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Section: 202DA

Project Report

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[For Teachers use only: Don't Write Anything inside this box]

Lab Project Status

Marks: …… **Signature: .....**

Comments: ..... **Date: .....**

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Chapter 1
Introduction

ACKNOWLEDGEMENT:

This Project is completed by the support from our honorable Teacher **Md. Rajibul Palas**. We are greatly indebted to our beloved teacher for her useful and necessary observation, suggestions and contribution. We could not have been able to achieve anything in this project without her supervision. May Allah enrich her greatly in every area of life.

Kowsar Ahmed Sojol

&

MD.Belal Hossen

Introduction

Assembly Language is a very important course for a student who studied the Computer Science and Engineering subject. In this course, we learned the concept of assembly language. At first, we learned the basic concept about assembly language. From the acquired knowledge of this course finally, we designed a Restaurant Management system . We have tried our best to make the complicated process of Restaurant Management System as simple as possible. We have tried to design the Project in such a way that user may not have any difficulty in using this package & further expansion is possible without much effort.

Objective

The main objective of this project is to establish an integrated Restaurant Management system . Specific Objective:

=> The program will show the foods names and pricings list. The program will calculate the total products values and quantities and will display it to the user. User can also reset the records of products. After completing the purchase user can exit the program

=> A computer based management system is designed to handle all the primary information required to calculate order number, order list, price and handle all the details required for the correct statement calculation and generation.

=> This project intends to introduce more user friendliness in the various activities such as take order, pay bill, and hassles less.

=> The ordering of foods has been made quite simple as all the details of the customer can be obtained by simply keying in the menu book.

Chapter 2

Project Development

Instruction:

We have used some Assembly Language functions in our project. These are

DB - stays for Define Byte. can be any
letter or digit combination, though it should start with a letter.

DW - stays for Define Word. can be any letter or digit combination,
though it should start with a letter.

Stack - The stack segment register is usually used to store information about the memory segment that stores the call stack of currently executed program.

Mov - The MOV instruction is the most important command in the 8086 because it moves data from one location to another.

Proc - A procedure is a set of code that can be branched to and returned from in such a way that the code is as if it were inserted at the point from which it is branched to. The branch to procedure is referred to as the call, and the corresponding branch back is known as the return.

DS – Data segment register.

AX - This is the accumulator. It is of 16 bits and is divided into two 8-bit registers AH and AL to also perform 8-bit instructions.

DX – This is the data register. It is of 16 bits and is divided into two 8-bit registers DH and DL to also perform 8-bit instructions. It is used in multiplication an input/output port addressing.

