**COMMAND ON CHEMISTRY**

*Mini Project Report*

*Submitted in partial fulfilment of the*

*Requirements for the award of the Degree of*

**BACHELOR OF ENGINEERING**

IN

**INFORMATION TECHNOLOGY**

By

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**Department of Information Technology**

**Vasavi College of Engineering (Autonomous)**

**(Affiliated to Osmania University)**

**Ibrahimbagh, Hyderabad-31**

**2020**

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**DECLARATION BY THE CANDIDATE**

We, **GANESH and NIKHIL REDDY,** bearing hall ticket number*s* **1602-19-737-012, 1602-19-737-024**, hereby declare that the project report entitled **“COMMAND ON CHEMISTRY”** Department of Information Technology, Vasavi College of Engineering, Hyderabad, is submitted in partial fulfilment of the requirement for the award of the degree of **Bachelor of Engineering** in **Information Technology**

This is a record of bonafide work carried out by me and the results embodied in this project report have not been submitted to any other university or institute for the award of any other degree or diploma.

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(Faculty In-Charge) (Head, Dept of IT)

**ACKNOWLEDGEMENT**

We, Ganesh and Nikhil presenting you "COMMAND ON CHEMISTRY" mini project report as per the curriculum of B.E second semester.

We express our sincere thanks to Dr. K .Ram Mohan Rao Sir (HOD) of IT department , Vasavi college of engineering , Hyderabad for providing us this golden opportunity to prepare the project. We are immensely obliged to our seniors for their elevating inspiration, encouraging guidance and kind supervision in the completion of our project.

We feel to acknowledge our indebtedness and deep sense of gratitude to our guide Ms .Leelavathy whose valuable guidance and kind supervision give to us throughout the practice which shaped the present work as its show.

**ABSTRACT**

Command on chemistry is a project that works like a tool to learn and practice chemistry for knowledge. One can find chemistry in daily life in the foods we eat, The air we breathe, and literally every object we can see or touch. Apart from reality obsessions, chemistry is a subject in demand for science courses. We hope this project might help them on the way of preparing for exams or information gain.

The project includes information about various elements, a mock test on the subject. It also allows us to find a reaction between two elements. There is also a choice to view the results of your previous exams. The project is designed in such a way that any student can access it with ease.

**INTRODUCTION**

The project Command on chemistry is an application to learn a basic and very useful topic in chemistry. Through this tool, one can learn elemental knowledge in chemistry for fun or for various examinations for other purposes.

As Chemistry has always been a scoring subject in many competitive examinations, this application provides us an opportunity to test our knowledge and to learn the exam strategy through mock tests and error rectification right away. Also, we can find the results of our previous attempts in mock tests.

The information available in the project is detailed and authorized. This application can be availed by students to reduce stress to gather various information in books as we provide them all in this project which can be a great help. There can also be supervision on the application by the sole developer of the application to view the scores of users to make up an idea on the subject standard of the individual.

Building this project involved C libraries, files, as well as methods in an organized manner.

* Login to the application.
* Choosing the actor’s role.
* Providing choices to the user.
* Storing the user information .
* Visualization of subject through functions.
* Calculation of exam results.

The project is designed in such a way that it can benefited to people use it because of its smooth information flow and easy access.

**TECHNOLOGY**

**a. Software Requirements**

Software requirements deal with defining software resource requirements and pre- requisites that need to be installed on a computer to provide optimal functioning of an application. These requirements or pre-requisites are generally not included in the software installation package and need to be installed separately before the software is installed.

Basic Software requirements for this project are :

Operating System: Windows 7 or Windows XP

Development tools: Vi,Vim editor, GCC compiler, atom, other IDE etc

These software requirements eases the task of developing the project.

1. **Hardware Requirements**

The most common set of requirements defined by any operating system or software application is the physical computer resources, also known as hardware. A hardware requirements list is always accompanied by a hardware compatibility list(HCL), especially in case of operating systems. An HCL lists tested, compatibility and sometimes incompatible hardware devices for a particular operating system or application

Basic Hardware requirements for present project are:

Processor: Intel Core i3

RAM: 4GB

Enough memory to fit and run the program.

**PROPOSED WORK**

1. **Design**

**Diagram

Description automatically generated**

**Diagram

Description automatically generated**

**b. Implementation**

#include<stdio.h>

#include<stdlib.h>

#include<ctype.h>

#include<string.h>

#define MAX\_SIZE 30

static int i=0;

struct logreg

{

char name[30],pass[30];

int highestscore;

}w[99];

int n;

void user();

void Users();

void login();

void reg();

void exam();

void data();

void Table();

void info();

void reaction();

void results();

void mainscreen2();

void mainscreen1();

void developer();

void developer(){

char name[30];

char pass[30];

k:

printf("\n\n\t\t\t Username :");

scanf("%s",name);

if(!strcmp(name,"ganesh")|| !strcmp(name,"nikhil")){

printf("\n\n\n\t\t\tPassword :");

scanf("%s",pass);

printf("%s",pass);

if(!strcmp(pass,"1234567890")){

system("cls");

printf("\n\n\n\n\n\t\t\t\tWELCOME TO COMMAND ON CHEMISTRY ");

printf("\n\t\t\t\t==============================");

printf("\n\n\n\n\t\t\tPress Enter to proceed...!!");

int c1=getchar();

if(c1==10)

{ }

P:

printf("\n\n\n\t\t\t1.Users\t\t2.Exit \n");

printf("\n\n\n\t\t\t\tENTER YOUR CHOICE: ");

int n;

scanf("%d",&n);

switch(n)

{

case 1:

Users();

break;

case 2:

exit(0);

break;

default: printf("\n\n\t\t\t\tNO MATCH FOUND");

printf("\n\n\t\t\tPress Enter to re-Enter the choice");

if(getchar()==10)

{goto P;}

break;

}

}

else {

system("cls");

printf(" Invalid Password ");

goto k;}}

else {

system("cls");

printf(" INVALID USERNAME ");

goto k;}

}

void Users()

{ struct logreg \*p;

FILE \*fp;

fp=fopen("coc\_reg.txt","ab+");

int i=0;

while(!feof(fp) && i<100)

