';
658
659     menupage(othername, 3);
660     break;
661
662 default:
663     printf("\n\n\n\n\t\tInvalid input! Please choose a valid option\n\t\tPress ENTER key to continue.");
664     getch();
665     system("cls");
666     goto homepage;
667 }
668 }

```

OUTPUT

```
C:\Users\saiva\OneDrive\Desl  X  +  v  -  □  X

----- Welcome to the DC cafe -----

What describes you best :

1. Student                2. Staff                3. Others

Choose an option :  1
```

```
C:\Users\saiva\OneDrive\Desl  X  +  v  -  □  X

----- Welcome to the DC cafe -----

1.Sign up
2.Sign in
3.Exit

Choose an option :    1
```

OUTPUT

```
C:\Users\saiva\OneDrive\Desl  X  +  v

----- Welcome to the DC cafe -----

ENTER USERNAME   :      Decode_code
ENTER PASSWORD   :      *****
CONFIRM PASSWORD :      *****

USER SUCCESSFULLY SIGNED UP !

Press ENTER key to Login
```

```
C:\Users\saiva\OneDrive\Desl  X  +  v

----- DC CAFE WELCOMES YOU -----

Items We Serve :

-----
COFFEE
-----
1. INSTANT COFFEE  30/-
2. ESPRESSO       60/-
3. LATTE          50/-
4. MOCHA          80/-
5. CAPPUCINO      80/-
6. BLACK COFFEE   50/-

-----
SNACKS
-----
1. VEG. SANDWICH   70/-
2. CHEESE SANDWICH 80/-
3. VEG. BURGER     100/-
4. CHEESE BURGER   120/-
5. FRENCH FRIES    70/-
6. CHEESE NUGGETS  90/-

-----
BEVERAGES
-----
1. TEA             30/-
2. HOT MILK        30/-
3. CHOCOLATE MILK  40/-
4. MANGO MILKSHAKE 60/-
5. APPLE JUICE     50/-
6. ORANGE JUICE    50/-

What do you want from COFFEE (For multiple orders write as : 1,2,...):
1 6
Enter Quantity For INSTANT COFFEE : 1
Enter Quantity For BLACK COFFEE   : 2

What do you want from SNACKS (For multiple orders write as : 1,2,...) :
2 5
Enter Quantity For CHEESE SANDWICH : 3
Enter Quantity For FRENCH FRIES    : 4

What do you want from BEVERAGES (For multiple orders write as : 1,2,...) :
3 4
Enter Quantity For CHOCOLATE MILK  : 5
Enter Quantity For MANGO MILKSHAKE : 6
```

OUTPUT

```
C:\Users\pavan\OneDrive\Desktop > java Receipt.java
-----
                        RECEIPT
-----

2023-02-26 15:24:38
ORDER ID : 18467
Name      : Decode_code

----- Order Details -----

Product          Qty.      Price
Instant-Coffee   1         30/-
Black-Coffee     2         50/-
Cheese-Sandwich  3         80/-
French-Fries     4         70/-
Chocolate-Milk   5         40/-
Mango-Milkshake  6         60/-
-----

TOTAL AMOUNT      : 1210
CGST               : 6%
SGST               : 2%
DISCOUNT          : 10%
TOTAL AMOUNT TO BE PAID : 1185.800

-----VISIT AGAIN-----
```

REFERENCES

goto statement :-

<https://youtu.be/AWUxfROdzPc>

system(“COLOR”) :-

<https://youtu.be/IOHhUDDZaRk>

time function :-

<https://www.geeksforgeeks.org/c-programprint-digital-clock-current-time/>

pass function :-

https://www.youtube.com/watch?v=xTk14TcWaN4&ab_channel=ADV.Learning

DV.LEARNING

THANK YOU

- DECODE CODE