Offset - The OFFSET operator returns the offset of a memory location

Source Code :

```
.model large
.stack 1000h
.data
m1 db 10,13,10,13,'              ****welcome to our green garden restaurants****$',10,13
m2 db 10,13,10,13,'Enter your choice $'

m3 db 10,13, '              1.breakfast            $'
m4 db 10,13, '              2.lunch              $'
ms5 db 10,13,'              3.dinner             $'
m5 db 10,13, '              4.snacks             $'
m6 db 10,13, '              5.dessert            $'
m7 db 10,13, '              6.drinks             $'


m8 db 10,13,10,13,'***choice your food from the menu***$'

;breakfast
m9 db 10,13, '  **          1.tanduri roti          10/-                **$' ;breakfast
m10 db 10,13,'  **          2.nan                 10/-                **$'
m11 db 10,13,'  **          3.parata              10/-                **$'
m12 db 10,13,'  **          4.dal                 10/-                **$'
m13 db 10,13,'  **          5.mixed vegetables      20/-                  **$'
m14 db 10,13,'  **          6.halwa               20/-                **$'
m15 db 10,13,'  **          7.luchi               10/-                **$'
m16 db 10,13,'  **          8.fried egg           20/-                **$'
m17 db 10,13,'  **          9.kichuri             60/-                **$'


;lunch & dinner

m25 db 10,13,'  **  1.kachchi birani                 90/-            **$'
m26 db 10,13,'  **  2.chicken birani                 90/-            **$'
m27 db 10,13,'  **  3.plain polaw                    30/-            **$'
m28 db 10,13,'  **  4.chicken bhuna khichuri            90/-            **$'
m29 db 10,13,'  **  5.mutton bhuna khichuri             90/-            **$'
m30 db 10,13,'  **  6.plain rice                  10/-            **$'
m31 db 10,13,'  **  7.pabda fish                  30/-            **$'
m32 db 10,13,'  **  8.lobstar(chingri)              30/-            **$'
m33 db 10,13,'  **  9.koi fish                    30/-            **$'

;dinner

m18 db 10,13,'  **  1.chicken roast         60/-                    **$'
m19 db 10,13,'  **  2.chicken bhuna khichuri  80/-                      **$'
m20 db 10,13,'  **  3.mutton bhuna khichuri   80/-                      **$'
m21 db 10,13,'  **  4.salad               40/-                    **$'
m22 db 10,13,'  **  5.chicken curry         50/-                     **$'
m23 db 10,13,'  **  6.spicy beef fry        70/-                     **$'
m34 db 10,13,'  **  7.hilsha fish           60/-                     **$'
m35 db 10,13,'  **  8.rui fish              60/-                    **$'
m36 db 10,13,'  **  9.special vegetable      60/-                      **$'
;
;snacks

m41 db 10,13,'  **  1.moghol porata    8/-              **$'
m42 db 10,13,'  **  2.jali kabab       80/-             **$'
m43 db 10,13,'  **  3.singara          5/-              **$'
m44 db 10,13,'  **  4.samucha          5/-              **$'

;sweat meat
m45 db 10,13,'  **  1.faluda   50/-                     **$'
m46 db 10,13,'  **  2.puding   50/-                     **$'
m47 db 10,13,'  **  3.firni    50/-                    **$'
m48 db 10,13,'  **  4.rasmalai 50/-                     **$'
```

```
. ;drinks
m49 db 10,13,'  **  1.soft drinks  8/-                  **$'
m50 db 10,13,'  **  2.lemon juice  6/-                  **$'
m51 db 10,13,'  **  3.borhani      9/-                  **$'
m52 db 10,13,'  **  4.coffee       9/-                  **$'
m53 db 10,13,'  **  5.lemon tea    7/-                  **$'
m54 db 10,13,'  **  6.tea          5/-                  **$'

;invalid
m55 db 10,13,10,13,'***&&invalid entry&&***$'
m56 db 10,13,'      ***&&try again&&***$'



m57 db 10,13,10,13,'enter your order: $'
m58 db 10,13,'quantity: $'
m59 db 10,13,'total price: $'

drink db ?
quantity db ?


m60 db 10,13,10,13,'1.go back to main menu$'
m61 db 10,13,'2.exit$'

;star resize


mr1 db 10,13,'  **                                  **$'
mr2 db 10,13,'  ************************************************$'

mr3 db 10,13,'  **                                  **$'


mr4 db 10,13,'  **                                          **$'
mr5 db 10,13,'  ************************************************************************$'



mr6 db 10,13,'  **                                  **$'
mr7 db 10,13,'  ************************************************$'


sej db 10,13,10,13,' $'

.code
main proc
    mov ax,@data
    mov ds,ax
  top:

    lea dx,m1
    mov ah,9
    int 21h

    lea dx,sej ;newline
    mov ah,9
    int 21h

    lea dx,mr2
    mov ah,9
    int 21h
```

```
 lea dx,mr2
    mov ah,9
    int 21h     ;border

    lea dx,mr3
    mov ah,9
    int 21h

lea dx,m3
    mov ah,9
    int 21h

    lea dx,m4
    mov ah,9
    int 21h

    lea dx,ms5
    mov ah,9
    int 21h

    lea dx,m5
    mov ah,9
    int 21h

lea dx,m6
    mov ah,9
    int 21h

    lea dx,m7
    mov ah,9
    int 21h

    lea dx,mr1
    mov ah,9
    int 21h

    lea dx,mr2
    mov ah,9
    int 21h

    lea dx,mr2
    mov ah,9
    int 21h

    lea dx,m2
    mov ah,9
    int 21h



    mov ah,1
    int 21h
    mov bh,al
    sub bh,48

    cmp bh,1
    je breatfast

    cmp bh,2
    je ld

    cmp bh,3
    je dinner
```

```
cmp bh,4
  je snacks


  cmp bh,5
  je sweatmeat

  cmp bh,6
  je drinks


  jmp invalid



 breatfast:


  lea dx,m8    ;breatfast starts
  mov ah,9
  int 21h

  lea dx,sej ;newline
  mov ah,9
  int 21h

  lea dx,mr5
  mov ah,9
  int 21h


  lea dx,mr5
  mov ah,9
  int 21h

  lea dx,mr4
  mov ah,9
  int 21h

  lea dx,m9    ;item 1
  mov ah,9
  int 21h


  lea dx,m10  ;item 2
  mov ah,9
  int 21h

  lea dx,m11
  mov ah,9         ;3nd
  int 21h

  lea dx,m12
  mov ah,9          ;4rd
  int 21h


  lea dx,m13        ;5th
  mov ah,9
  int 21h


  lea dx,m14     ;6th
  mov ah,9
  int 21h
```

```
lea dx,m15
  mov ah,9          ;7th
  int 21h


  lea dx,m16        ;8th
  mov ah,9
  int 21h

  lea dx,m17        ;9th
  mov ah,9
  int 21h


  lea dx,mr4
  mov ah,9
  int 21h

  lea dx,mr5
  mov ah,9
  int 21h


  lea dx,mr5
  mov ah,9
  int 21h


  lea dx,m57
  mov ah,9
  int 21h


  mov ah,1
  int 21h
  mov bl,al
  sub bl,48

  cmp bl,1
  je ten

  cmp bl,2
  je ten

  cmp bl,3
  je ten

  cmp bl,4
  je ten

  cmp bl,5
  je twenty

  cmp bl,6
  je twenty

  cmp bl,7
  je ten

  cmp bl,8
  je twenty

  cmp bl,9
  je sixty
```

```
lea dx,m49              ;1th
    mov ah,9
    int 21h

    lea dx,m50          ;2th
    mov ah,9
    int 21h

    lea dx,m51          ;3th
    mov ah,9
    int 21h

    lea dx,m52          ;4th
    mov ah,9
    int 21h

    lea dx,m53          ;5th
    mov ah,9
    int 21h

    lea dx,m54          ;6th
    mov ah,9
    int 21h

    lea dx,mr6
    mov ah,9
    int 21h


    lea dx,mr7
    mov ah,9
    int 21h    ;border

    lea dx,mr7
    mov ah,9
    int 21h

    lea dx,m57
    mov ah,9
    int 21h


    mov ah,1
    int 21h
    mov bl,al
    sub bl,48

    cmp bl,1
    je softdrink

    cmp bl,2
    je laschi

    cmp bl,3
    je borhani

    cmp bl,4
    je labang

    cmp bl,5
    je coffee

    cmp bl,6
    je tea

    jmp invalid
```

```
softdrink:
  mov bl,8
  jmp common

 laschi:
  mov bl,6
  jmp common


 borhani:
  mov bl,9
  jmp common

 labang:
  mov bl,9
  jmp common


 coffee:
  mov bl,7
  jmp common


 tea:
  mov bl,5
  jmp common




 common:
  lea dx,m58
  mov ah,9
  int 21h

  mov ah,1
  int 21h
  sub al,48

  mul bl
  aam

  mov cx,ax
  add ch,48
  add cl,48


  lea dx,m59
  mov ah,9
  int 21h

  mov ah,2
  mov dl,ch
  int 21h


  mov dl,cl
  int 21h


  mov dl,47
  int 21h
  mov dl,45
  int 21h

  ;go back to main menu
```

