

PSP [20ES104] COURSE PROJECT REPORT

On

"KFC Built-in System"

Developed By:

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CERTIFICATE

This is to certify that the PSP course project report entitled "KFC Built-in System" is a record of bonafide work carried out by the student M.Akhila bearing roll number 2203A51119 of Computer Science and Artificial Intelligence department during the academic year 2022-23.

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PROBLEM STATEMENT:

The code is a simple console-based program for a restaurant ordering system. It allows the user to select various food items, view the selected items, delete items, change the quantity of items, and generate a bill.

The code includes the necessary header files: stdio.h, string.h, and stdlib.h. These provide functions for input/output, string manipulation, and memory allocation.

The code defines several structures to represent different types of items: non_veg_items, non_veg_cart, veg_cart, drinks_cart, veg, and drinks. These structures store information about the items such as ID, name, price, and quantity.

The code defines several functions for different operations: non_veg_item, veg, drinks, delete_non_veg, delete_veg, delete_drinks, change, bill, displaye, displayb, and displays. These functions handle tasks such as displaying menu items, adding items to the cart, deleting items from the cart, changing the quantity of items, generating the bill, and displaying the cart items.

In the main function, a loop is used to repeatedly display the menu and handle user choices. The user can choose to display items, view the total number of items added, delete items, change the quantity of items, or generate a bill. After each operation, the user is prompted to continue or exit.

The code uses arrays of structures (ec, bc, and sc) to store the items added to the cart. The variables ei, bi, and si keep track of the number of items added to each cart.

The code uses switch statements and loops to handle different user choices and perform the required operations.

The code also includes some printf and scanf statements to interact with the user and gather input.

MODULES:

The code uses structures to define different types of items such as non-veg items, veg items, and drinks. The cart for each category is stored in separate arrays of structures.

1. non_veg_item(): Displays non-veg items and allows the user to add them to the cart.

2.veg(): Displays veg items and allows the user to add them to the cart.

3.drinks(): Displays drinks and allows the user to add them to the cart.

4.delete_non_veg(): Deletes a non-veg item from the cart.

5.delete_veg(): Deletes a veg item from the cart.

6.delete_drinks(): Deletes a drink item from the cart.

7.change(): Allows the user to change the quantity of items in the cart.

8.bill(): Generates the bill for the items in the cart.

Finally, calculates the total cost of the order using Total() and displays it.

int main():

The main function where the program execution begins.

Defines an array of MenuItem representing the menu items and the total number of items.

Calls the placeOrder() function to start the order placement process.

Returns 0 to indicate successful program execution.

KNOWLEDGE REQUIRED TO DEVELOP THIS APPLICATION

- Variables
- Data types
- ➤ Control Statements (if)
- ➤ Loop Statements (while)
- Arrays (1D/2D-arrays)
- Functions (Any type of user defined functions)
- > Structure (structures and nested structures)
- > Strings (Strings and Table of strings)

