HEXAGON

INCORPORATED

OFFLINE
DATABASE MANAGEMENT SYSYTEM

-: Group members :-

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Submitted by

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Class 12th B

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Acknowledgements

The following program has been made by Sumit Saha under the proper guidance of Mrs. Alka Jayaswal and much appreciated help from
Mrs. Prema Rawat,our Lab Assistant.

We would like to dedicate our work to our parents who have supported us throughout. Last but not the least we would like to thank our inspirations from the biggest of the software industries –
Mr. Bill Gates and Late Steve Jobs whose work have inspired us to create something on our own.

But before we present ourselves we would like to assure the viewers a much better version of this program which would be converted into software in the following years.

Certificate

Bharatiya Vidya BHAVAN
DELHI KENDRA

MEHTA VIDYALAYA

K.G MARG, NEW DELHI-110001

THIS IS TO CERTIFY THAT THE PROJECT ON C++ OFFLINE DATABASE SYSTEM HAS BEEN SUCCESSFULLY EXECUTED BY SUMIT SAHA OF CLASS XII-B IN THE SCHOOL'S COMPUTER LAB UNDER THE PROPER GUIDENCE OF OUR RESPECTED TEACHER MRS. ALKA JAYASWAL.

THE FOLLOWING PROJECT HAS BEEN SUBMITTED FOR THE CENTRAL BOARD OF SECONDARY EXAMINATION.