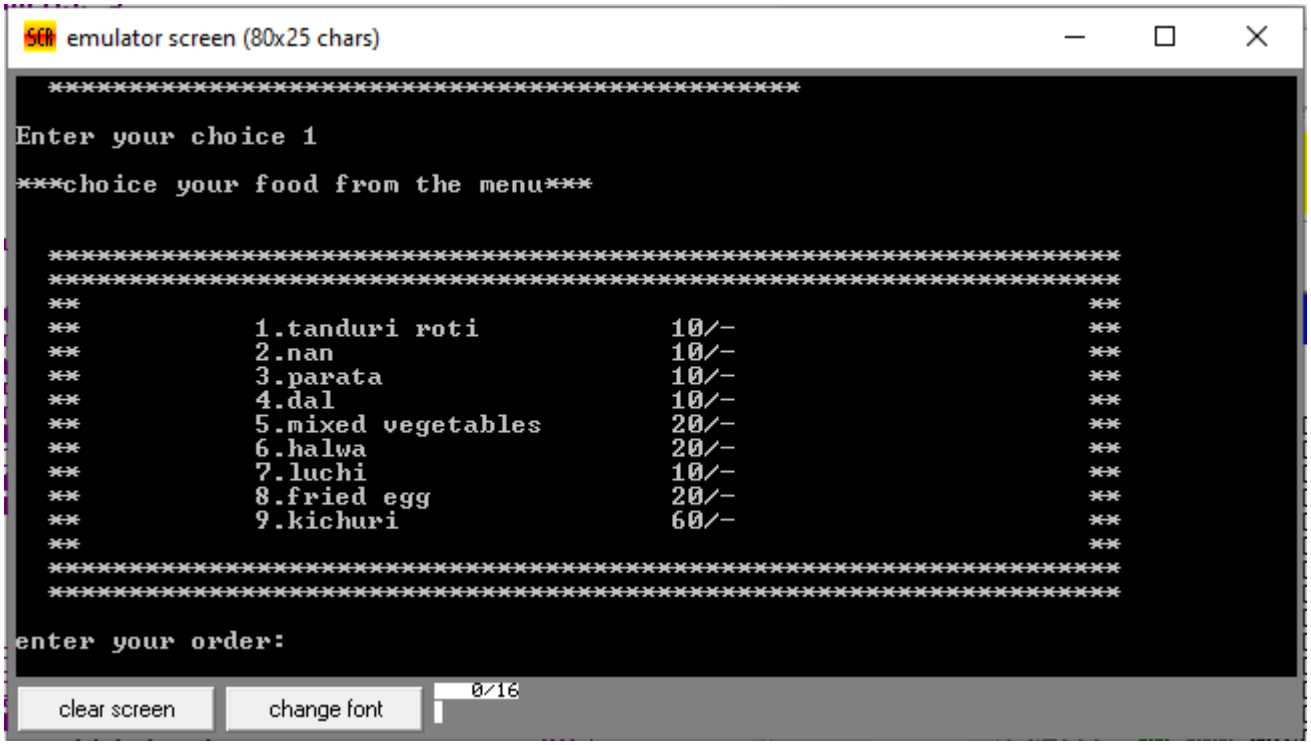
```
 lea dx,m60
   mov ah,9
   int 21h

   lea dx,m61
   mov ah,9
   int 21h

   lea dx,m2
   mov ah,9
   int 21h

   mov ah,1
   int 21h
   sub al,48



   cmp al,1
   je top

   jmp exit:


  invalid:

   lea dx,m55
   mov ah,9
   int 21h


   lea dx,m56
   mov ah,9
   int 21h



   jmp exit



    exit:

   mov ah,4ch
   int 21h
   main endp
end main
```

Chapter 3

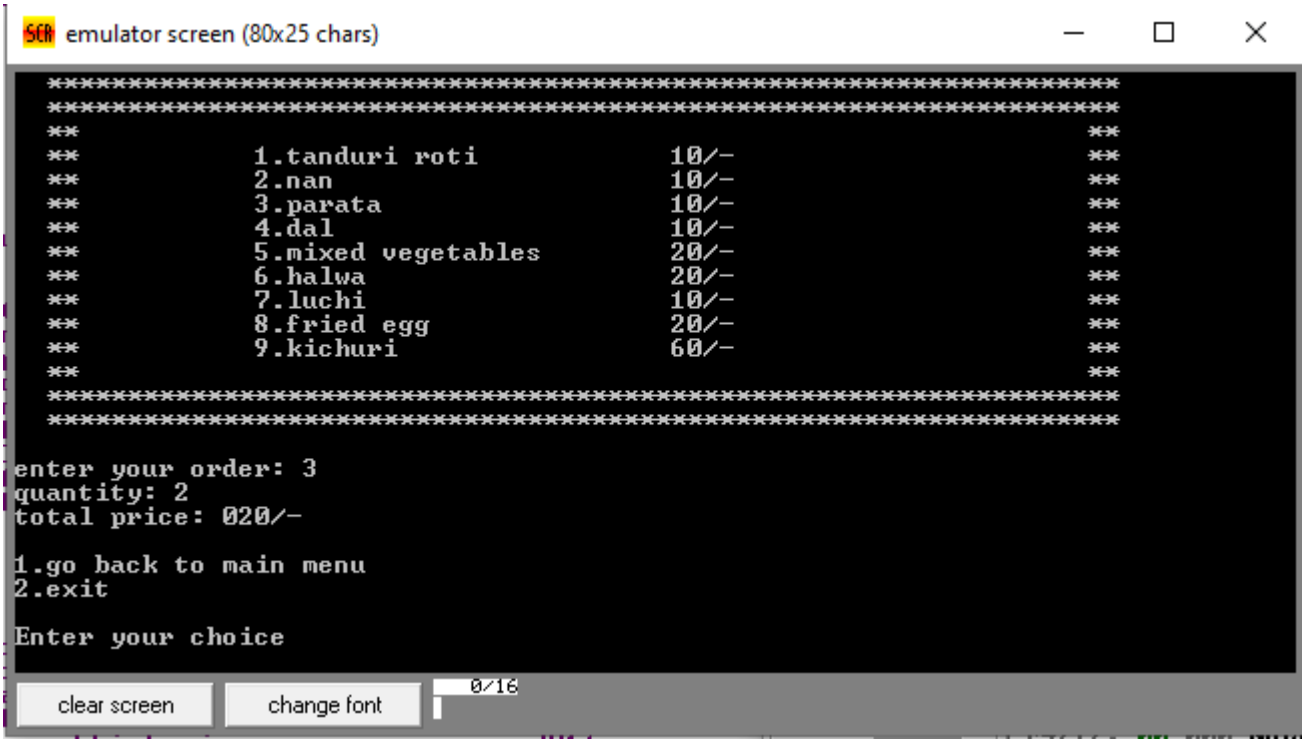
Implementation

This is our main menu . It has 6 parts . These are :