SOURCE CODE [.C FILE]:

```
#include<stdio.h>
#include<string.h>
#include<stdlib.h>
void non_veg_item();
void veg();
void drinks();
void delete_non_veg();
void delete_veg();
void delete_drinks();
void change();
void bill();
int
i,n,nvid,nvi,nnv,vid,vi,nv,did,di,nd,delid,pos=0,chanid=0,j,id,total,totalnv,totalv,totald;
char nvch,vch,dch,ch;
struct non_veg_items
{
      int id;
      char item_name[50];
      int price;
};
struct non_veg_cart
{
      int id;
      char item_name[50];
      int price;
      int no_items;
}nvc[10];
struct veg_cart
{
      int id;
      char item_name[50];
      int price;
      int no_items;
}vc[10];
struct drinks_cart
```

```
int id;
     char types[50];
     int price;
     int no_items;
}dc[10];
struct veg
{
     int id;
     char item_name[50];
     int price;
};
struct drinks{
     int id;
     char types[50];
     int price;
};
int main()
{
printf("------");
     int n,ch,ic,p;
     char c;
     do{
            printf("\n\n .Display all items available to select\n 2.Display the total
no.of items added\n3.Delete any item selected\n4.Change the quantity of any item
selected\n5.Bill the items selected\n");
            printf("\nEnter your choice:");
            scanf("%d",&ch);
            switch(ch)
                  case 1:printf("\n1.Non_Veg Items\n");
                      printf("2.Veg\n");
                      printf("3.Drinks\n");
                      printf("choose the item you want to select:");
                      scanf("%d",&ic);
                      switch(ic)
                      {
                         case 1:printf("Id\tItem\t\t\tPrice\n");
                            non_veg_item();
```

```
break;
case 2:printf("Id\tName\t\t\tPrice\n");
                veg();
                break;
             case 3:printf("Id\ttypes\t\tPrice\n");
                drinks();
              }
              break;
       case 2:if(nvc[0].id!=0)
     {
           printf("-----\n");
           printf("Id\tName\t\t\tprice\tNo.of items\n");
           displaynv(nvc,nvi);
         }
         if(vc[0].id!=0)
           printf("-----\n");
           printf("Id\tName\t\tprice\tNo.of items\n");
           displayv(vc,vi);
         }
         if(dc[0].id!=0)
           printf("-----\n");
           printf("Id\tName\t\tprice\tNo.of items\n");
           displayd(dc,di);
         }
           break;
       case 3:if(nvc[0].id!=0)
     {
           printf("-----\n");
           printf("Id\tName\t\tprice\tNo.of items\n");
           displaynv(nvc,nvi);
         }
         if(vc[0].id!=0)
         {
           printf("-----\n");
           printf("Id\tName\t\tprice\tNo.of items\n");
           displayv(vc,vi);
```

```
}
    if(dc[0].id!=0)
    {
      printf("-----\n");
      printf("Id\tName\t\tprice\tNo.of items\n");
      displayd(dc,di);
   }
    do
         {
    printf("Enter id of the item you want to delete:");
         scanf("%d",&delid);
         id=delid/100;
         switch(id)
         {
              case 1:delete_non_veg(delid,nvi);
              break;
               case 2:delete_veg(delid,vi);
              break;
              case 3:delete_drinks(delid,di);
              break;
         printf("\nEnter d to delete more item:");
         scanf(" %c",&ch);
  }while(ch=='d');
    break;
  case 4:if(nvc[0].id!=0)
{
      printf("-----\n");
      printf("Id\tName\t\tprice\tNo.of items\n");
      displaynv(nvc,nvi);
    }
    if(vc[0].id!=0)
      printf("-----\n");
      printf("Id\tName\t\tprice\tNo.of items\n");
      displayv(vc,vi);
    if(dc[0].id!=0)
```

```
{
                       printf("-----\n");
                       printf("Id\tName\t\tprice\tNo.of items\n");
                       displayd(dc,di);
                     change();
                      break;
                   case 5:bill();
                   exit(0);
                   break;
     }
     printf("press o to display options:");
     scanf(" %c",&c);
}while(c=='o');
void non_veg_item()
     struct non_veg_items nv1={11,"Biryani combo for-2 ",795};
     struct non_veg_items nv2={12,"Chicken Burger ",350};
     struct non_veg_items nv3={13, "Grilled Chicken-5",528};
     struct non_veg_items nv4={14,"5Leg Pieces
     struct non_veg_items nv5={15,"Family Feast ",859};
     printf("%d\t%s\t\t%d\n",nv1.id,nv1.item_name,nv1.price);
     printf("%d\t%s\t\t%d\n",nv2.id,nv2.item_name,nv2.price);
     printf("%d\t%s\t\t%d\n",nv3.id,nv3.item_name,nv3.price);
     printf("%d\t%s\t\t%d\n",nv4.id,nv4.item_name,nv4.price);
     printf("%d\t%s\t\t%d\n",nv5.id,nv5.item_name,nv5.price);