_____   _____
        Mrs. Alka Jayaswal   Sumit Saha

C++
SOURCE CODE

```cpp
#include<iostream.h>
#include<fstream.h>
#include<graphics.h>
#include<stdlib.h>
#include<stdio.h>
#include<conio.h>
#include<string.h>
#include<process.h>
#include<dos.h>
#include"mynhead.h"
#include"mainhead.h"
#include"NEWW.h"

int ok=0;
void access();
void submenu();
void disp();

//MAIN CONTROL FOR DBMS


 char subch;
 int ch;
 char bch;
 int ech;

void recent::recent_feed()
{
 ofstream r;
 r.open("recent.dat",ios::binary|ios::out|ios::app);
 {
   cout<<"\nDATE: ";
   gets(re.date);
   //r<<"\nDATE: "<<re.date;
   cout<<"\nNEWS: ";
   gets(re.strrecent);
  // r<<"\nNEWS: "<<re.strrecent;
   r.write((char*)&re,sizeof(recent));
 }

 r.close();
}
```

```cpp
void recent::recent_view()
{
 ifstream r;
  r.open("recent.dat",ios::in|ios::binary);


  r.read((char*)&re,sizeof(re));

 while(r)
 { cout<<"\nDATE: "<<re.date<<"\nNEWS: "<<re.strrecent;
    r.read((char *)&re,sizeof(re));
 }


 r.close();
}

void device::devices_feed()
{
 fstream d;
 d.open("devices.dat",ios::out|ios::binary|ios::app);
 {
   cout<<"\nEnter Device Name: ";
   gets(de.device);
  // d<<"\nDEVICE: "<<device;
   cout<<"\nEnter Device Details: ";
   gets(de.devices_details);
   d.write((char*)&de,sizeof(de));
   //d<<"\nDEVICE DETAILS: "<<de.device_details;
 }
 d.seekg(0);
 d.close();
}

void device::devices_view()
{
 fstream d;
 d.open("devices.dat",ios::in|ios::binary);
 d.read((char*)&de,sizeof(de));
 while(d)
 {
```

```cpp
     cout<<"\nDEVICE: "<<de.device<<"\nDEVICE DETAILS:
"<<de.devices_details;
     d.read((char*)&de,sizeof(de));
 }
 d.close();
}


void os::os_feed()
{
 fstream o;
 o.open("os.dat",ios::out|ios::in|ios::app|ios::binary);
 {
  cout<<"\nEnter OS publishing date:";
  gets(os.dateos);
  //os<<"\nOS PUBLISH DATE: "<<dateos;
  cout<<"\nEnter OS Name: ";
  gets(os.newos);
  //os<<"\nOS: "<<newos;
  cout<<"\nEnter OS Details: ";
  gets(os.whatsnewos);
  o.write((char*)&os,sizeof(os));
  //os<<"\nOS DETAILS: "<<whatsnewos;
 }

 o.close();
}

void os::os_view()
{
 fstream o;
 o.open("os.dat",ios::in|ios::binary);
 o.read((char*)&os,sizeof(os));
 while(o)
 {
     cout<<"\nOS PUBLISH DATE: "<<os.dateos;
     cout<<"\nOS NAME: "<<os.newos;
     cout<<"\nOS DETAILS: "<<os.whatsnewos;
     o.read((char*)&os,sizeof(os));
 }
 o.close();
}
```

```cpp
void dloads::dloads_feed()
{
 fstream dload;
 dload.open("dload.dat",ios::in|ios::out|ios::app|ios::binary);

  cout<<"\nEnter New Download Publishing Date: ";
  gets(dl.datedload);
  //dload<<"\nNEW DOWNLOAD PUBLISHING DATE: "<<datedload;
  cout<<"\nEnter Download Title: ";
  gets(dl.newdload);
  //dload<<"\nDOWNLOAD: "<<newdload;
  cout<<"\nEnter Download Details: ";
  gets(dl.whatsnewdload);
  //dload<<"\nDOWNLOAD DETAILS: "<<whatsnewdload;
  dload.write((char*)&dl,sizeof(dl));

 dload.seekg(0);
 dload.close();
}

void dloads::dloads_view()
{
 fstream dload;
 dload.open("dload.dat",ios::in|ios::binary);
 dload.read((char*)&dl,sizeof(dl));
 while(dload)
 {

   cout<<"\nDATE: "<<dl.datedload;
   cout<<"\nDOWNLOAD: "<<dl.newdload;
   cout<<"\nDETAILS: "<<dl.whatsnewdload;
  dload.read((char*)&dl,sizeof(dl));
 }
 dload.close();
}

void jobs::jobs_feed()
{
 fstream j;
 j.open("jobs.dat",ios::out|ios::in|ios::app|ios::binary);
 {
  cout<<"\nEnter available position: ";
```

```cpp
   gets(jo.avail);
   cout<<"\nEnter details regarding position : ";
   gets(jo.details);
   //j<<"\nAVAILABLE POSITION: "<<avail;
   //j<<"\nPOSITION DETAILS: "<<details;
   j.write((char*)&jo,sizeof(jo));
   j.seekg(0);
 }
 j.close();
}

void jobs::jobs_view()
{
 fstream j;
 j.open("jobs.dat",ios::in|ios::binary);
 j.read((char*)&jo,sizeof(jo));
 while(j)
 {


   cout<<"\nAVAILABLE POSITION: "<<jo.avail;
   cout<<"\nPOSITION DETAILS: "<<jo.details;
   j.read((char*)&jo,sizeof(jo));

 }
 j.close();
}

void submenu()
{
 cout<<"\nA> FEED";
 cout<<"\nB> VIEW";
 cout<<"\nEnter : ";
 cin>>subch;
}

void guest()
{
 system("cls");
 cout<<"\nLOGGED IN VIA GUEST ACCOUNT";
 do {
 cout<<"\n\t\t\t    ";
```

```cpp
cout<<"1* Recent News ";
cout<<"\n\t\t\t   ";
cout<<"2* Devices ";
cout<<"\n\t\t\t   ";
cout<<"3* Operating Systems ";
cout<<"\n\t\t\t   ";
cout<<"4* Downloads ";
cout<<"\n\t\t\t   ";
cout<<"5* About HEXA-CORP. ";
cout<<"\n\t\t\t   ";
cout<<"6* Contact Us ";
cout<<"\n\t\t\t   ";
cout<<"7* Jobs";
cout<<"\n\t\t\t   ";
cout<<"8* Sign Out";
cout<<"\n\t\t\t   ";
cout<<"9* EXIT";
cout<<"\nYour Entry : ";     //Input at the Menu
cin>>ch;

switch(ch)                              //CONTROLS ONLY AVAILABLE TO
ADMIN(S)
   {
      case 1 : re.recent_view();
            getch();
            clrscr();
            break;
      case 2 : de.devices_view();
            getch();
            clrscr();
            break;
      case 3 : os.os_view();
            getch();
            clrscr();
            break;
      case 4 : dl.dloads_view();
            getch();
            clrscr();
            break;
      case 5 : cout<<"\nHexagon Corporation or HEXA-CORP "
             <<"was founded in the year 2014 "
             <<"by Sumit Saha and Priyankar Jain "
```

```cpp
                  <<"while they were in their Secondary School. "
                  <<"The company started   off with C based computer
software "
                  <<"for windows development. "
                  <<"Later they emerged  as a major software and
hardware company "
                  <<"The company has now been fully \nestablished....
";
            getch();
            clrscr();
            break;
      case 6 : cout<<"\nSumit Saha * 8447031665";
            cout<<"\nPriyankar Jain * 8510860516";
            cout<<"\nHeadQuarters * New Delhi * 011-26866379";
            getch();
            clrscr();
            break;
      case 7 : jo.jobs_view();
            getch();
            clrscr();
            break;
      case 8 : disp();
      case 9 : exit(0);
      default: cout<<"\nUNAVAILABLE CHOICE.";
            break;
    }
 cout<<"\n\n\t\t\t       Browse Further ? ";
 cin>>bch;
    }while(bch=='y'||bch=='Y');
 if(ch!='y'||ch!='Y')
 exit(0);
 getch();
}

void email::email_feed()
{
 emailstart_feed:
 {
  system("cls");
  cout<<" -------------------\n";
  cout<<"|INTER e-MAIL KONNECT|\n";
  cout<<" -------------------";
```

```cpp
cout<<"\nSend an e-mail to : ";
cout<<"\n1> priyankarjain13@gmail.com";
cout<<"\n2> sumit.saha666@gmail.com";
cout<<"\n3> resourcecentre@hexagon.com";
cout<<"\n4> businessdepartment@haxagon.com";
cout<<"\nEnter choice : ";
cin>>ech;
if(ech==1)
{
 fstream pj;
 pj.open("pjemail.dat",ios::binary|ios::out|ios::in|ios::app);
 cout<<"\nSUBJECT: ";
 gets(em.emailsub);
 cout<<"\nCONTENT: ";
 gets(em.emailcontent);
 pj.write((char*)&em,sizeof(em));