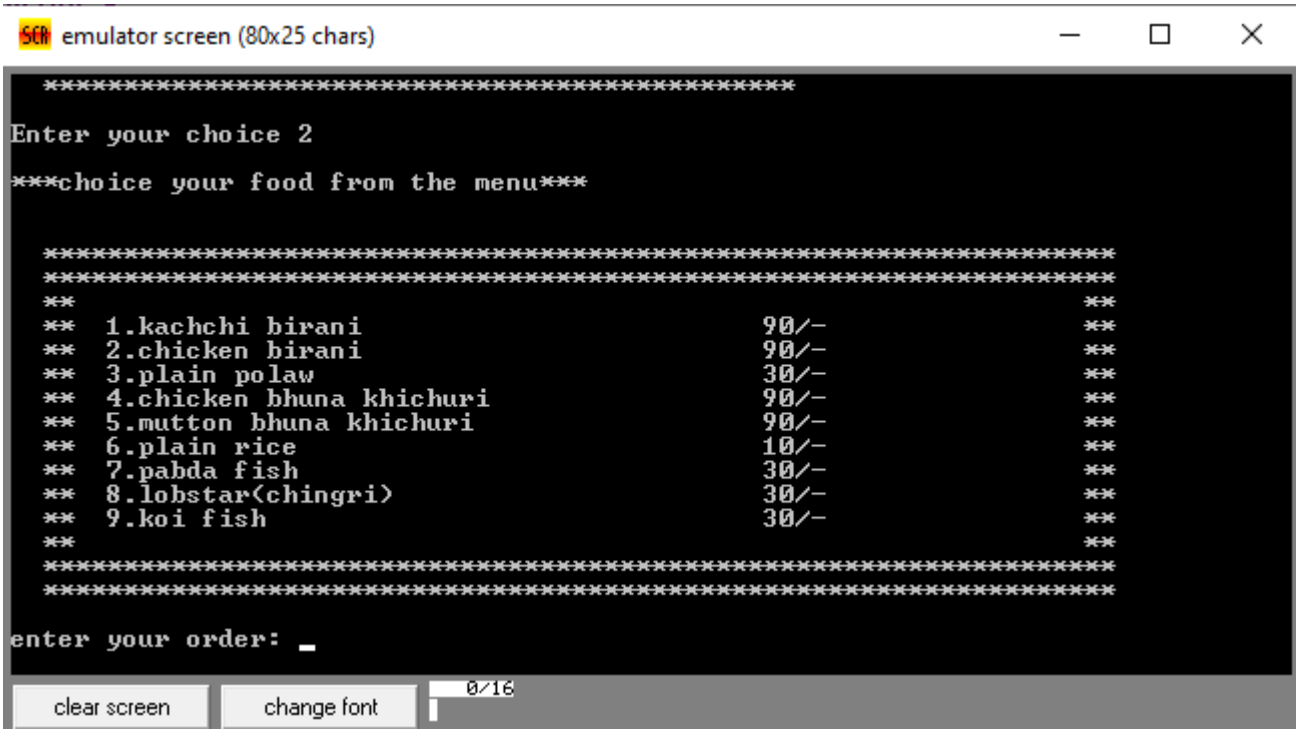
At first , Clicked 1 for breakfast .Then breakfast menu is open



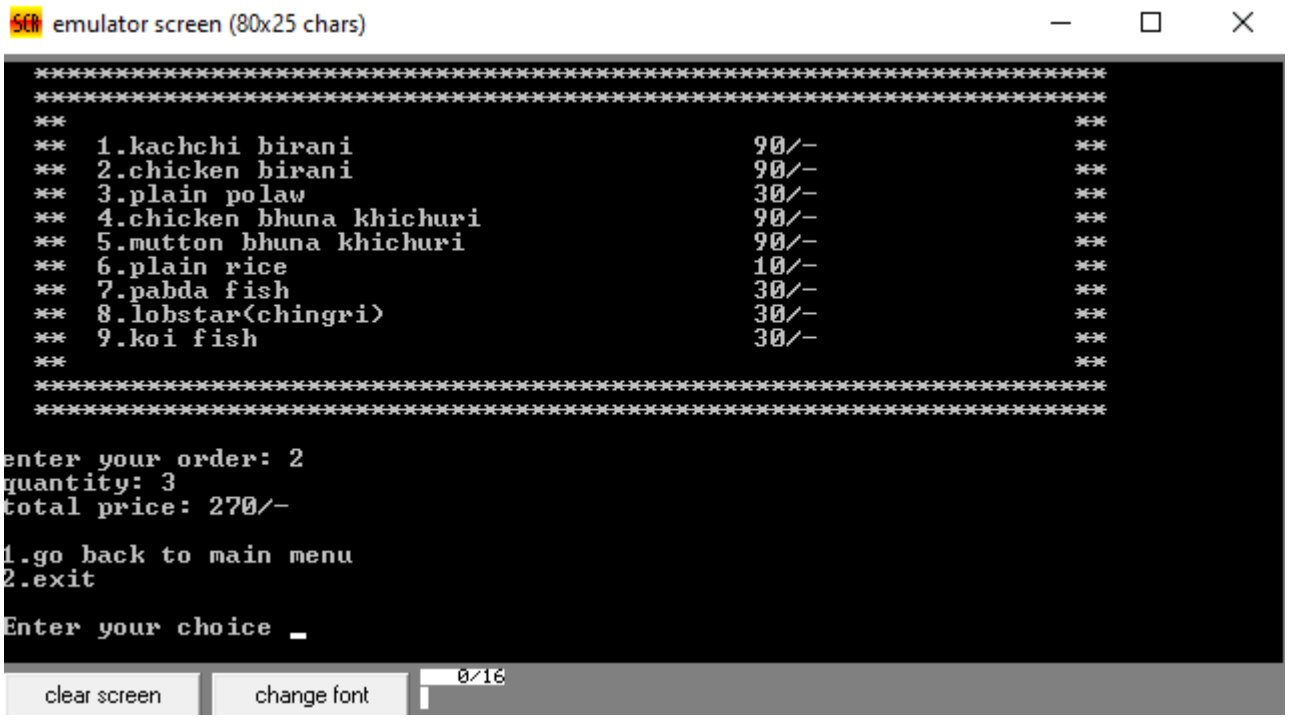
Here , various foods items and their prices available. We can order any items. Suppose ,we want to order “Parata” so , clicked 3 and Quantity =2
Total price : 20/-