     do{
     printf("Enter Id of the item you want to add into cart:");
     scanf("%d",&nvid);
     switch(nvid)
            case 11:printf("Enter the no.of %s you want to add:",nv1.item_name);
               scanf("%d",&nnv);
               nvc[nvi].id=nv1.id;
               strcpy(nvc[nvi].item_name,nv1.item_name);
               nvc[nvi].price=nv1.price;
               nvc[nvi].no_items=nnv;
```

```
nvi++;
           break:
        case 12:printf("Enter the no.of %s you want to add:",nv2.item_name);
                scanf("%d",&nnv);
                nvc[nvi].id=nv2.id;
                strcpy(nvc[nvi].item_name,nv2.item_name);
                nvc[nvi].price=nv2.price;
                nvc[nvi].no_items=nnv;
                nvi++;
           break;
        case 13:printf("Enter the no.of %s you want to add:",nv3.item_name);
                scanf("%d",&nnv);
               nvc[nvi].id=nv3.id;
                strcpy(nvc[nvi].item_name,nv3.item_name);
                nvc[nvi].price=nv3.price;
                nvc[nvi].no_items=nnv;
                nvi++;
           break;
        case 14:printf("Enter the no.of %s you want to add:",nv4.item_name);
                scanf("%d",&nnv);
                nvc[nvi].id=nv4.id;
                strcpy(nvc[nvi].item_name,nv4.item_name);
                nvc[nvi].price=nv4.price;
                nvc[nvi].no_items=nnv;
                nvi++;
           break:
        case 15:printf("Enter the no.of %s you want to add:",nv5.item_name);
                scanf("%d",&nnv);
                nvc[nvi].id=nv5.id;
                strcpy(nvc[nvi].item_name,nv5.item_name);
                nvc[nvi].price=nv5.price;
                nvc[nvi].no_items=nnv;
                nvi++;
           break;
      }
      printf("Press s if you want add anymore items from non_veg:");
      scanf(" %c",&nvch);
}while(nvch=='s');
```

```
}
void veg()
{
      struct veg v1=\{21,"Biryani",199\};
  struct veg v2={22,"Veg Burger ",179};
  struct veg v3={23,"Veg Zinger ",185};
  struct veg v4={24,"Veg Patty-2PC",119};
  struct veg v5={25,"Fried rice ",100};
      printf("%d\t%s\t\t\d\n",v1.id,v1.item_name,v1.price);
      printf("%d\t%s\t\t\d\n",v2.id,v2.item_name,v2.price);
      printf("%d\t%s\t\t\d\n",v3.id,v3.item_name,v3.price);
      printf("%d\t%s\t\t\d\n",v4.id,v4.item_name,v4.price);
      printf("%d\t%s\t\t\d\n",v5.id,v5.item_name,v5.price);
      do{
      printf("Enter Id of the items you want to add into the cart:");
      scanf("%d",&vid);
      switch(vid)
      {
             case 21:printf("Enter the no.of %s you want to add:",v1.item_name);
                scanf("%d",&nv);
                vc[vi].id=v1.id;
                strcpy(vc[vi].item_name,v1.item_name);
                vc[vi].price=v1.price;
                vc[vi].no_items=nv;
                vi++;
           break:
        case 22:printf("Enter the no.of %s you want to add:",v2.item_name);
                scanf("%d",&nv);
                vc[vi].id=v2.id;
                strcpy(vc[vi].item_name,v2.item_name);
                vc[vi].price=v2.price;
                vc[vi].no_items=nv;
                vi++;
           break;
        case 23:printf("Enter the no.of %s you want to add:",v3.item_name);
                scanf("%d",&nv);
                vc[vi].id=v3.id;
                strcpy(vc[vi].item_name,v3.item_name);
```

```
vc[vi].price=v3.price;
                vc[vi].no_items=nv;
                vi++;
           break;
        case 24:printf("Enter the no.of %s you want to add:",v4.item_name);
                scanf("%d",&nv);
                vc[vi].id=v4.id;
                strcpy(vc[vi].item_name,v4.item_name);
                vc[vi].price=v4.price;
                vc[vi].no_items=nv;
                vi++;
           break;
        case 25:printf("Enter the no.of %s you want to add:",v5.item_name);
                scanf("%d",&nv);
                vc[vi].id=v5.id;
                strcpy(vc[vi].item_name,v5.item_name);
                vc[vi].price=v5.price;
                vc[vi].no_items=nv;
                vi++;
           break;
      printf("Press s if you want add anymore items from veg:");
      scanf(" %c",&vch);
}while(vch=='s');
}
void drinks()
 struct drinks d1={31,"Sprit ",80};
 struct drinks d2={32,"Coca_Cola",29};
 struct drinks d3={33,"Pepsi ",28};
 struct drinks d4={34,"Thums Up ",79};
 struct drinks d5={35,"Fanta ",78};
 printf("%d\t%s\t%d\n",d1.id,d1.types,d1.price);
 printf("%d\t%s\t%d\n",d2.id,d2.types,d2.price);
 printf("%d\t%s\t%d\n",d3.id,d3.types,d3.price);