/* pj<<"\nSUBJECT: "<<emailsub;
 pj<<"\nCONTENT: "<<emailcontent;*/
 pj.seekg(0);
 pj.close();
}
else if(ech==2)
{
 fstream ss;
 ss.open("ssemail.dat",ios::out|ios::in|ios::app);
 cout<<"\nSUBJECT: ";
 gets(em.emailsub);
 cout<<"\nCONTENT: ";
 gets(em.emailcontent);
 //ss<<"\nSUBJECT: "<<emailsub;
 //ss<<"\nCONTENT: "<<emailcontent;
 ss.write((char*)&em,sizeof(em));
 ss.seekg(0);
 ss.close();
}
else if(ech==3)
{
 fstream rc;
 rc.open("rcemail.dat",ios::out|ios::in|ios::app);
 cout<<"\nSUBJECT: ";
 gets(em.emailsub);
 cout<<"\nCONTENT: ";
```

```cpp
    gets(em.emailcontent);
    rc.write((char*)&em,sizeof(em));
    //rc<<"\nSUBJECT: "<<em.emailsub;
    //rc<<"\nCONTENT: "<<em.emailcontent;
    rc.seekg(0);
    rc.close();
   }
  else if(ech==4)
   {
    fstream bd;
    bd.open("bdemail.dat",ios::out|ios::in|ios::app);
    cout<<"\nSUBJECT: ";
    gets(em.emailsub);
    cout<<"\nCONTENT: ";
    gets(em.emailcontent);
    bd.write((char*)&em,sizeof(em));
    //bd<<"\nSUBJECT: "<<emailsub;
    //bd<<"\nCONTENT: "<<emailcontent;
    bd.seekg(0);
    bd.close();
   }
  else
   {
    cout<<"\nWrong choice ";
    goto emailstart_feed;
   }
  }
}

void email::email_view()
{
 emailstart_view:
 system("cls");
 cout<<" --------------------\n";
 cout<<"|INTER e-MAIL KONNECT|\n";
 cout<<" --------------------";
 cout<<"\nView e-mail of : ";
 cout<<"\n1> priyankarjain13@gmail.com";
 cout<<"\n2> sumit.saha666@gmail.com";
 cout<<"\n3> resourcecentre@hexagon.com";
 cout<<"\n4> businessdepartment@haxagon.com";
 cout<<"\nEnter choice : ";
```

```cpp
 cin>>ech;
 if(ech==1)
 {
  fstream pj;
  pj.open("pjemail.dat",ios::in,ios::binary|ios::app);
  pj.read((char *)&em,sizeof(em));
  while(pj)
  {
  cout<<"\nSUBJECT: "<<em.emailsub;
  cout<<"\nCONTENT: "<<em.emailcontent;
  pj.read((char *)&em,sizeof(em));
  }
  pj.close();
 }
 else if(ech==2)
 {
  fstream ss;
  ss.open("ssemail.dat",ios::out|ios::in|ios::app|ios::binary);
  ss.read((char *)&em,sizeof(em));
  while(ss)
  {
  cout<<"\nSUBJECT: "<<em.emailsub;
  cout<<"\nCONTENT: "<<em.emailcontent;
  ss.read((char *)&em,sizeof(em));
  }
  ss.close();
 }
 else if(ech==3)
 {
  fstream rc;
  rc.open("rcemail.dat",ios::out|ios::in|ios::app|ios::binary);
  rc.read((char*)&em,sizeof(em));
  while(rc)
  {
  cout<<"\nSUBJECT: "<<em.emailsub;
  cout<<"\nCONTENT: "<<em.emailcontent;
  rc.read((char*)&em,sizeof(em));
  }
  rc.close();
 }
 else if(ech==4)
 {
```

```cpp
     fstream bd;
     bd.open("bdemail.dat",ios::out|ios::in|ios::app|ios::binary);
     bd.read((char *)&em,sizeof(em));
     while(bd)
     {
     cout<<"\nSUBJECT: "<<em.emailsub;
     cout<<"\nCONTENT: "<<em.emailcontent;
     bd.read((char *)&em,sizeof(em));
     }
     bd.close();

 }
 else
 {
  cout<<"\nWrong choice ";
  goto emailstart_view;
 }
}



void mail::usernew()
{ ofstream outfile;
   outfile.open("password.dat",ios::app,ios::binary);
   int k;
   char c;

       outtextxy(170,190,"USERNAME: ");
       //INPUT BOX FOR USERNAME
       moveto(250,180);
       lineto(250,210); //vertical_left
       moveto(450,180);
       lineto(450,210); //vertical_right
       moveto(250,180);
       lineto(450,180); //horizontal_up
       moveto(250,210);
       lineto(450,210); //horizontal_down

       outtextxy(170,240,"PASSWORD: ");
       /*INPUT BOX FOR PASSWORD */
       moveto(250,230);
       lineto(450,230); //horizontal_up
```

```
        moveto(250,260);
        lineto(450,260); //horizontal_down
        moveto(250,230);
        lineto(250,260); //vertical_left
        moveto(450,230);
        lineto(450,260); //vertical_right

        /*CODE FOR PYRO TAG */
        moveto(500,180);
        lineto(550,180);
        moveto(500,180);
        lineto(475,215);
        moveto(475,215);
        lineto(500,250);
        moveto(500,250);
        lineto(550,250);
        moveto(550,250);
        lineto(575,215);
        moveto(575,215);
        lineto(550,180);
        outtextxy(497,200,"HEXAGON");
        outtextxy(510,215,"PyRo");
        outtextxy(510,225,"2014");

        /*CODE FOR SECURE TAG*/
        outtextxy(520,450,"HEXASECURED");
        /*CODE FOR TYPE */
        outtextxy(20,450,"OFFLINE DBMS");
        outtextxy(240,191,">");// ( > ) the sign represents
CURRENT INPUT BOX
        gotoxy(33,13);


        outtextxy(240,241,">");
        gotoxy(33,13);



    gets(user.name);

    gotoxy(33,16);
    for(k=0; ; k++)
```

```cpp
    { c=getch();

      if((c!=8) && (c!=13))
        { user.pass[k]=c;
    cout<< "*";
        }

      if(c==8)
    { if(k>0)
        {
           k-=2;
           user.pass[k+1]='\0';
          cout<<'\b'<<' '<<'\b';
        }
    }

     if(c==13)
     { break;}


    }



  outfile.write((char*)&user,sizeof(user));

  outfile.close();
  char ans;
  outtextxy(120,280,"\n DO YOU NOW WANT TO LOGIN: ");
  gotoxy(45,18);
  cin>>ans;
  getch();
  if(ans=='y'||ans=='Y')
  { disp();}
  else{exit(0);}

}

void mail::exist()
{   int i;
    char c;
```

```cpp
ifstream infile("password.dat",ios::binary);


cout<<"\n ENTER USER NAME: ";
cin>>nuser.username;
cout<<"\n ENTER PASS : ";
for(i=0; ; i++)
   { c=getch();

     if((c!=8)&&(c!=13))
    { nuser.userpass[i]=c;
      cout<<"*";
    }

     else if(c==8)
   { i-=2;
     nuser.userpass[i+1]='\0';
     cout<<'\b'<<' '<<'\b';}

     else if(c==13)
     break;
   }

   clrscr();
   int gdriver = EGA, gmode = EGAHI, errorcode;
   initgraph(&gdriver,&gmode,"");
setbkcolor(5);
     cout<<"\n AUTHENTICATING";
     for(int p=0; p<6; p++)
     { delay(250);
    cout<<".";
     }
    delay(1000);
    int flag=0;
    while(!infile.eof())
    {
   infile.read((char*)&s1,sizeof(s1));
   if(!strcmp(s1.name,nuser.username))
   {

     if(!strcmp(s1.pass,nuser.userpass))
        { flag=1;
```

```cpp
                }
          }


             }
        if(flag==1)
        {cout<<"\n\a ACCESS GRANTED";
        disp();}
        else
        { cout<<"\n\a !!!!!ACCESS DENIED";
            cout<<"\n EITHER NAME OR PASSWORD IS INCORRECT\n\n"; }
     infile.close();

     getch();

     clrscr();
}

void disp()
 {
    clrscr();
     start:
    char firstname[80];
    char lastname[80];
    char peruser[80];
    char perpass[80];
    char confirmperpass[80];
    int ch,flag=0;
    /* request auto detection */
    int gdriver = DETECT, gmode, errorcode;
    char msg[80];

    /* initialize graphics and local variables */
    initgraph(&gdriver, &gmode, "");

    /* read result of initialization */
    errorcode = graphresult();
    if (errorcode != grOk)
    {
       printf("Graphics error: %s\n", grapherrormsg(errorcode));
       printf("Press any key to halt:");
       getch();
       exit(1);
```

```cpp
    }

  /* code for the welcome border line segments */
   moveto(10, 10);