{

fread(&w[i],sizeof(w[i]),1,fp);

p=&w[i];

printf(" \n\n \t\t Name : %s \n",p->name);

}

P:

printf("\n\t\t1.Goto Mainscreen \t\t\t 2.Exit\n");

int n1;

scanf("%d",&n1);

switch(n1){

case 1: mainscreen1();

break;

case 2:exit(0);

default : printf("Invalid input ");

goto P;

}}

void mainscreen1(){

system("cls");

printf("\n\n\n\n\n\t\t\t\tWELCOME TO COMMAND ON CHEMISTRY ");

printf("\n\t\t\t\t==============================");

printf("\n\n\n\n\t\t\tPress Enter to proceed...!!");

int c1=getchar();

if(c1==10)

system("cls");

P:

printf("\n\n\n\t\t\t1.USER\t\t2. DEVELOPER\n");

printf("\n\n\n\t\t\t\tENTER YOUR CHOICE: ");

scanf("%d",&n);

switch(n)

{

case 1: system("cls");

user();

break;

case 2: system("cls");

developer();

break;

default: printf("\n\n\t\t\t\tNO MATCH FOUND");

printf("\n\n\t\t\tPress Enter to re-Enter the choice");

if(getchar()==10)

system("cls");

goto P;

}

}

void user()

{

system("cls");

printf("\n\n\n\n\n\t\t\t\tWELCOME TO COMMAND ON CHEMISTRY USERS ");

printf("\n\t\t\t\t=====================");

printf("\n\n\n\n\t\t\tPress Enter to proceed...!!");

int c1=getchar();

if(c1==10)

system("cls");

XY:

printf("\n\n\n\t\t\t1. LOGIN\t\t2. REGISTER");

printf("\n\n\n\t\t\t\tENTER YOUR CHOICE: ");

scanf("%d",&n);

switch(n)

{

case 1: system("cls");

login();

break;

case 2: system("cls");

reg();

break;

default: printf("\n\n\t\t\t\tNO MATCH FOUND");

printf("\n\n\t\t\tPress Enter to re-Enter the choice");

if(getchar()==10)

system("cls");

goto XY;

}

}

void reg()

{

FILE \*fp;

char c; int k1=0,z=0;

char checker[30];

fp=fopen("coc\_reg.txt","ab+");

printf("\n\n\t\t\t\tWELCOME TO REGISTER ZONE");

printf("\n\t\t\t\t^^^^^^^^^^^^^^^^^^^^^^^^");

printf("\n\n\t\t\t\t ENTER USERNAME: ");

scanf("%s",checker);

int i=0;

while(!feof(fp) && i<100)

{

fread(&w[i],sizeof(w[i]),1,fp);

if(strcmp(checker,w[i].name)==0)

{

printf("\n\n\t\t\tUSERNAME ALREDY EXISTS");

reg();

}

else if(w[i].name != NULL)

{

i++;

continue;}}

if(strcmp(checker,w[i].name)!=0)

strcpy(w[i].name,checker);

printf("\n\n\t\t\t\t DESIRED PASSWORD: ");

scanf("%s",w[i].pass);

fwrite(&w[i],sizeof(w[i]),1,fp);

fclose(fp);

printf("\n\n\tPress enter if you agree with Username and Password");

if((getchar())==10)

{

system("cls");

printf("\n\n\t\tYou are successfully registered");

printf("\n\n\t\tTry login your account??\n\n\t\t ");

printf("> PRESS 1 FOR YES\n\n\t\t > PRESS 2 FOR NO\n\n\t\t\t\t");

scanf("%d",&n);

switch(n)

{

case 1: system("cls");

login();

break;

case 2: system("cls");

printf("\n\n\n\t\t\t\t\tTHANK YOU FOR REGISTERING");

break;

}

}

getchar();

}

void login()

{

FILE \*fp;

char c,name[30],pass[30]; int z=0;

int checku,checkp;

fp=fopen("coc\_reg.txt","rb");

printf("\n\n\t\t\t\tWELCOME TO LOG IN ZONE");

printf("\n\t\t\t\t^^^^^^^^^^^^^^^^^^^^^^");

printf("\n\n\t\t\t\t ENTER USERNAME: ");

scanf("%s",name);

printf("\n\n\t\t\t\t ENTER PASSWORD: ");

scanf("%s",pass);

int i=0;

while(!feof(fp) && i<100)

{

fread(&w[i],sizeof(w[i]),1,fp);

checku=strcmp(name,w[i].name);

checkp=strcmp(pass,w[i].pass);

if(checku==0&&checkp==0)

{

system("cls");

printf("\n\n\n\t\t\tYOU HAVE LOGGED IN SUCCESSFULLY!!");

printf("\n\n\n\t\t\t\tWELCOME, HAVE A NICE DAY\n\n");

mainscreen2(i);

exit(0);

}

else if(checku==0&&checkp!=0)

{

printf("\n\n\n\t\t\tWRONG PASSWORD!! Not %s??",name);

printf("\n\n\t\t\t\t (Press 'Y' to re-login)");

printf("\n\t\t\t\tpress any other key to register");

char c;

scanf(" %c",&c);

if(c=='y' || c=='Y')

login();

}

i++;}

if(checku!=0)

{

printf("\n\n\n\t\t\tYou are not a Registered User\n \t\t\tPlease register yourself\n");

if(getchar()==10)

reg();

}

getchar();

}

void mainscreen2(int i){

system("cls");

printf("\n\n\n\t\t\t\t\t\t\t\tPROFILE");

printf("\n\n\n\n\n\t\t\t\tPLEASE SELECT ANY ONE FROM BELOW ");

int c1=getchar();

XY:

printf("\n\n\n\t\t\t1. EXAM\n\n\t\t\t2. INFO\n\n\t\t\t 3. REACTION \n\n\t\t\t 4.RESULTS\n\n\t\t\t 5.EXIT");

printf("\n\n\n\t\t\t\tENTER YOUR CHOICE: ");

scanf("%d",&n);

switch(n)