 printf("%d\t%s\t%d\n",d4.id,d4.types,d4.price);
 printf("%d\t%s\t%d\n",d5.id,d5.types,d5.price);
 do{
```

```
printf("Enter Id of the items you want to add into the cart:");
scanf("%d",&did);
switch(did)
{
       case 31:printf("Enter the no.of %s drinks you want to add:",d1.types);
          scanf("%d",&nd);
          dc[di].id=d1.id;
          strcpy(dc[di].types,d1.types);
          dc[di].price=d1.price;
          dc[di].no_items=nd;
          di++;
     break;
  case 32:printf("Enter the no.of %s drinks you want to add:",d2.types);
          scanf("%d",&nd);
          dc[di].id=d2.id;
          strcpy(dc[di].types,d2.types);
          dc[di].price=d2.price;
          dc[di].no_items=nd;
          di++;
     break;
  case 33:printf("Enter the no. of %s drinks you want to add:",d3.types);
          scanf("%d",&nd);
          dc[di].id=d3.id;
          strcpy(dc[di].types,d3.types);
          dc[di].price=d3.price;
          dc[di].no_items=nd;
          di++;
     break:
  case 34:printf("Enter the no.of %s drinks you want to add:",d4.types);
          scanf("%d",&nd);
          dc[di].id=d4.id;
          strcpy(dc[di].types,d4.types);
          dc[di].price=d4.price;
          dc[di].no_items=nd;
          di++;
     break:
  case 35:printf("Enter The no.of %s drinks you want to add:",d5.types);
          scanf("%d",&nd);
```

```
dc[di].id=d5.id;
                strcpy(dc[di].types,d5.types);
                dc[di].price=d5.price;
                dc[di].no_items=nd;
                di++;
           break:
      }
      printf("Press s if you want to add anymore items from drinks:");
      scanf(" %c",&dch);
}while(dch=='s');
displaynv(struct non_veg_cart nvc[],int(n))
{
      for(i=0;i<n;i++)
      printf("%d\t%s\t\t\t\d\t%d\n",nvc[i].id,nvc[i].item_name,nvc[i].price,nvc[i].
no_items);
}
displayv(struct veg_cart vc[],int(n))
{
      for(i=0;i<n;i++)
      printf("%d\t%s\t%d\n",vc[i].id,vc[i].item_name,vc[i].price,vc[i].no_items);
}
displayd(struct drinks_cart dc[],int(n))
{
      for(i=0;i<n;i++)
      printf("%d\t%s\t%d\n",dc[i].id,dc[i].types,dc[i].price,dc[i].no_items);
}
void change()
{
      do
      printf("Enter the Id of the item you want to change the quantity:");
      scanf("%d",&chanid);
      for(i=0;i<nvi;i++)
      {
             if(chanid==nvc[i].id)
             printf("Enter the no.of quatities you want:");
```

```
scanf("%d",&nvc[i].no_items);
            break;
     }
     pos=0;
     for(i=0;i< vi;i++)
     if(chanid==vc[i].id)
            {
            printf("Enter the no.of quatities you want:");
            scanf("%d",&vc[i].no_items);
            break;
     }
}
     pos=0;
     for(i=0;i< di;i++)
     if(chanid==dc[i].id)
            printf("Enter the no.of quatities you want:");
            scanf("%d",&dc[i].no_items);
            break;
     }
     printf("-----\n\n");
     printf("Enter s to change the quantity of more items:");
     scanf(" %c",&ch);
}while(ch=='c');
}
void delete_non_veg(delid,n)
     pos=0;
     for(i=0;i<n;i++)
     {
            pos++;
            if(nvc[i].id==delid)
            {
```

```
for(j=pos-1;j< n;j++)
               nvc[j]=nvc[j+1];
               nvi--;
          }
printf("------Item deleted Sucessfully------
void delete_veg(delid,n)
    pos=0;
    for(i=0;i< n;i++)
    {
          pos++;
          if(vc[i].id==delid)
               for(j=pos-1;j< n;j++)
               vc[j]=vc[j+1];
               vi--;
          }
}
printf("------Item deleted Sucessfully------
 ----");
void delete_drinks(delid,n)
{
    pos=0;
    for(i=0;i< n;i++)
    {
          pos++;
          if(dc[i].id==delid)
          {
               for(j=pos-1;j< n;j++)
               dc[j]=dc[j+1];
               di--;
          }
}
printf("------Item deleted Sucessfully------
```

```
}
void bill()
  if(nvc[0].id!=0)
  printf("\n-----\n");
  for(i=0;i<nvi;i++)</pre>
     {
     printf("ID:%d\nItem_Name:%s\nPrice:%d\nNo_Items:%d\n",nvc[i].id,nvc[i].ite
m_name,nvc[i].price,nvc[i].no_items);
            totalnv+=nvc[i].price*nvc[i].no_items;
     }
}
     if(totalnv!=0)
     printf("-----***Total Non_Veg Bill=%d***----\n",totalnv);
  }
     if(vc[0].id!=0)
  {
     printf("-----\n");
     for(i=0;i<vi;i++)
     {
     printf("ID:%d\nveg_Name:%s\nPrice:%d\nNo_Items:%d\n",vc[i].id,vc[i].item_n
ame,vc[i].price,vc[i].no_items);
            totalv+=vc[i].price*vc[i].no_items;
     }
}
     if(totalv!=0)
     printf("-----***Total Veg Bill=%d***----\n",totalv);
  }
     if(dc[0].id!=0)
  printf("-----\n");
     for(i=0;i<di;i++)
     {
```