   lineto(10, 470); //vertical_left
   moveto(630,10);
   lineto(630,470); //vertical_right
   moveto(10,470);
   lineto(630,470); //horizontal_down
   moveto(10,10);
   lineto(630,10);  //horizontal_up

   outtextxy(250,100,"HEXAGON INCORPORATED");
   outtextxy(250,106,"------- -----------");

   char input;
   outtextxy(60,120,"===========");
   outtextxy(60,130,"|NEW USER?|");
   outtextxy(60,140,"===========");
   gotoxy(20,9);
   cin>>input;

   //FIRST CHOICE OF INPUT FOR ( NO ) !

   if(input=='n'||input=='N')
   {
    outtextxy(170,190,"USERNAME: ");
    //INPUT BOX FOR USERNAME
    moveto(250,180);
    lineto(250,210); //vertical_left
    moveto(450,180);
    lineto(450,210); //vertical_right
    moveto(250,180);
    lineto(450,180); //horizontal_up
    moveto(250,210);
    lineto(450,210); //horizontal_down

    outtextxy(170,240,"PASSWORD: ");
    /*INPUT BOX FOR PASSWORD */
    moveto(250,230);
    lineto(450,230); //horizontal_up
    moveto(250,260);
```

```
        lineto(450,260); //horizontal_down
        moveto(250,230);
        lineto(250,260); //vertical_left
        moveto(450,230);
        lineto(450,260); //vertical_right

        /*CODE FOR PYRO TAG */
        moveto(500,180);
        lineto(550,180);
        moveto(500,180);
        lineto(475,215);
        moveto(475,215);
        lineto(500,250);
        moveto(500,250);
        lineto(550,250);
        moveto(550,250);
        lineto(575,215);
        moveto(575,215);
        lineto(550,180);
        outtextxy(497,200,"HEXAGON");
        outtextxy(510,215,"PyRo");
        outtextxy(510,225,"2014");

        /*CODE FOR SECURE TAG*/
        outtextxy(520,450,"HEXASECURED");
        /*CODE FOR TYPE */
        outtextxy(20,450,"OFFLINE DBMS");

        int k;
        char c;

        outtextxy(240,191,">");// ( > ) the sign represents
CURRENT INPUT BOX
        gotoxy(33,13);
        gets(nuser.username);
        if(strlen(nuser.username)==0)
        outtextxy(340,191,"!");//( ! ) the sign represents LEFT
BLANK

        outtextxy(240,241,">");
        gotoxy(33,16);
        int i;
```

```cpp
        for(i=0; ;  i++)
      { c=getch();

        if((c!=8)&&(c!=13))
      { nuser.userpass[i]=c;
        cout<<"*";
       }

        else if(c==8)
     { i-=2;
        nuser.userpass[i+1]='\0';
        cout<<'\b'<<' '<<'\b'; }

        else if(c==13)
        break;
      }

if((strlen(nuser.username)==0)&&(strlen(nuser.userpass)==0))
       {
        guest();
       }

      ifstream infile;
    infile.open("password.dat",ios::binary);

       while(!infile.eof())
      {
     infile.read((char*)&s1,sizeof(s1));
     if(!strcmp(s1.name,nuser.username))
     {
       if(!strcmp(s1.pass,nuser.userpass))
         { flag=1;
         }
     }

       }

     infile.close();

     outtextxy(310,280,"Verifying...");
     for(int a=360;a>0;a--)
     {
```

```c
      delay(5);
      arc(340,310,a,a+1,15);
     }
     if(flag==1)
     {
      outtextxy(320,340,"ACCESS!");
      outtextxy(225,353,"PRESS CARRIAGE RETURN TO PROCEED");
      getch();
      access();
     }
     else if(flag==0||flag==2)
     {
      outtextxy(320,340,"DENIED");
      outtextxy(225,353,"PRESS CARRIAGE RETURN TO EXIT");
      getch();
      exit(0);
     }
     getch();
   } //INPUT OF FIRST CHOICE FOR ( N0 ) END

    //INPUT OF SECOND CHOICE FOR ( YES ) START

 else if(input=='y'||input=='Y')
    { user.usernew();
    }

     getch();
   }
 // disp() end



void access()
{
 int ch;
 char bch;
 int gdriver = DETECT, gmode, errorcode;
 /* initialize graphics and local variables */
    initgraph(&gdriver, &gmode, "");

    /* read result of initialization */
```

```cpp
    errorcode = graphresult();
    if (errorcode != grOk)
    {
       printf("Graphics error: %s\n", grapherrormsg(errorcode));
       printf("Press any key to halt:");
       getch();
       exit(1);
    }
                                //MENU DRIVEN DBMS
do {
 system("cls");
 cout<<"\n\t\t\t    ";
 cout<<"HEXAGON DATABASE CENTRAL";
 cout<<"\n";
 /*MENU*/
 cout<<"\n\t\t\t    ";
 cout<<"1* Recent News ";
 cout<<"\n\t\t\t    ";
 cout<<"2* Devices ";
 cout<<"\n\t\t\t    ";
 cout<<"3* Operating Systems ";
 cout<<"\n\t\t\t    ";
 cout<<"4* Downloads ";
 cout<<"\n\t\t\t    ";
 cout<<"5* About HEXA-CORP. ";
 cout<<"\n\t\t\t    ";
 cout<<"6* Contact Us ";
 cout<<"\n\t\t\t    ";
 cout<<"7* Jobs";
 cout<<"\n\t\t\t    ";
 cout<<"8* Inter e-Mail KONNECT";
 cout<<"\n\t\t\t    ";
 cout<<"9* Sign Out";
 cout<<"\n\t\t\t    ";
 cout<<"10* EXIT";
 cout<<"\nYour Entry : ";     //Input at the Menu
 cin>>ch;

 switch(ch)                      //CONTROLS ONLY AVAILABLE TO
ADMIN(S)
  {
     case 1 : submenu();
```

```cpp
            if(subch=='A'||subch=='a')
            re.recent_feed();
            else if(subch=='B'||subch=='b')
            re.recent_view();
            break;

    case 2 : submenu();
            if(subch=='A'||subch=='a')
            de.devices_feed();
            else if(subch=='B'||subch=='b')
            de.devices_view();
            break;
    case 3 : submenu();
            if(subch=='A'||subch=='a')
            os.os_feed();
            else if(subch=='B'||subch=='b')
            os.os_view();
            break;
    case 4 : submenu();
            if(subch=='A'||subch=='a')
            dl.dloads_feed();
            else if(subch=='B'||subch=='b')
            dl.dloads_view();
            break;
    case 5 : cout<<"\nHexagon Corporation or HEXA-CORP "
            <<"was founded in the year 2014 "
            <<"by Sumit Saha and Priyankar Jain "
            <<"while they were in their Secondary School. "
            <<"The company started   off with C based computer
software "
            <<"for windows development. "
            <<"Later they emerged  as a major software and
hardware company "
            <<"The company has now been fully \nestablished.... ";
            break;
    case 6 : cout<<"\nSumit Saha * 8447031665";
            cout<<"\nPriyankar Jain * 8510860516";
            cout<<"\nHeadQuarters * New Delhi * 011-26866379";
            break;
    case 7 : submenu();
            if(subch=='A'||subch=='a')
            jo.jobs_feed();
```

```cpp
            else if(subch=='B'||subch=='b')
            jo.jobs_view();
            break;
     case 8 : submenu();
            if(subch=='A'||subch=='a')
            em.email_feed();
            else if(subch=='B'||subch=='b')
            em.email_view();
            break;
     case 9 : disp();
     case 10 : exit(0);
     default: cout<<"\nUNAVAILABLE CHOICE.";
            break;
  }
cout<<"\n\n\t\t\t      Browse Further ? ";
cin>>bch;
}while(bch=='y'||bch=='Y');
if(ch!='y'||ch!='Y')
exit(0);
getch();
}

int main()
{
 disp();
 return 0;
}
```