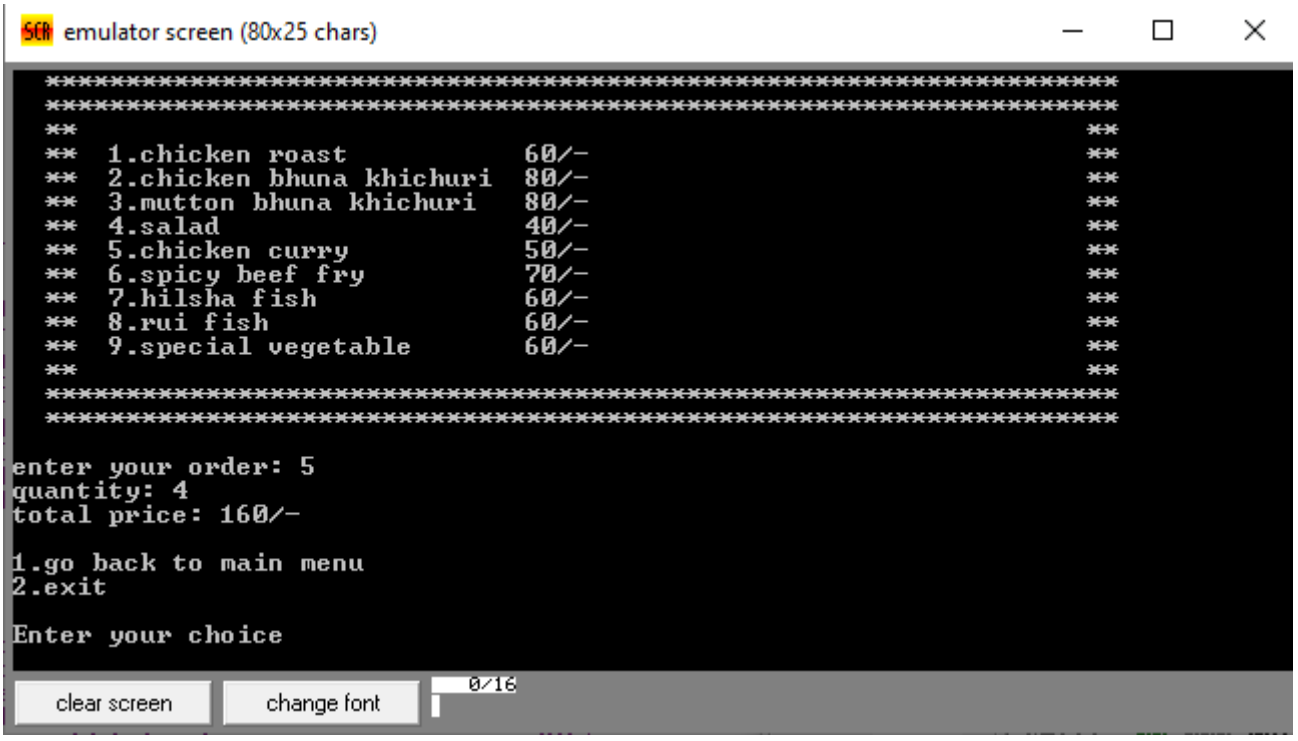
Clicked 1 for go to main menu and clicked 2 for go to lunch menu.
And lunch menu is open



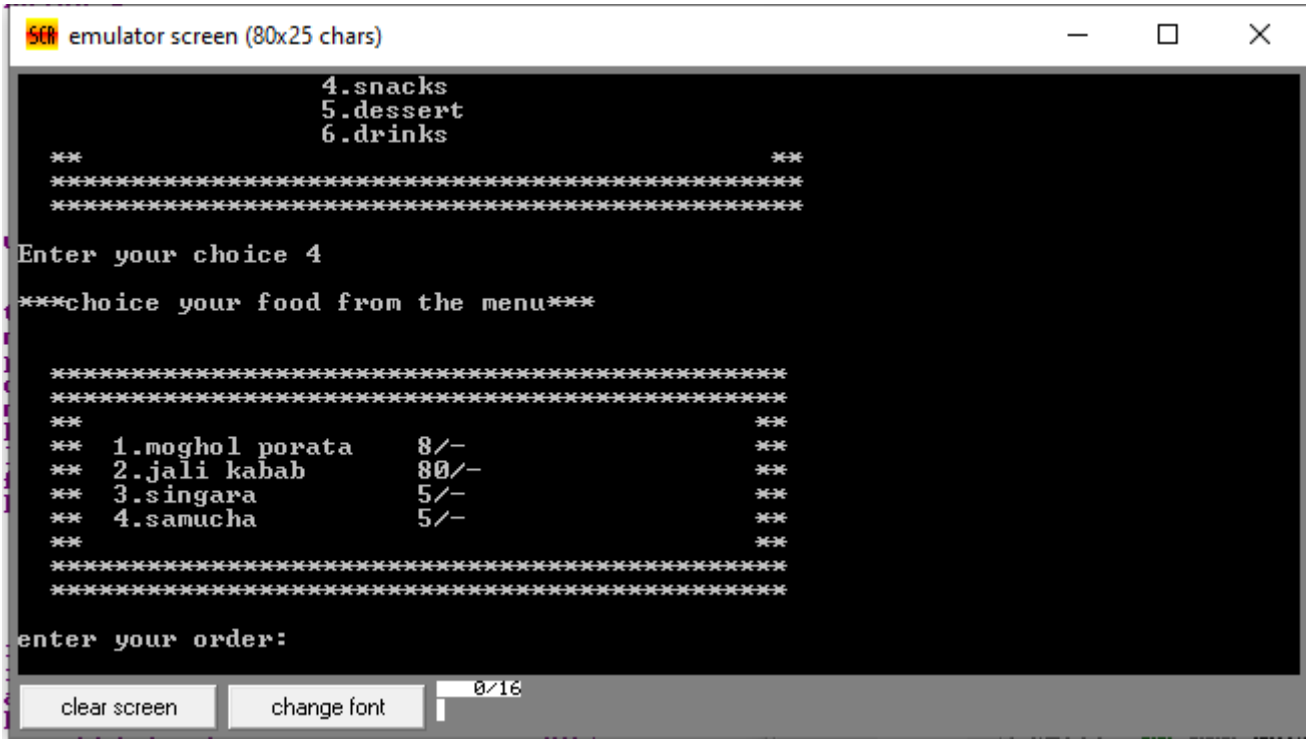
We want to order “Chicken birani” so , clicked 2 and Quantity =3
Total price : 270/-