{

case 1: system("cls");

exam(&w[i],i);

break;

case 2: system("cls");

info(i);

break;

case 3: system("cls");

reaction();

getchar();

break;

case 4: system("cls");

results(&w[i],i);

getchar();

break;

case 5: system("cls");

exit(0);

break;

default: printf("\n\n\t\t\t\tNO MATCH FOUND");

printf("\n\n\t\t\tPress Enter to re-Enter the choice");

if(getchar()==10)

goto XY;

}

x:

printf("\n\n Enter Y/y for goback to PROFILE \n");

char q;

scanf("%c",&q);

if(q=='y' ||q=='Y')

mainscreen2(i);

else

goto x;

}

void Table(char \*Name, double Number, int Group, int Period, char \*Formula ,char \*Charge, double Mass, int Neutrons, char \*Special)

{

Neutrons = (Mass - Number);

system("cls");

printf(" Element Name: %s \n", Name);

printf(" Formula: %s\n" ,Formula);

printf(" Atomic Number: %f\n",Number);

printf(" Atomic Mass: %f\n",Mass);

printf(" Group: %d\n",Group);

printf(" Period: %d\n",Period);

printf(" Charge: %s\n",Charge);

printf(" Neutrons: %d\n",Neutrons);

if (strcmp(Special,"None"))

{

printf(" Note: %s\n",Special);

}

}

void develops(){

return;

}

void data(char\*Command)

{

double Number;

int Group;

int Period;

double Mass;

int Neutrons;

if (!strcmp(Command,"1") || !strcmp(Command ,"hydrogen") || !strcmp(Command, "H"))

{

char Name[] = "hydrogen";

Number = 1;

Group = 1;

Period = 1;

char Formula[] = "H";

char Charge[] = "1+";

Mass = 1.01;

char Special[] = "Diatomic";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"2") || !strcmp(Command,"helium") || !strcmp(Command,"He"))

{

char Name[] = "helium";

Number = 2;

Group = 18;

Period = 1;

char Formula[] = "He";

char Charge[] = "0";

Mass = 4.00;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);}

else if (!strcmp(Command,"3") || !strcmp(Command,"lithium") || !strcmp(Command,"Li"))

{

char Name[] = "lithium";

Number = 3;

Group = 1;

Period = 2;

char Formula[] = "Li";

char Charge[] = "1+";

Mass = 6.94;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"4") || !strcmp(Command,"beryllium") || !strcmp(Command,"Be"))

{

char Name[] = "beryllium";

Number = 4;

Group = 2;

Period = 2;

char Formula[] = "Be";

char Charge[] = "2+";

Mass = 9.01;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"5") || !strcmp(Command,"boron") || !strcmp(Command,"B"))

{

char Name[] = "boron";

Number = 5;

Group = 13;

Period = 2;

char Formula[] = "B";

char Charge[] = "3+";

Mass = 10.81;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"6") || !strcmp(Command,"carbon") || !strcmp(Command,"C"))

{

char Name[] = "carbon";

Number = 6;

Group = 14;

Period = 2;

char Formula[] = "C";

char Charge[] = "4+";

Mass = 12.01;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"7") || !strcmp(Command,"nitrogen") || !strcmp(Command,"N"))

{

char Name[] = "nitrogen";

Number = 7;

Group = 15;

Period = 2;

char Formula[] = "N";

char Charge[] = "3-";

Mass = 14.01;

char Special[] = "Diatomic";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"8") || !strcmp(Command,"oxygen") || !strcmp(Command,"O"))

{

char Name[] = "oxygen";

Number = 8;

Group = 16;

Period = 2;

char Formula[] = "O";

char Charge[] = "2-";

Mass = 16.00;

char Special[] = "Diatomic";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"9") || !strcmp(Command,"flourine") || !strcmp(Command,"F"))

{

char Name[] = "fluorine";

Number = 9;

Group = 17;

Period = 2;

char Formula[] = "F";

char Charge[] = "1-";

Mass = 19.00;

char Special[] = "Diatomic";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"10") || !strcmp(Command,"neon") || !strcmp(Command,"Ne"))

{

char Name[] = "neon";

Number = 10;

Group = 18;

Period = 2;

char Formula[] = "Ne";

char Charge[] = "0";

Mass = 20.18;

char Special[] = "Noble Gas";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"11") || !strcmp(Command,"sodium") || !strcmp(Command,"Na"))

{

char Name[] = "sodium";

Number = 11;

Group = 1;

Period = 3;

char Formula[] = "Na";

char Charge[] = "1+";

Mass = 22.99;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"12") || !strcmp(Command,"magnesium") || !strcmp(Command,"Mg"))

{

char Name[] = "magnesium";

Number = 12;

Group = 2;

Period = 3;

char Formula[] = "Mg";

char Charge[] = "2+";

Mass = 24.31;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"13") || !strcmp(Command,"aluminum") || !strcmp(Command,"Al"))

{

char Name[] = "aluminum";

Number = 13;

Group = 13;

Period = 3;

char Formula[] = "Al";

char Charge[] = "3+";

Mass = 26.98;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"14") || !strcmp(Command,"silicon") || !strcmp(Command,"Si"))

{

char Name[] = "silicon";

Number = 14;

Group = 14;

Period = 3;

char Formula[] = "Si";

char Charge[] = "4+";

Mass = 28.09;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"15") || !strcmp(Command,"phosphorous") || !strcmp(Command,"P"))

{

char Name[] = "phosphorus";

Number = 15;

Group = 15;

Period = 3;

char Formula[] = "P";

char Charge[] = "3-";

Mass = 30.97;

char Special[] = "Diatomic";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"16") || !strcmp(Command,"sulfur") || !strcmp(Command,"S"))

{

char Name[] = "sulfur";

Number = 16;

Group = 16;

Period = 3;

char Formula[] = "S";

char Charge[] = "2-";

Mass = 32.06;

char Special[] = "Diatomic";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"17") || !strcmp(Command,"chlorine") || !strcmp(Command,"Cl"))

{

char Name[] = "chlorine";

Number = 17;

Group = 17;

Period = 3;

char Formula[] = "Cl";

char Charge[] = "1-";

Mass = 35.45;

char Special[] = "Diatomic";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"18") || !strcmp(Command,"argon") || !strcmp(Command,"Ar"))

{

char Name[] = "argon";

Number = 18;

Group = 18;

Period = 3;

char Formula[] = "Ar";

char Charge[] = "0";