HEADER FILES

mainhead.hpp

```cpp
class jobs
{
public:
char avail[80];
char details[100];
void jobs_feed();
void jobs_view();
}jo;

class recent
{
public:
char date[10];
char strrecent[200];
void recent_feed();
void recent_view();
}re,re2;

class device
{
public:
char device[80];
char devices_details[80];
void devices_feed();
void devices_view();
}de;
class os{
public:
char dateos[10];
char newos[30];
char whatsnewos[200];
void os_feed();
void os_view();
}os;

class dloads
{
public:
char newdload[30];
char datedload[10];
char whatsnewdload[100];
void dloads_feed();
```

```
void dloads_view();
}dl;

class email
{
public:
char emailsub[40];
char emailcontent[200];
void email_feed();
void email_view();
}em;
```

```
class mail
{
public:
char name[30];
char pass[20];
void usernew();
void exist();
};
mail user,s1;
class newuser
{
public:
char username[30];
char userpass[20];
};
newuser nuser;
```

```
char username[80]="sumit@hex.com";
char password[80]="abc";
char pass[80];
char usern[80];
```

SCREENSHOTS OF OUTPUT SCREEN
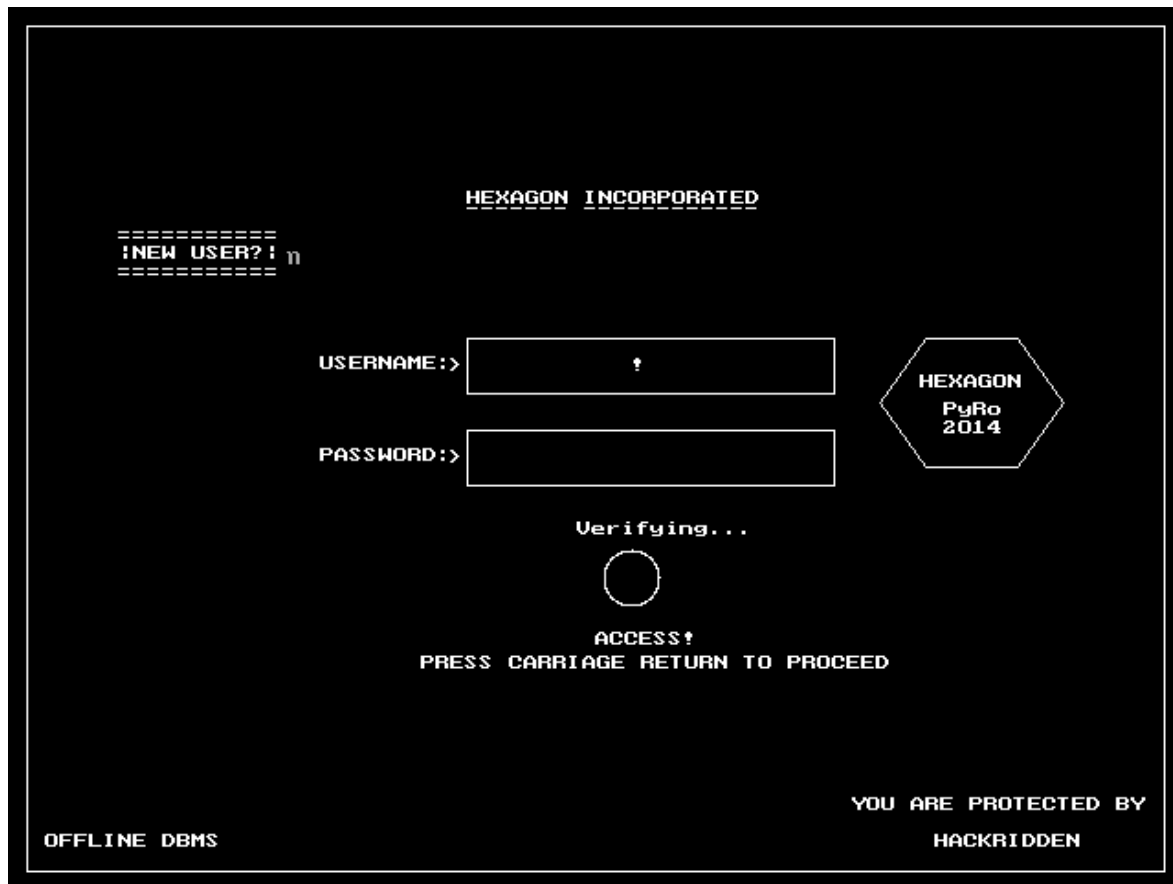
The program starts off with the very first stage of a so called log-in screen. Here the person can type whether the input would be by a new user or and existing user.