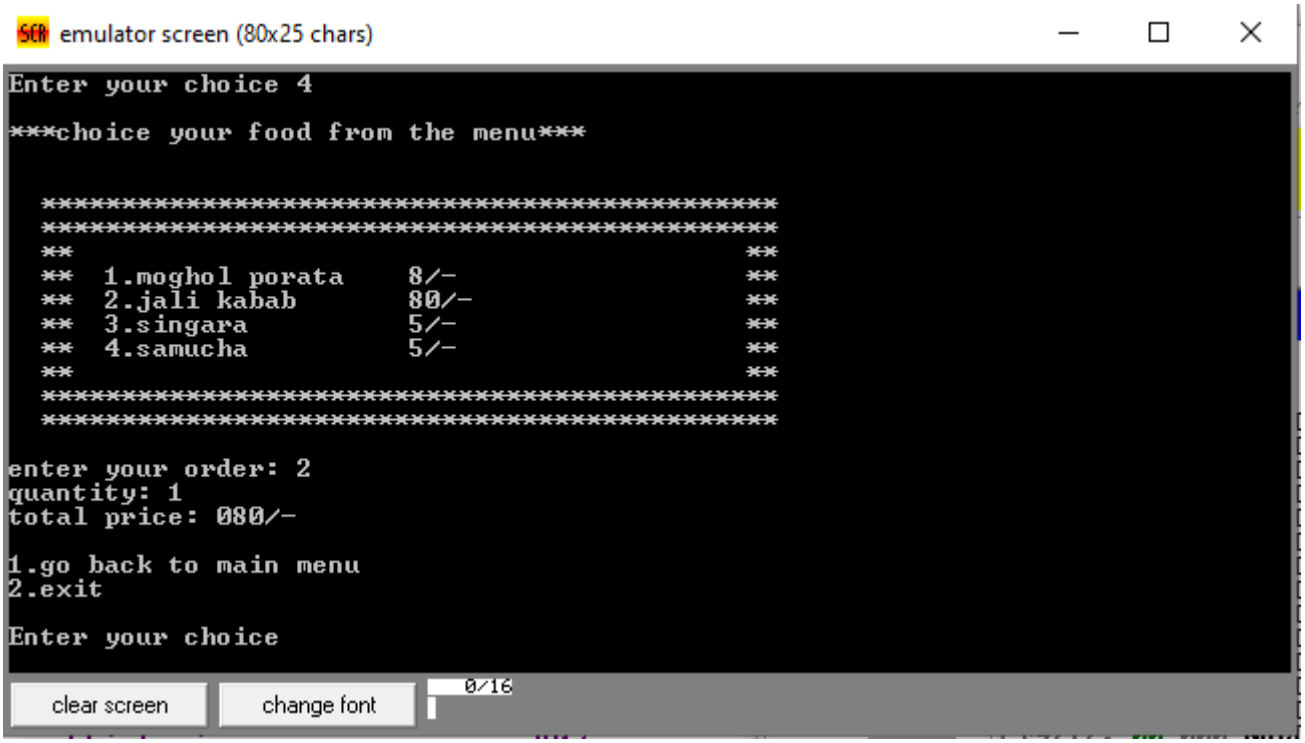
Clicked 1 for go to main menu and clicked 3 for go to dinner menu. And dinner menu is open . we clicked 5 for “Chicken Curry” and Quantity =4



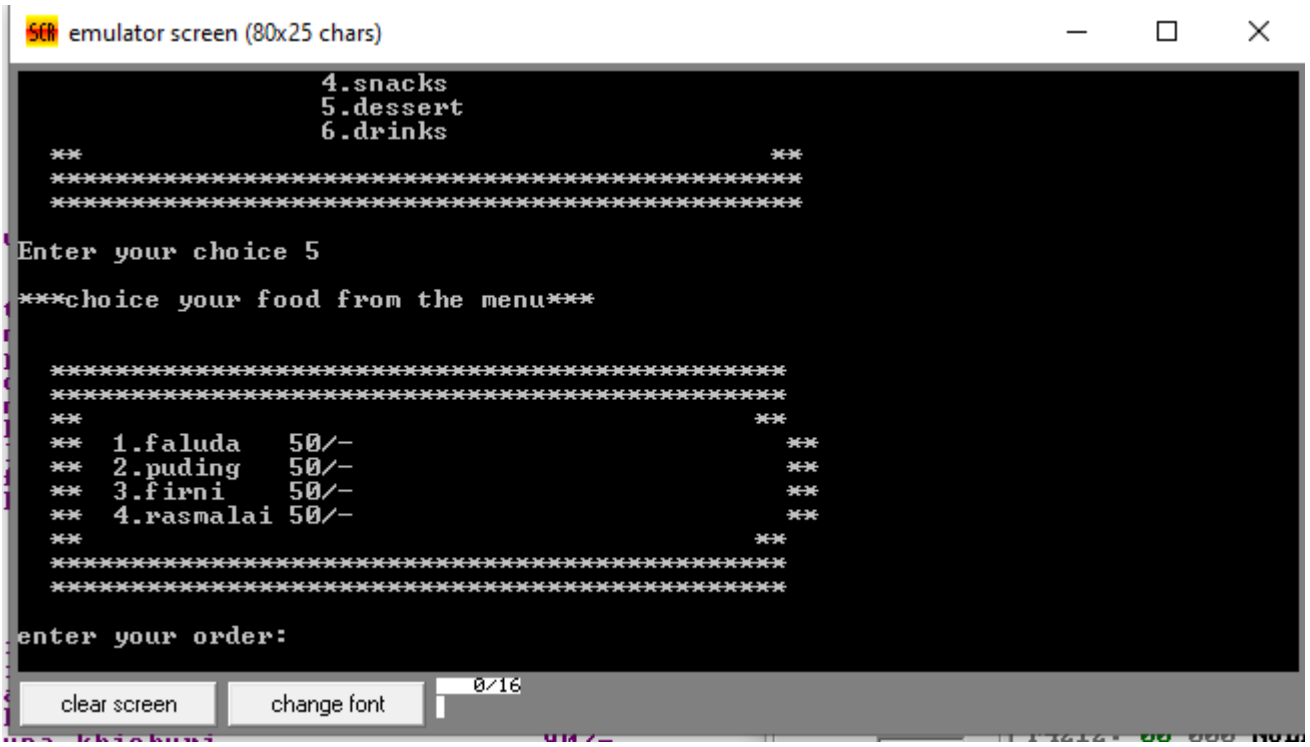
Clicked 1 for go to main menu and clicked 4 for go to snacks menu. And snacks menu is open .