Mass = 39.95;

char Special[] = "Noble Gas";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"19") || !strcmp(Command,"potassium") || !strcmp(Command,"K"))

{

char Name[] = "potassium";

Number = 19;

Group = 1;

Period = 4;

char Formula[] = "K";

char Charge[] = "1+";

Mass = 39.10;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"20") || !strcmp(Command,"calcium") || !strcmp(Command,"Ca"))

{

char Name[] = "calcium";

Number = 20;

Group = 2;

Period = 4;

char Formula[] = "Ca";

char Charge[] = "2+";

Mass = 40.08;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"21") || !strcmp(Command,"scandium") || !strcmp(Command,"Sc"))

{

char Name[] = "scandium";

Number = 21;

Group = 3;

Period = 4;

char Formula[] = "Sc";

char Charge[] = "3+";

Mass = 44.96;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"22") || !strcmp(Command,"titanium") || !strcmp(Command,"Ti"))

{

char Name[] = "titanium";

Number = 22;

Group = 4;

Period = 4;

char Formula[] = "Ti";

char Charge[] = "4+ \\ 3+";

Mass = 47.88;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"23") || !strcmp(Command,"vanadium") || !strcmp(Command,"V"))

{

char Name[] = "vanadium";

Number = 23;

Group = 5;

Period = 4;

char Formula[] = "V";

char Charge[] = "5+ \\ 4+";

Mass = 50.94;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"24") || !strcmp(Command,"chromium") || !strcmp(Command,"Cr"))

{

char Name[] = "chromium";

Number = 24;

Group = 6;

Period = 4;

char Formula[] = "Cr";

char Charge[] = "3+ \\ 2+";

Mass = 52.00;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"25") || !strcmp(Command,"manganese") || !strcmp(Command,"Mn"))

{

char Name[] = "manganese";

Number = 25;

Group = 7;

Period = 4;

char Formula[] = "Mn";

char Charge[] = "2+ \\ 4+";

Mass = 54.94;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"26") || !strcmp(Command,"iron") || !strcmp(Command,"Fe"))

{

char Name[] = "iron";

Number = 26;

Group = 8;

Period = 4;

char Formula[] = "Fe";

char Charge[] = "3+ \\ 2+";

Mass = 55.85;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"27") || !strcmp(Command,"cobalt") || !strcmp(Command,"Co"))

{

char Name[] = "cobalt";

Number = 27;

Group = 9;

Period = 4;

char Formula[] = "Co";

char Charge[] = "2+ \\ 3+";

Mass = 58.93;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"28") || !strcmp(Command,"nickel") || !strcmp(Command,"Ni"))

{

char Name[] = "nickel";

Number = 28;

Group = 10;

Period = 4;

char Formula[] = "Ni";

char Charge[] = "2+ \\ 3+";

Mass = 58.69;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"29") || !strcmp(Command,"copper") || !strcmp(Command,"Cu"))

{

char Name[] = "copper";

Number = 29;

Group = 11;

Period = 4;

char Formula[] = "Cu";

char Charge[] = "2+ \\ 1+";

Mass = 63.55;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"30") || !strcmp(Command,"zinc") || !strcmp(Command,"Zn"))

{

char Name[] = "zinc";

Number = 30;

Group = 12;

Period = 4;

char Formula[] = "Zn";

char Charge[] = "2+";

Mass = 65.38;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"31") || !strcmp(Command,"gallium") || !strcmp(Command,"Ga"))

{

char Name[] = "gallium";

Number = 31;

Group = 13;

Period = 4;

char Formula[] = "Ga";

char Charge[] = "3+";

Mass = 69.72;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"32") || !strcmp(Command,"germanium") || !strcmp(Command,"Ge"))

{

char Name[] = "germanium";

Number = 32;

Group = 14;

Period = 4;

char Formula[] = "Ge";

char Charge[] = "4+";

Mass = 72.61;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"33") || !strcmp(Command,"arsonic") || !strcmp(Command,"As"))

{

char Name[] = "arsonic";

Number = 33;

Group = 15;

Period = 4;

char Formula[] = "As";

char Charge[] = "3-";

Mass = 74.92;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"34") || !strcmp(Command,"selenium") || !strcmp(Command,"Se"))

{

char Name[] = "selenium";

Number = 34;

Group = 16;

Period = 4;

char Formula[] = "Se";

char Charge[] = "2-";

Mass = 78.96;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"35") || !strcmp(Command,"bromine") || !strcmp(Command,"Br"))

{

char Name[] = "bromine";

Number = 35;

Group = 17;

Period = 4;

char Formula[] = "Br";

char Charge[] = "1-";

Mass = 79.90;

char Special[] = "Diatomic";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"36") || !strcmp(Command,"krypton") || !strcmp(Command,"Kr"))

{

char Name[] = "krypton";

Number = 36;

Group = 18;

Period = 4;

char Formula[] = "Kr";

char Charge[] = "0";

Mass = 83.80;

char Special[] = "Noble Gas";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"37") || !strcmp(Command,"rubidium") || !strcmp(Command,"Rb"))

{

char Name[] = "rubidium";

Number = 37;

Group = 1;

Period = 5;

char Formula[] = "Rb";

char Charge[] = "1+";

Mass = 85.47;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"38") || !strcmp(Command,"stronthum") || !strcmp(Command,"Sr"))

{

char Name[] = "stronthum";

Number = 38;

Group = 2;

Period = 5;

char Formula[] = "Sr";

char Charge[] = "2+";

Mass = 87.62;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"39") || !strcmp(Command,"ythrium") || !strcmp(Command,"Y"))

{

char Name[] = "ythrium";

Number = 39;

Group = 3;

Period = 5;

char Formula[] = "Y";

char Charge[] = "3+";

Mass = 88.91;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"40") || !strcmp(Command,"zirconium") || !strcmp(Command,"Zr"))

{

char Name[] = "zirconium";

Number = 40;

Group = 4;

Period = 5;

char Formula[] = "Zr";

char Charge[] = "4+";

Mass = 91.22;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"41") || !strcmp(Command,"niobium") || !strcmp(Command,"Nb"))

{

char Name[] = "niobium";

Number = 41;

Group = 5;