If they represent the latter then they would have to type in *'n'.*

Once through we would be presented by the other half of the login screen.
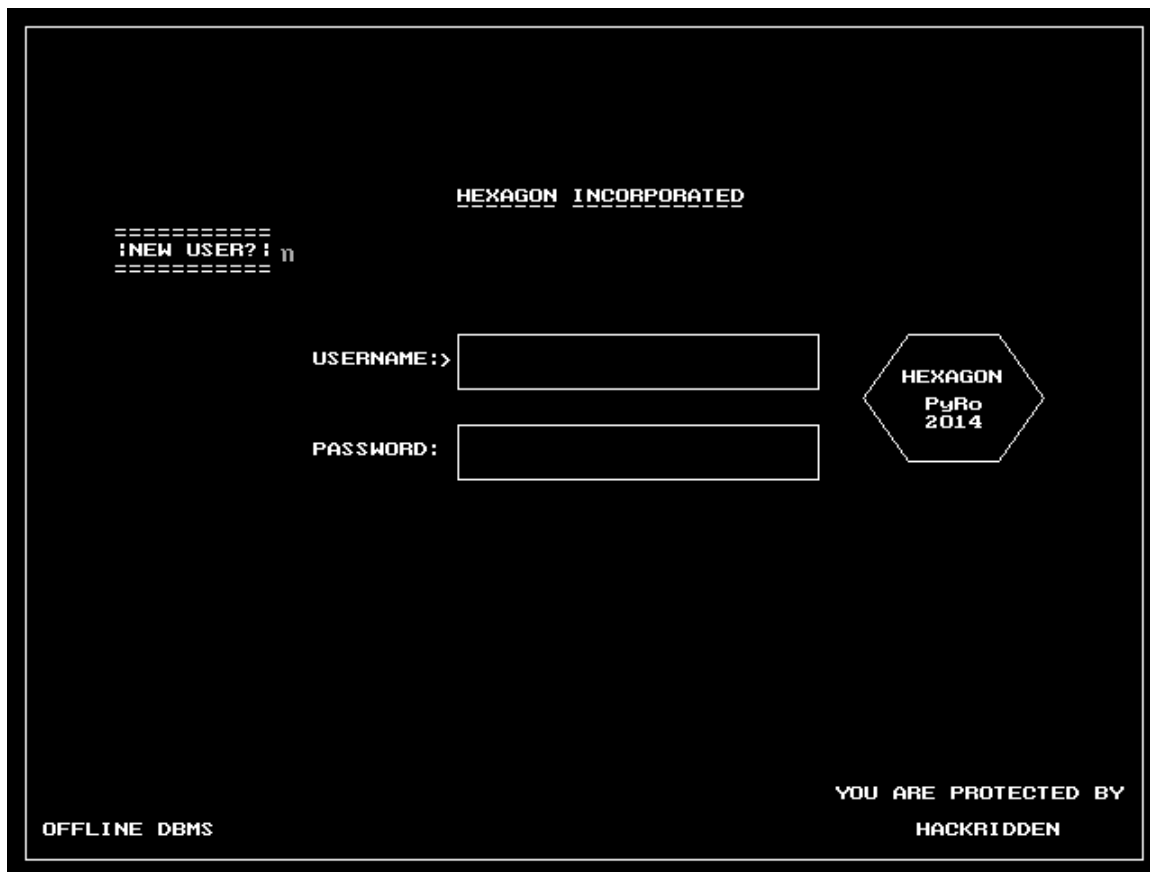
Here we type in our username and password.

We have referred to this password program under the Tag name **HACKRIDDEN.**

Currently what matters in this portion is the password i.e. the Administrator Password.

For quick use we have kept it as *'abc'*.

Also the logo seen on the right hand side of the screen has been completely made out of graphics using *moveto* and *lineto* commands.

```
                          HEXAGON INCORPORATED
        ==========
        !NEW USER?! n
        ==========
                  USERNAME:> hexain2014                        HEXAGON
                                                                PyRo
                                                                2014
                  PASSWORD:> ***


                                                    YOU ARE PROTECTED BY
        OFFLINE DBMS                                    HACKRIDDEN
```
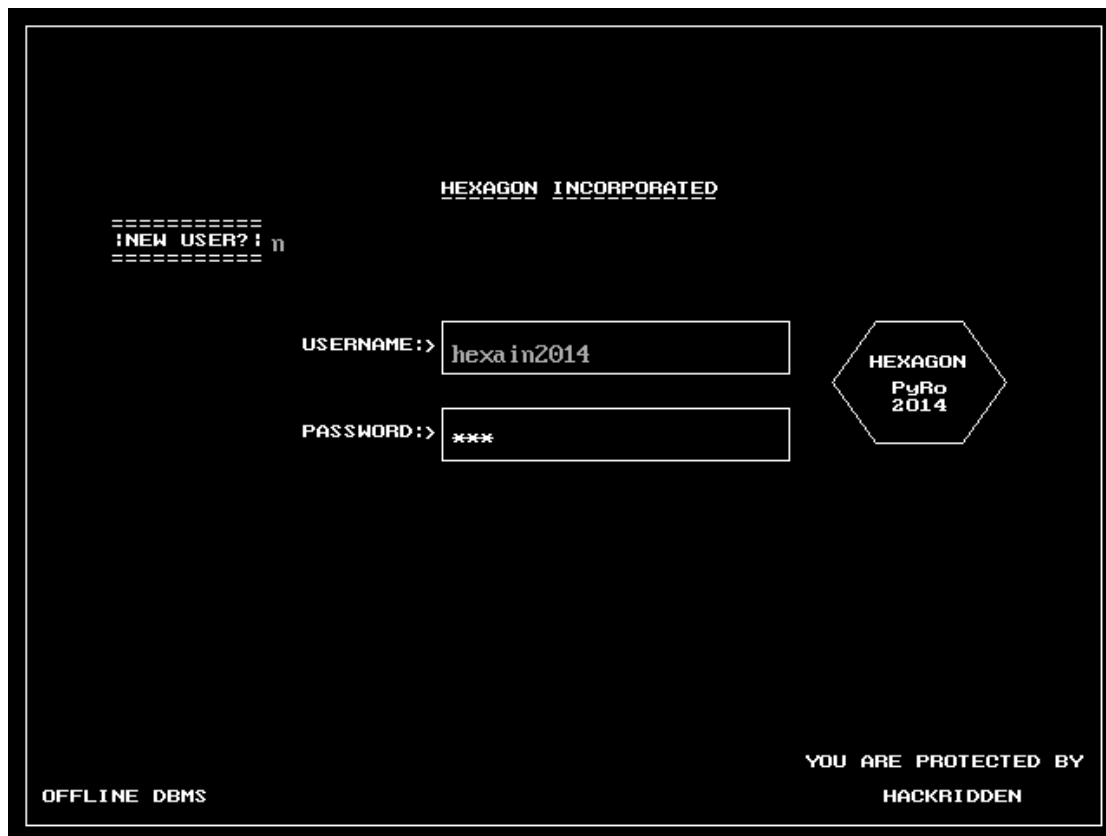
For display purposes we have put **hexain2014** in place of **username.**

Once this password is typed in (regardless we give the username or not) it would verify the password and give us feedback whether it is an **Access** or **Denied**.