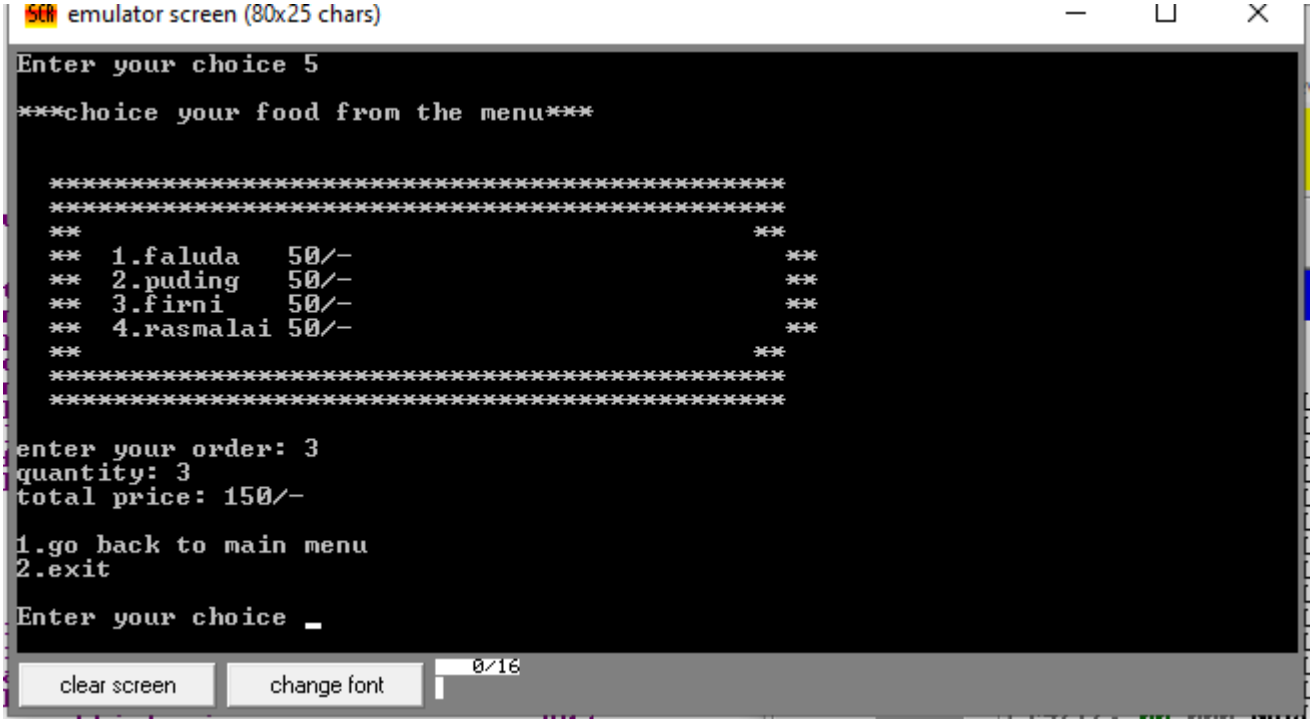
We clicked 2 for “Jali Kabab” and Quantity =1 . Total price : 80/-



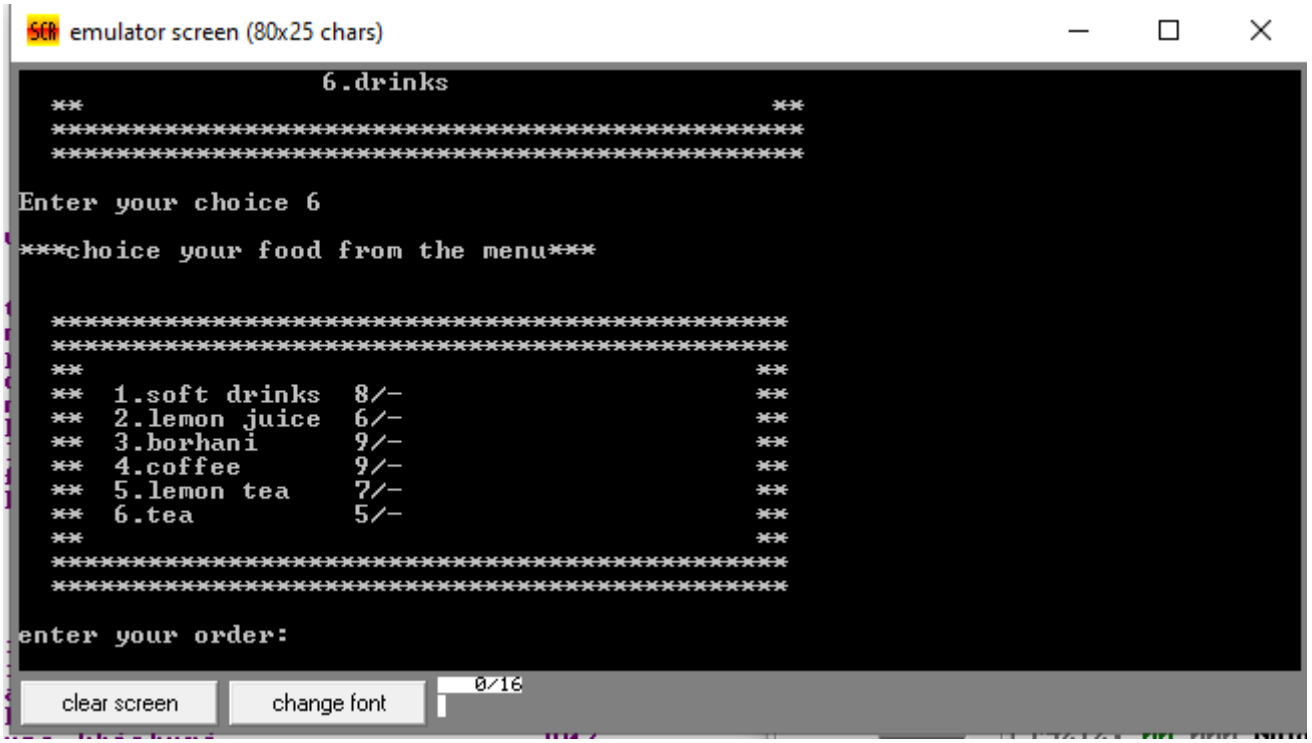
Clicked 1 for go to main menu and clicked 5 for go to dessert menu. And dessert menu is open .