Period = 5;

char Formula[] = "Nb";

char Charge[] = "5+ \\ 3+";

Mass = 92.91;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"42") || !strcmp(Command,"molybdenum") || !strcmp(Command,"Mo"))

{

char Name[] = "molybdenum";

Number = 42;

Group = 6;

Period = 5;

char Formula[] = "Mo";

char Charge[] = "6+";

Mass = 95.94;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"43") || !strcmp(Command,"techenium") || !strcmp(Command,"Tc"))

{

char Name[] = "techenium";

Number = 43;

Group = 7;

Period = 5;

char Formula[] = "Tc";

char Charge[] = "7+";

Mass = 98.91;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"44") || !strcmp(Command,"ruthenium") || !strcmp(Command,"Ru"))

{

char Name[] = "ruthenium";

Number = 44;

Group = 8;

Period = 5;

char Formula[] = "Ru";

char Charge[] = "3+ \\ 4+";

Mass = 101.07;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"45") || !strcmp(Command,"rhodium") || !strcmp(Command,"Rh"))

{

char Name[] = "rhodium";

Number = 45;

Group = 9;

Period = 5;

char Formula[] = "Rh";

char Charge[] = "3+";

Mass = 102.91;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"46") || !strcmp(Command,"palladium") || !strcmp(Command,"Pd"))

{

char Name[] = "palladium";

Number = 46;

Group = 10;

Period = 5;

char Formula[] = "Pd";

char Charge[] = "2+ \\ 4+";

Mass = 106.42;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"47") || !strcmp(Command,"silver") || !strcmp(Command,"Ag"))

{

char Name[] = "silver";

Number = 47;

Group = 11;

Period = 5;

char Formula[] = "Ag";

char Charge[] = "1+";

Mass = 107.87;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"48") || !strcmp(Command,"cadmium") || !strcmp(Command,"Cd"))

{

char Name[] = "cadmium";

Number = 48;

Group = 12;

Period = 5;

char Formula[] = "Cd";

char Charge[] = "2+";

Mass = 112.41;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"49") || !strcmp(Command,"indium") || !strcmp(Command,"In"))

{

char Name[] = "indium";

Number = 49;

Group = 13;

Period = 5;

char Formula[] = "In";

char Charge[] = "3+";

Mass = 114.82;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"50") || !strcmp(Command,"tin") || !strcmp(Command,"Sn"))

{

char Name[] = "tin";

Number = 50;

Group = 14;

Period = 5;

char Formula[] = "Sn";

char Charge[] = "4+ \\ 2+";

Mass = 118.69;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"51") || !strcmp(Command,"antimony") || !strcmp(Command,"Sb"))

{

char Name[] = "antimony";

Number = 51;

Group = 15;

Period = 5;

char Formula[] = "Sb";

char Charge[] = "3+ \\ 5+";

Mass = 121.75;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"52") || !strcmp(Command,"tellurium") || !strcmp(Command,"Te"))

{

char Name[] = "tellurium";

Number = 52;

Group = 16;

Period = 5;

char Formula[] = "Te";

char Charge[] = "2-";

Mass = 127.60;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"53") || !strcmp(Command,"iodine") || !strcmp(Command,"I"))

{

char Name[] = "iodine";

Number = 53;

Group = 17;

Period = 5;

char Formula[] = "I";

char Charge[] = "1-";

Mass = 126.90;

char Special[] = "Diatomic";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"54") || !strcmp(Command,"xenon") || !strcmp(Command,"Xe"))

{

char Name[] = "xenon";

Number = 54;

Group = 18;

Period = 5;

char Formula[] = "Xe";

char Charge[] = "0";

Mass = 131.29;

char Special[] = "Noble Gas";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"55") || !strcmp(Command,"cosium") || !strcmp(Command,"Cs"))

{

char Name[] = "cosiumn";

Number = 55;

Group = 1;

Period = 6;

char Formula[] = "Cs";

char Charge[] = "1+";

Mass = 132.91;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"56") || !strcmp(Command,"barium") || !strcmp(Command,"Ba"))

{

char Name[] = "barium";

Number = 56;

Group = 2;

Period = 6;

char Formula[] = "Ba";

char Charge[] = "2+";

Mass = 137.33;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"57") || !strcmp(Command,"lanthanum") || !strcmp(Command,"La"))

{

char Name[] = "lanthanum";

Number = 57;

Group = 3;

Period = 6;

char Formula[] = "La";

char Charge[] = "3+";

Mass = 138.91;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"58") || !strcmp(Command,"cerium") || !strcmp(Command,"Ce"))

{

char Name[] = "cerium";

Number = 58;

Group = 5;

Period = 6;

char Formula[] = "Ce";

char Charge[] = "3+";

Mass = 140.12;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"59") || !strcmp(Command,"pruseodymium") || !strcmp(Command,"Pr"))

{

char Name[] = "pruseodymium";

Number = 59;

Group = 6;

Period = 6;

char Formula[] = "Pr";

char Charge[] = "3+";

Mass = 140.91;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"60") || !strcmp(Command,"neodymium") || !strcmp(Command,"Nd"))

{

char Name[] = "neodymium";

Number = 60;

Group = 7;

Period = 6;

char Formula[] = "Nd";

char Charge[] = "3+";

Mass = 144.24;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"61") || !strcmp(Command,"promethium") || !strcmp(Command,"Pm"))

{

char Name[] = "promethium";

Number = 61;

Group = 8;

Period = 6;

char Formula[] = "Pm";

char Charge[] = "3+";

Mass = 145;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"62") || !strcmp(Command,"samarium") || !strcmp(Command,"Sm"))

{

char Name[] = "samarium";

Number = 62;

Group = 9;

Period = 6;

char Formula[] = "Sm";

char Charge[] = "3+ \\ 2+";

Mass = 150.40;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"63") || !strcmp(Command,"europium") || !strcmp(Command,"Eu"))

{

char Name[] = "europium";

Number = 63;

Group = 10;

Period = 6;

char Formula[] = "Eu";

char Charge[] = "3+ \\ 2+";

Mass = 151.97;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"64") || !strcmp(Command,"gadolinium") || !strcmp(Command,"Gd"))

{

char Name[] = "gadolinium";