One more thing we have tried to do is to solve the case when both the username and password do not match. For this we have written a small piece of code for a **GUEST** account which is a **Read-Only** type of account. For example, from this account one can **view** data but not **feed** data.

Speaking in a Layman's Language data can be **Read** but not **Modified**.
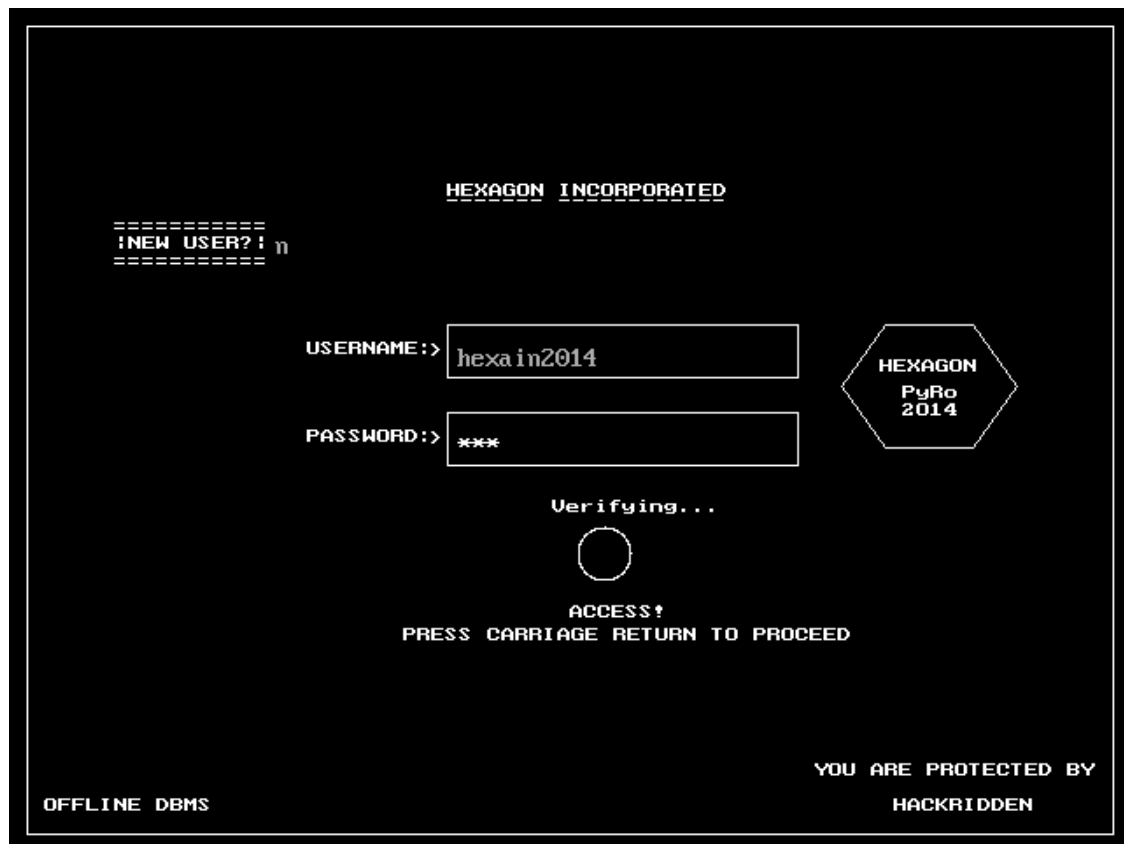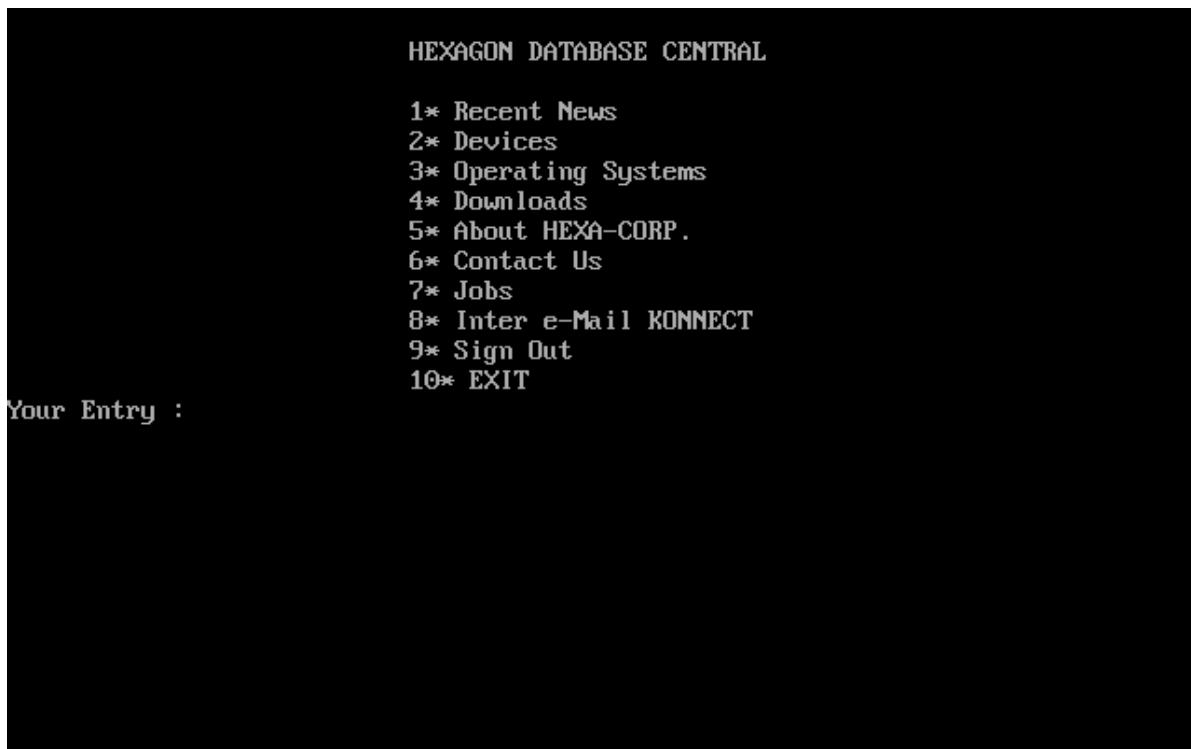
Screen showing Success
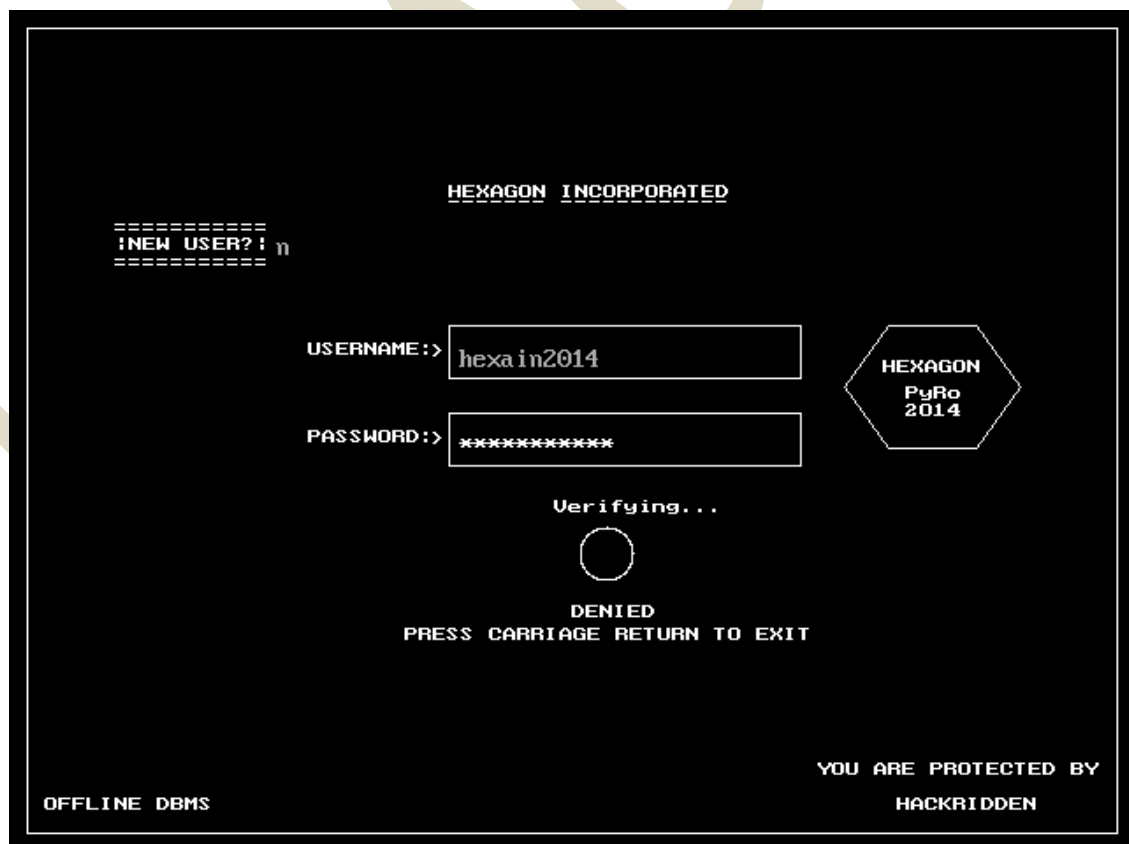
Screen showing Failure
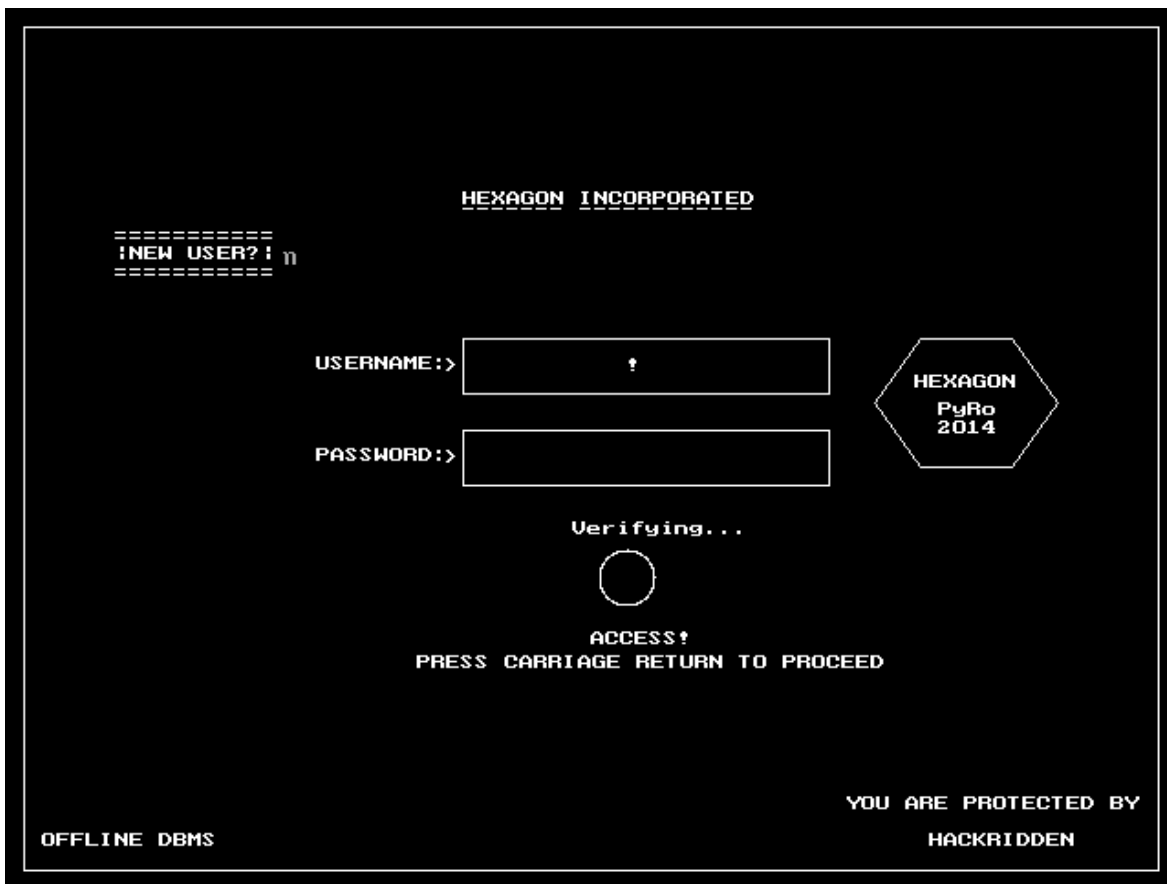
Guest Account Access
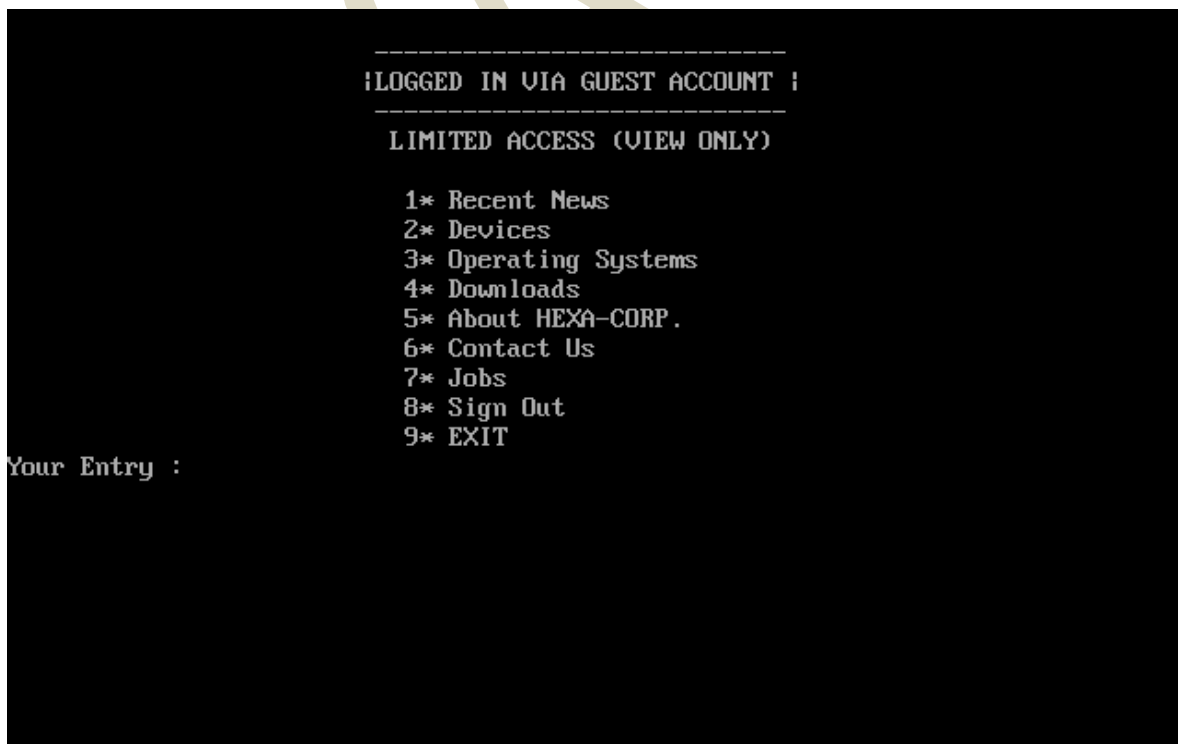
Guest Account Capabilities

```
                    HEXAGON DATABASE CENTRAL

                    1* Recent News
                    2* Devices
                    3* Operating Systems
                    4* Downloads
                    5* About HEXA-CORP.
                    6* Contact Us
                    7* Jobs
                    8* Inter e-Mail KONNECT
                    9* Sign Out
                    10* EXIT
Your Entry :
```

Now if we have passed the security test we can go forward and access the main Database. We have shown a very simple menu driven program over here.