RESULTS:

-----****Welcome to KFC Restuarent****-----

- 1.Display all items available to select
- 2.Display the total no.of items added
- 3.Delete any item selected
- 4. Change the quantity of any item selected
- 5.Bill the items selected

Enter your choice:1

- 1.Non_Veg Items
- 2.Veg
- 3.Drinks

choose the item you want to select:1

- Id Item Price
- 11 Biryani combo for-2 795
- 12 Chicken Burger 350
- 13 Grilled Chicken-5 528
- 14 5Leg Pieces 519
- 15 Family Feast 859

Enter Id of the item you want to add into cart:14

Enter the no.of 5Leg Pieces you want to add:1

Press s if you want add anymore items from non_veg:s

Enter Id of the item you want to add into cart:12

Enter the no.of Chicken Burger you want to add:2

Press s if you want add anymore items from non_veg:n press o to display options:o

- 1.Display all items available to select
- 2.Display the total no.of items added
- 3.Delete any item selecte

4. Change the quantity of any item selected

5.Bill the items selected

Enter your choice:2

-----non_veg items-----

IdNamepriceNo.of items145Leg Pieces519112Chicken Burger3502press o to display options:o

- 1.Display all items available to select
- 2.Display the total no.of items added
- 3.Delete any item selected
- 4. Change the quantity of any item selected
- 5.Bill the items selected