Number = 64;

Group = 11;

Period = 6;

char Formula[] = "Gd";

char Charge[] = "3+";

Mass = 157.25;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"65") || !strcmp(Command,"terbium") || !strcmp(Command,"Tb"))

{

char Name[] = "terbium";

Number = 65;

Group = 12;

Period = 6;

char Formula[] = "Tb";

char Charge[] = "3+";

Mass = 158.93;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"66") || !strcmp(Command,"dysprosium") || !strcmp(Command,"Dy"))

{

char Name[] = "dysprosium";

Number = 66;

Group = 13;

Period = 6;

char Formula[] = "Dy";

char Charge[] = "3+";

Mass = 162.50;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"67") || !strcmp(Command,"helmium") || !strcmp(Command,"Ho"))

{

char Name[] = "helmium";

Number = 67;

Group = 14;

Period = 6;

char Formula[] = "Ho";

char Charge[] = "3+";

Mass = 164.93;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"68") || !strcmp(Command,"erbium") || !strcmp(Command,"Er"))

{

char Name[] = "erbium";

Number = 68;

Group = 15;

Period = 6;

char Formula[] = "Er";

char Charge[] = "3+";

Mass = 167.26;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"69") || !strcmp(Command,"thulium") || !strcmp(Command,"Tm"))

{

char Name[] = "thulium";

Number = 69;

Group = 16;

Period = 6;

char Formula[] = "Tm";

char Charge[] = "3+";

Mass = 168.94;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"70") || !strcmp(Command,"ytlerhium") || !strcmp(Command,"Yb"))

{

char Name[] = "ytlerhium";

Number = 70;

Group = 17;

Period = 6;

char Formula[] = "Yb";

char Charge[] = "3+ \\ 2+";

Mass = 173.04;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"71") || !strcmp(Command,"lutelium") || !strcmp(Command,"Lu"))

{

char Name[] = "lutelium";

Number = 71;

Group = 18;

Period = 6;

char Formula[] = "Lu";

char Charge[] = "3+";

Mass = 174.97;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"72") || !strcmp(Command,"hefnium") || !strcmp(Command,"Hf"))

{

char Name[] = "hefnium";

Number = 72;

Group = 4;

Period = 6;

char Formula[] = "Hf";

char Charge[] = "4+";

Mass = 178.49;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"73") || !strcmp(Command,"tantalum") || !strcmp(Command,"Ta"))

{

char Name[] = "tantalum";

Number = 73;

Group = 5;

Period = 6;

char Formula[] = "Ta";

char Charge[] = "5+";

Mass = 180.95;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"74") || !strcmp(Command,"wolfrum") || !strcmp(Command,"tungsten") || !strcmp(Command,"W"))

{

char Name[] = "wolfrum (tungsten)";

Number = 74;

Group = 6;

Period = 6;

char Formula[] = "W";

char Charge[] = "6+";

Mass = 183.85;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"75") || !strcmp(Command,"rhenium") || !strcmp(Command,"Re"))

{

char Name[] = "rhenium";

Number = 75;

Group = 7;

Period = 6;

char Formula[] = "Re";

char Charge[] = "7+";

Mass = 186.21;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"76") || !strcmp(Command,"osmium") || !strcmp(Command,"Os"))

{

char Name[] = "osmium";

Number = 76;

Group = 8;

Period = 6;

char Formula[] = "Os";

char Charge[] = "4+";

Mass = 190.2;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"77") || !strcmp(Command,"iridium") || !strcmp(Command,"Ir"))

{

char Name[] = "iridium";

Number = 77;

Group = 9;

Period = 6;

char Formula[] = "Ir";

char Charge[] = "4+";

Mass = 192.22;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"78") || !strcmp(Command,"platinum") || !strcmp(Command,"Pt"))

{

char Name[] = "platinum";

Number = 78;

Group = 10;

Period = 6;

char Formula[] = "Pt";

char Charge[] = "4+ \\ 2+";

Mass = 195.08;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"79") || !strcmp(Command,"gold") || !strcmp(Command,"Au"))

{

char Name[] = "gold";

Number = 79;

Group = 11;

Period = 6;

char Formula[] = "Au";

char Charge[] = "3+ \\ 1+";

Mass = 196.97;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"80") || !strcmp(Command,"mercury") || !strcmp(Command,"Mg"))

{

char Name[] = "mercury";

Number = 80;

Group = 12;

Period = 6;

char Formula[] = "Hg";

char Charge[] = "2+ \\ 1+";

Mass = 200.59;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"81") || !strcmp(Command,"thallium") || !strcmp(Command,"Tl"))

{

char Name[] = "thallium";

Number = 81;

Group = 13;

Period = 6;

char Formula[] = "Tl";

char Charge[] = "1+ \\ 3+";

Mass = 204.38;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"82") || !strcmp(Command,"lead") || !strcmp(Command,"Pb"))

{

char Name[] = "lead";

Number = 82;

Group = 14;

Period = 6;

char Formula[] = "Pb";

char Charge[] = "2+ \\ 4+";

Mass = 207.20;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"83") || !strcmp(Command,"bismuth") || !strcmp(Command,"Bi"))

{

char Name[] = "bismuth";

Number = 83;

Group = 15;

Period = 6;

char Formula[] = "Bi";

char Charge[] = "3+ \\ 5+";

Mass = 208.98;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"84") || !strcmp(Command,"polonium") || !strcmp(Command,"Po"))

{

char Name[] = "polonium";

Number = 84;

Group = 16;

Period = 6;

char Formula[] = "Po";

char Charge[] = "2+ \\ 4+";

Mass = 209;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"85") || !strcmp(Command,"asiatine") || !strcmp(Command,"At"))

{

char Name[] = "asiatine";

Number = 85;

Group = 17;

Period = 6;

char Formula[] = "At";

char Charge[] = "1-";

Mass = 210;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"86") || !strcmp(Command,"radon") || !strcmp(Command,"Rn"))

{

char Name[] = "radon";

Number = 86;

Group = 18;

Period = 6;

char Formula[] = "Rn";

char Charge[] = "0";

Mass = 222;

char Special[] = "Noble Gas";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"87") || !strcmp(Command,"fruncium") || !strcmp(Command,"Fr"))