So let us show some of the features we have included in this program.

Choice inputs made in the program will be self-explanatory.

(PTO)

```
                    HEXAGON DATABASE CENTRAL

                    1* Recent News
                    2* Devices
                    3* Operating Systems
                    4* Downloads
                    5* About HEXA-CORP.
                    6* Contact Us
                    7* Jobs
                    8* Inter e-Mail KONNECT
                    9* Sign Out
                    10* EXIT
Your Entry : 1

A> FEED
B> VIEW
Enter :
```

```
                    HEXAGON DATABASE CENTRAL

                    1* Recent News
                    2* Devices
                    3* Operating Systems
                    4* Downloads
                    5* About HEXA-CORP.
                    6* Contact Us
                    7* Jobs
                    8* Inter e-Mail KONNECT
                    9* Sign Out
                    10* EXIT
Your Entry : 1

A> FEED
B> VIEW
Enter : a

DATE: 5.12.14

NEWS: New Software Launch


                    Browse Further ? _
```

If we want to view the recent news for example we will go through as follows.
We will **'y'** in *browse further* and select **view**.

```
                    HEXAGON DATABASE CENTRAL

                    1* Recent News
                    2* Devices
                    3* Operating Systems
                    4* Downloads
                    5* About HEXA-CORP.
                    6* Contact Us
                    7* Jobs
                    8* Inter e-Mail KONNECT
                    9* Sign Out
                    10* EXIT
Your Entry : 1

A> FEED
B> VIEW
Enter : b

DATE: 5.12.14
NEWS: New Software Launch

                        Browse Further ?
```

Further…..

```
                    HEXAGON DATABASE CENTRAL

                    1* Recent News
                    2* Devices
                    3* Operating Systems
                    4* Downloads
                    5* About HEXA-CORP.
                    6* Contact Us
                    7* Jobs
                    8* Inter e-Mail KONNECT
                    9* Sign Out
                    10* EXIT
Your Entry : 5

Hexagon Corporation or HEXA-CORP was founded in the year 2014 by Sumit Saha and
Priyankar Jain while they were in their Secondary School. The company started
off with C based computer software for windows development. Later they emerged
as a major software and hardware company The company has now been fully
established....

                        Browse Further ? _
```

And…..

```
                    HEXAGON DATABASE CENTRAL

                    1* Recent News
                    2* Devices
                    3* Operating Systems
                    4* Downloads
                    5* About HEXA-CORP.
                    6* Contact Us
                    7* Jobs
                    8* Inter e-Mail KONNECT
                    9* Sign Out
                    10* EXIT
Your Entry : 6

Sumit Saha * 8447031665
Priyankar Jain * 8510860516
HeadQuarters * New Delhi * 011-26866379

                    Browse Further ?
```

There are some extra features we have added in this program like sending an Offline e-mail to other choice users. Here is what we have done to send and view emails.

```
-----------------------
¦INTER e-MAIL KONNECT¦
-----------------------
Send an e-mail to :
1> priyankarjain13@gmail.com
2> sumit.saha666@gmail.com
3> resourcecentre@hexagon.com
4> businessdepartment@haxagon.com
Enter choice :
```

Email feed

To view email we can input *'y'* and put in *view*.

Email view

One more little thing we have added is the sign-out feature (this will take us back to the original log-in screen).

```
                    HEXAGON DATABASE CENTRAL

                    1* Recent News
                    2* Devices
                    3* Operating Systems
                    4* Downloads
                    5* About HEXA-CORP.
                    6* Contact Us
                    7* Jobs
                    8* Inter e-Mail KONNECT
                    9* Sign Out
                    10* EXIT
Your Entry : 9_
```

SCREENSHOTS OF THE SOURCE CODE

```
#include<iostream.h>
#include<fstream.h>
#include<graphics.h>
#include<stdlib.h>
#include<stdio.h>
#include<conio.h>
#include<string.h>
#include"head.h"
#include<process.h>
#include<dos.h>
#include"my.h"
int ok=0;
void disp();
void access();
void submenu();
struct hex_list                         //MAIN CONTROL FOR DBMS
{
 public:

 char strrecent[200];
 char date[10];
```

F1 Help   F2 Save   F3 Open   Alt-F9 Compile   F9 Make   F10 Menu

```
void hex_list::recent_feed()
{
 fstream r;
 r.open("recent.txt",ios::in|ios::out|ios::app);
 {
   cout<<"\nDATE: ";
   gets(date);
   r<<"\nDATE: "<<date;
   cout<<"\nNEWS: ";
   gets(strrecent);
   r<<"\nNEWS: "<<strrecent;
 }
 r.seekg(0);
 r.close();
}
void hex_list::recent_view()
{
 fstream r;
 r.open("recent.txt",ios::in);
 while(!r.eof())
 {
```

F1 Help   F2 Save   F3 Open   Alt-F9 Compile   F9 Make   F10 Menu

```
═══════════════════════════ HEXAGON.CPP ═══════════════════════1=[↑]
    moveto(250,180);
    lineto(250,210); //vertical_left
    moveto(450,180);
    lineto(450,210); //vertical_right
    moveto(250,180);
    lineto(450,180); //horizontal_up
    moveto(250,210);
    lineto(450,210); //horizontal_down

    outtextxy(170,240,"PASSWORD: ");
    /*INPUT BOX FOR PASSWORD */
    moveto(250,230);
    lineto(450,230); //horizontal_up
    moveto(250,260);
    lineto(450,260); //horizontal_down
    moveto(250,230);
    lineto(250,260); //vertical_left
    moveto(450,230);
    lineto(450,260); //vertical_right

    /*CODE FOR PYRO TAG*/
```

502:1

```
═══════════════════════════ HEXAGON.CPP ═══════════════════════1=[↑]
    {
      c=getch();
      if((c!=8) && (c!=13))
       {
        pass[k]=c;                  //CODE FOR CONVERTING INPUT TO ( * )
        cout<< "*";
       }
      if(c==8)
       {
         if(k>0)
           {
             k-=2;
             pass[k+1]='\0';
             cout<<'\b'<<' '<<'\b';
           }
       }
      if(c==13)
       {                     //STOPS INPUT AS SOON AS CARRIAGE RETURN IS HIT
        break;
       }
     }
```

558:1

SCOPE FOR Modification

The project had been developed successfully but there is always a scope for modification. Due to limited time, development had not been completed as expected. But it is an aim to further develop this as soon as time is available. We had planned sharing of files via lan network but multiple user system is not complete. Hence this has a scope up to dual users including the administrator. File management was another plan but it required hours of code. But the work is satisfactory and we hope it stands in the eyes of the invigilator.

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