Enter your choice:1

- 1.Non_Veg Items
- 2.Veg
- 3.Drinks

choose the item you want to select:2

Id	Name	Price		
21	Biryani	199		
22	Veg Burger	179		
23	Veg Zinger	185		
24	Veg Patty-2PC	119		
25	Fried rice	100		

Enter Id of the items you want to add into the cart:21

Enter the no.of Biryani you want to add:1

Press s if you want add anymore items from veg:s

Enter Id of the items you want to add into the cart:25

Enter the no.of Fried rice you want to add:2

Press s if you want add anymore items from veg:n press o to display options:o

- 1.Display all items available to select
- 2.Display the total no.of items added
- 3.Delete any item selected
- 4. Change the quantity of any item selected
- 5.Bill the items selected

Enter your choice:2

-----non_veg items-----

- IdNamepriceNo.of items145Leg Pieces519112Chicken Burger3502
- 12 Chicken Burger 3. ----veg items-----
- Id Name price No.of items
- 21 Biryani 199 1
- 25 Fried rice 100 2

press o to display options:o

- 1.Display all items available to select
- 2.Display the total no.of items added
- 3.Delete any item selected
- 4. Change the quantity of any item selected
- 5.Bill the items selected

Enter your choice:1

- 1.Non_Veg Items
- 2.Veg
- 3.Drinks

choose the item you want to select:3

- Id types Price
- 31 Sprit 80
- 32 Coca_Cola 29
- 33 Pepsi 28
- 34 Thums Up 79

35 Fanta 78

Enter Id of the items you want to add into the cart:32
Enter the no.of Coca_Cola drinks you want to add:2
Press s if you want to add anymore items from drinks:s
Enter Id of the items you want to add into the cart:34
Enter the no.of Thums Up drinks you want to add:2
Press s if you want to add anymore items from drinks:n
press o to display options:0

- 1.Display all items available to select
- 2.Display the total no.of items added
- 3.Delete any item selected
- 4. Change the quantity of any item selected
- 5.Bill the items selected

Enter your choice:4						
non_veg items						
Id	Name	price	No.of items			
14 5Leg Pieces			519	1		
12	2 Chicken Burger			350	0 2	
veg items						
Id	Name	price	No.of items			
21	Biryani	199	1			
25	Fried rice	100	2			
drinks						
Id	Name	price	No.of items			
32	Coca_Cola	29	2			
34	Thums Up	79	2			
Enter the Id of the item you want to change the quantity:21						
Enter the no.of quatities you want:2						
Product Quantity changed Succesfully						

Enter s to change the quantity of more items:n press o to display options:o

- 1.Display all items available to select
- 2.Display the total no.of items added
- 3.Delete any item selected
- 4. Change the quantity of any item selected
- 5.Bill the items selected

Enter your choice:2

-----non_veg items-----

- Id Name price No.of items
- 14 5Leg Pieces 519 1
- 12 Chicken Burger 350 2

----veg items-----

- Id Name price No.of items
- 21 Biryani 199 2
- 25 Fried rice 100 2

-----drinks-----

- Id Name price No.of items
- 32 Coca_Cola 29 2
- 34 Thums Up 79 2

press o to display options:o

- 1.Display all items available to select
- 2.Display the total no.of items added
- 3.Delete any item selected
- 4. Change the quantity of any item selected
- 5.Bill the items selected

Enter your choice:5

-----Non_Veg Items-----

ID:14

Item_Name:5Leg Pieces

Price:519

No_Items:1

ID:12

Item_Name:Chicken Burger
Price:350
No_Items:2
Total Non_Veg Bill=1219
Veg items
ID:21
veg_Name:Biryani
Price:199
No_Items:2
ID:25
veg_Name:Fried rice
Price:100
No_Items:2
Total Veg Bill=598
Drinks
ID:32
type_Name:Coca_Cola
Price:29
No_Items:2
ID:34
type_Name:Thums Up
Price:79
No_Items:2
Total Drinks Bill=216
~~~~~TOTAL BILL=2033~~~~~~
**Take Your Recipt**
**Thank You For Your Order**
Process exited after 155.8 seconds with return value 0
Press any key to continue