{

char Name[] = "fruncium";

Number = 87;

Group = 1;

Period = 7;

char Formula[] = "Fr";

char Charge[] = "1+";

Mass = 223;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"88") || !strcmp(Command,"radium") || !strcmp(Command,"Ra"))

{

char Name[] = "radium";

Number = 88;

Group = 2;

Period = 7;

char Formula[] = "Ra";

char Charge[] = "2+";

Mass = 226.03;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"89") || !strcmp(Command,"actinium") || !strcmp(Command,"Ac"))

{

char Name[] = "actinium";

Number = 89;

Group = 3;

Period = 7;

char Formula[] = "Ac";

char Charge[] = "3+";

Mass = 227.03;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"90") || !strcmp(Command,"thorlum") || !strcmp(Command,"Th"))

{

char Name[] = "thorlum";

Number = 90;

Group = 5;

Period = 7;

char Formula[] = "Th";

char Charge[] = "4+";

Mass = 232.04;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"91") || !strcmp(Command,"protactinium") || !strcmp(Command,"Pa"))

{

char Name[] = "protactinium";

Number = 91;

Group = 6;

Period = 7;

char Formula[] = "Pa";

char Charge[] = "5+ \\ 4+";

Mass = 231.04;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"92") || !strcmp(Command,"uranium") || !strcmp(Command,"U"))

{

char Name[] = "uranium";

Number = 92;

Group = 7;

Period = 7;

char Formula[] = "U";

char Charge[] = "6+ \\ 4+";

Mass = 238.03;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"93") || !strcmp(Command,"neplunium") || !strcmp(Command,"Np"))

{

char Name[] = "neplunium";

Number = 93;

Group = 8;

Period = 7;

char Formula[] = "Np";

char Charge[]= "5+";

Mass = 237.05;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"94") || !strcmp(Command,"plutonium") || !strcmp(Command ,"Pu"))

{

char Name[] = "plutonium";

Number = 94;

Group = 9;

Period = 7;

char Formula[] = "Pu";

char Charge[] = "4+ \\ 6+";

Mass = 244;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"95") || !strcmp(Command,"americium") || !strcmp(Command,"Am"))

{

char Name[] = "americium";

Number = 95;

Group = 10;

Period = 7;

char Formula[] = "Am";

char Charge[] = "3+ \\ 4+";

Mass = 244;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"96") || !strcmp(Command,"curium") || !strcmp(Command,"Cm"))

{

char Name[] = "curium";

Number = 96;

Group = 11;

Period = 7;

char Formula[] = "Cm";

char Charge[] = "3+";

Mass = 247;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"97") || !strcmp(Command,"borkelium") || !strcmp(Command,"Bk"))

{

char Name[] = "borkelium";

Number = 97;

Group = 12;

Period = 7;

char Formula[] = "Bk";

char Charge[] = "3+ \\ 4+";

Mass = 247;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"98") || !strcmp(Command,"californium") || !strcmp(Command,"Cf"))

{

char Name[] = "californium";

Number = 98;

Group = 13;

Period = 7;

char Formula[] = "Cf";

char Charge[] = "3+";

Mass = 251;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"99") || !strcmp(Command,"einsteinium") || !strcmp(Command,"Es"))

{

char Name[] = "einsteinium";

Number = 99;

Group = 14;

Period = 7;

char Formula[] = "Es";

char Charge[] = "3+";

Mass = 252;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"100") || !strcmp(Command,"formium") || !strcmp(Command,"Fm"))

{

char Name[] = "formium";

Number = 100;

Group = 15;

Period = 7;

char Formula[] = "Fm";

char Charge[] = "3+";

Mass = 257;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"101") || !strcmp(Command,"mendelevium") || !strcmp(Command,"Md"))

{

char Name[] = "mendelevium";

Number = 101;

Group = 16;

Period = 7;

char Formula[] = "Md";

char Charge[]= "2+ \\ 3+";

Mass = 258;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"102") || !strcmp(Command,"nebelium") || !strcmp(Command,"No"))

{

char Name[] = "nebelium";

Number = 102;

Group = 17;

Period = 7;

char Formula[] = "No";

char Charge[] = "2+ \\ 3+";

Mass = 259;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else if (!strcmp(Command,"103") || !strcmp(Command,"lawrencium") || !strcmp(Command,"Lr"))

{

char Name[] = "lawrencium";

Number = 103;

Group = 18;

Period = 7;

char Formula[] = "Lr";

char Charge[] = "3+";

Mass = 260;

char Special[] = "None";

Table (Name, Number, Group, Period, Formula, Charge, Mass, Neutrons, Special);

}

else

{ printf("INVALID INPUT");

printf(" \n\nAfter 103rd Element, There is no much importance of above 103rd element,but we can say they are radioactive\n\n");

develops();

return ;

}

}

void info(int i){

printf(" \n\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Welcome to info\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\n");

char element[30];

d:

printf("\n Enter the element atomic number or name or Formula to search Element : ");

scanf("%s",element);

data(element);

k:

printf(" \n Enter y/Y to search again \n Enter N/n to stop : \n");

getchar();

char c;

scanf("%c",&c);

if(c=='y' ||c=='Y')

goto d;

else if(c=='N' || c=='n')

mainscreen2(i);

else

goto k;

}

void reaction()

{

int s,a,b;

WER:

printf("Select group number from 1A ,2A or 3A : ");

scanf("%d",&s);

if (s==1)

{ N:

printf("\nselect one element :");

printf("\t1. H \t2. Li \t3. Na \t4. K \t5. Rb \t6. Cs \t7. Fr \n");

scanf("%d",&a);

if(a>7)

{ printf("Invalid Input\n");

goto N;}

WET:

printf("select one element :");

printf("\t1. F \t2. cl \t3. Br \t4. I \t5. At \t6. Ts \n");

scanf("%d",&b);

if (b>6)

{ printf("Invalid Input\n");

goto WET;}

if(a==1)

{ switch(b){

case 1 :

printf("compound exists : HF \n");

break;

case 2 :

printf("compound exists : HCl\n");

break;

case 3 :

printf("compound exists : HBr\n");

break;

case 4 :

printf("compound exists : HI\n");

break;

case 5 :

printf("compound exists : HAt\n");

break;

case 6 :

printf("compound doesn't exist \n");

break;

default :

printf("Invalid input");

break;