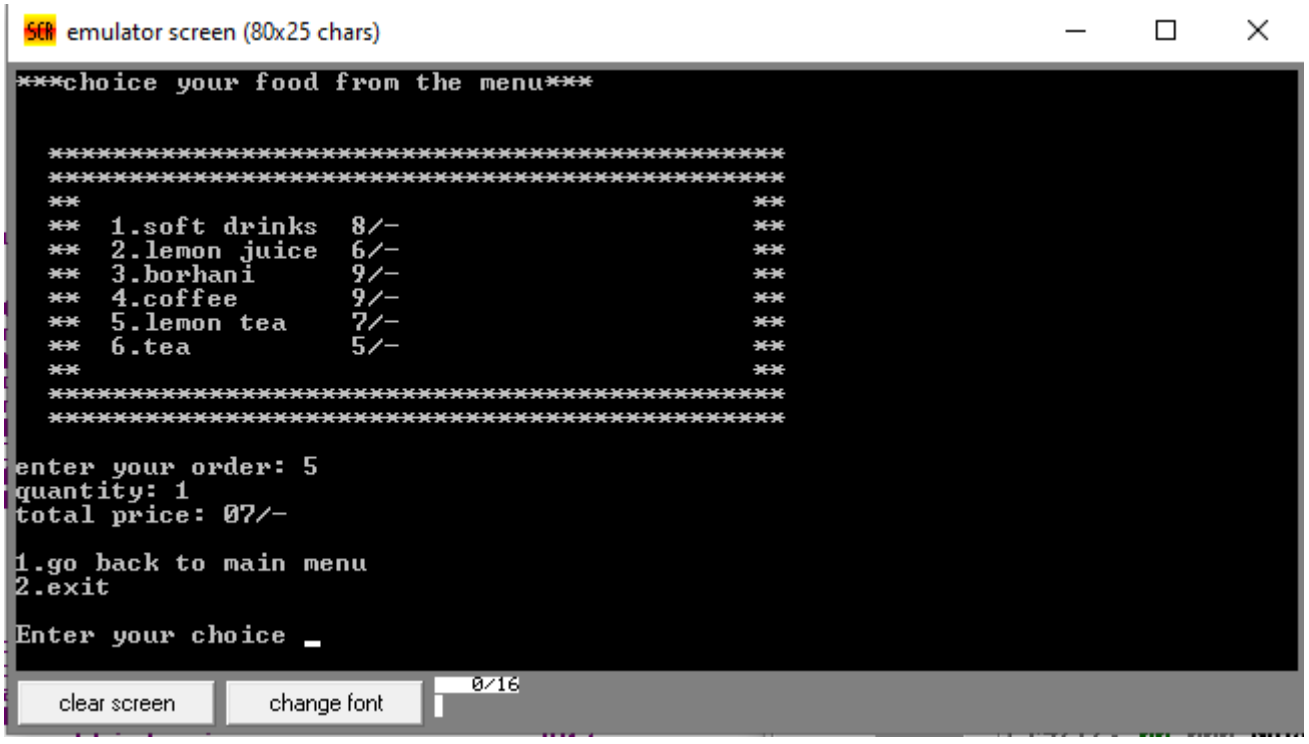
We clicked 3 for “Firni” and Quantity =3 . Total price : 150/-



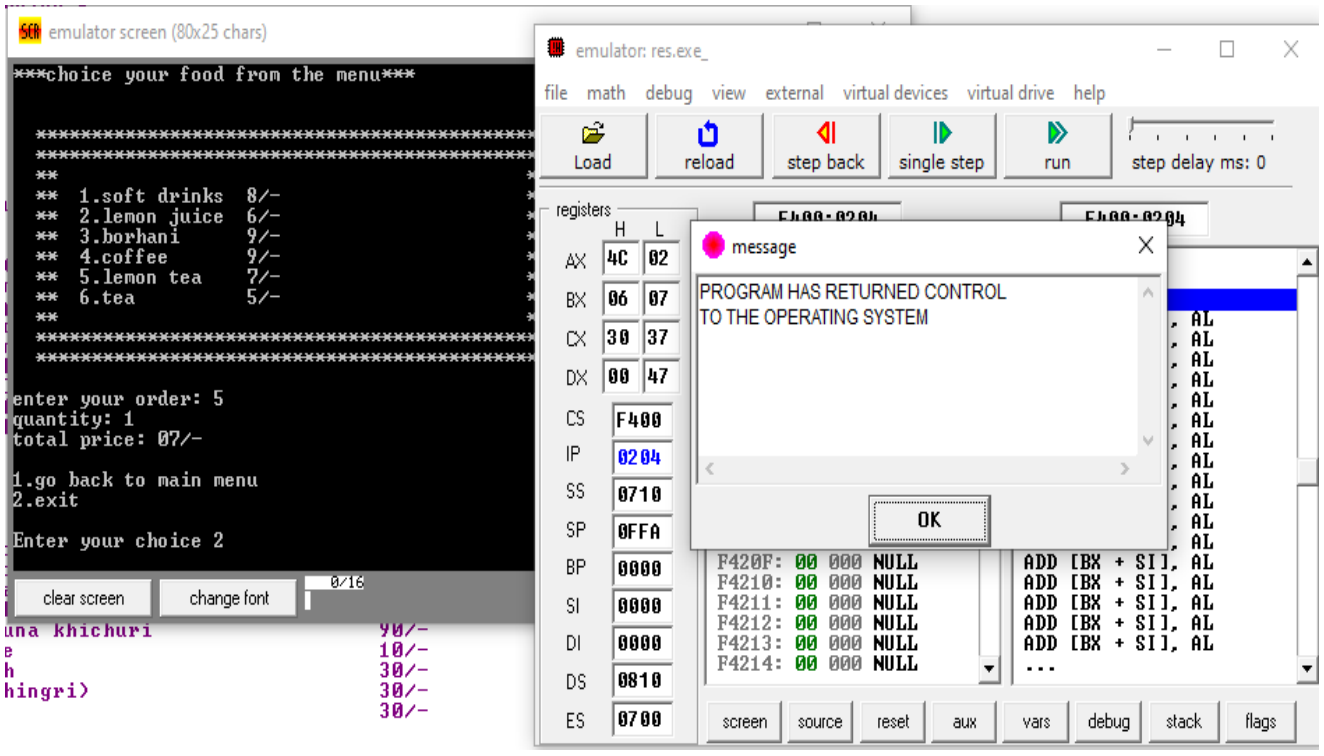
Clicked 1 for go to main menu and clicked 6 for go to drinks menu. And drinks menu is open .



We clicked 5 for “Lemon Tea” and Quantity =1 . Total price : 07/-



Finally Clicked ‘2’ for go to exit.



Chapter 3
Conclusion

Scope of Future Work:

We also want to modify our application for the Future Work .We hope this work will help us in our future work. The application to be developed deals with creating a Restaurant Management System which will automate the major restaurant operations such as generating COD, billing and keeping track of records of daily transaction.

Required software:

For using this project, we need to maintain a software requirement which is given below

a) Emu 8086
b) Operating System

Hardware:

In hardware requirements we require all those components which will provide us the platform for the development of the project. The minimum hardware required for the development of this project is as follows—

Ram minimum 2 GB
Hard disk—minimum 250 GB
Processor- Pentium 1 and Above

Results and Discussions

The purpose of our project is to make a restaurant management system . We have able to complete our target. First of all we had faced many problems while completing this project . Although it was difficult at first ,later we have able to complete our project correctly. We have learned a lot from this project and have worked with great pleasure.

Reference:

[1] Wikipedia
[2] Dev.to

Thank You