} }

if(a==2)

{ switch(b){

case 1 :

printf("compound exists : LiF\n ");

break;

case 2 :

printf("compound exists : LiCl\n");

break;

case 3 :

printf("compound exists : LiBr\n");

break;

case 4 :

printf("compound exists : LiI\n");

break;

case 5 :

printf("compound exists : LiAt\n");

break;

case 6 :

printf("compound doesn't exist\n ");

break;

default :

printf("Invalid input");

break;

}}

if(a==3)

{ switch(b){

case 1 :

printf("compound exists : NaF\n ");

break;

case 2 :

printf("compound exists : NaCl\n");

break;

case 3 :

printf("compound exists : NaBr\n");

break;

case 4 :

printf("compound exists : NaI\n");

break;

case 5 :

printf("compound exists : NaAt\n");

break;

case 6 :

printf("compound doesn't exist\n ");

break;

default :

printf("Invalid input");

break;

}}

if(a==4)

{ switch(b){

case 1 :

printf("compound exists : KF \n");

break;

case 2 :

printf("compound exists : KCl\n");

break;

case 3 :

printf("compound exists : KBr\n");

break;

case 4 :

printf("compound exists : KI\n");

break;

case 5 :

printf("compound exists : KAt\n");

break;

case 6 :

printf("compound doesn't exist\n ");

break;

default :

printf("Invalid input");

break;

}}

if(a==5)

{ switch(b){

case 1 : printf("compound exists : RbF\n ");

break;

case 2 : printf("compound exists : RbCl\n");

break;

case 3 : printf("compound exists : RbBr\n");

break;

case 4 : printf("compound exists : RbI\n");

break;

case 5 : printf("compound doesn't exist\n");

break;

case 6 : printf("compound doesn't exist \n");

break;

default : printf("Invalid input");

break;

}}

if(a==6)

{ switch(b){

case 1 : printf("compound exists : CsF\n ");

break;

case 2 : printf("compound exists : CsCl\n");

break;

case 3 : printf("compound exists : CsBr\n");

break;

case 4 : printf("compound exists : CsI\n");

break;

case 5 : printf("compound exists : CsAt\n");

break;

case 6 : printf("compound doesn't exist \n");

break;

default : printf("Invalid input");

break;

}}

if(a==7)

{ switch(b){

case 1 : printf("compound doesn't exist \n");

break;

case 2 : printf("compound doesn't exist \n");

break;

case 3 : printf("compound doesn't exist\n");

break;

case 4 : printf("compound doesn't exist\n");

break;

case 5 : printf("compound doesn't exist\n");

break;

case 6 : printf("compound doesn't exist\n ");

break;

default : printf("Invalid input");

break; }

}}

if(s==2)

{ E:

printf("select one element");

printf(" \t1. Be \t2. Mg \t3. Ca \t4. Sr \t5. Ba \t6. Ra\n");

scanf("%d",&a);

if(a>6)

{ printf("Invalid Input\n");

goto E;}

WEY:

printf("select one element :");

printf("\t1. O \t2. S \t3. Se \t4. Te \t5. Po \t6. Lv \n");

scanf("%d",&b);

if(b>6)

{ printf("Invalid Input\n");

goto WEY;}

if(a==1)

{ switch(b){

case 1 : printf("compound exists : BeO\n");

break;

case 2 : printf("compound exists : BeS\n");

break;

case 3 : printf("compound exists : BeSe\n");

break;

case 4 : printf("compound exists : BeTe\n");

break;

case 5 : printf("compound exists : BePo\n");

break;

case 6 : printf("compound doesn't exist\n");

break;

default : printf("Invalid input");

break;

}}

if(a==2)

{ switch(b){

case 1 : printf("compound exists : MgO\n");

break;

case 2 : printf("compound exists : MgS\n");

break;

case 3 : printf("compound exists : MgSe\n");

break;

case 4 : printf("compound exists : MgTe\n");

break;

case 5 : printf("compound exists : MgPo\n");

break;

case 6 : printf("compound doesn't exist\n");

break;

default : printf("Invalid input");

break;

}}

if(a==3)

{ switch(b){

case 1 : printf("compound exists : CaO\n");

break;

case 2 : printf("compound exists : CaS\n");

break;

case 3 : printf("compound exists : CaSe\n");

break;

case 4 : printf("compound exists : CaTe\n");

break;

case 5 : printf("compound exists : CaPo\n");

break;

case 6 : printf("compound doesn't exist\n");

break;

default : printf("Invalid input");

break;

}}

if(a==4)

{ switch(b){

case 1 : printf("compound exists : SrO\n");

break;

case 2 : printf("compound exists : SrS\n");

break;

case 3 : printf("compound exists : SrSe\n");

break;

case 4 : printf("compound exists : SrTe\n");

break;

case 5 : printf("compound doesn't exist\n");

break;

case 6 : printf("compound doesn't exist\n");

break;

default : printf("Invalid input");

break;

}}

if(a==5)

{ switch(b){

case 1 : printf("compound exists : BaO\n");

break;

case 2 : printf("compound exists : BaS\n");

break;

case 3 : printf("compound exists : BaSe\n");

break;

case 4 : printf("compound exists : BaTe\n");

break;

case 5 : printf("compound exists : BaPo\n");

break;

case 6 : printf("compound doesn't exist\n");

break;

default : printf("Invalid input");

break;

}}

if(a==6)

{ switch(b){

case 1 : printf("compound exists : Rh2O3\n");

break;

case 2 : printf("compound exists : Rh2S3\n");

break;

case 3 : printf("compound doesn't exist \n");

break;

case 4 : printf("compound exists : RhTe2\n");

break;

case 5 : printf("compound doesn't exist\n");

break;

case 6 : printf("compound doesn't exist\n");

break;

default : printf("Invalid input");

break;

}}

}

if(s==3)

{ W:

printf("select one element");

printf(" \t1. B \t2. Al \t3. Ga \t4. In \t5. Tl \t6. Nh\n");

scanf("%d",&a);

if(a>6)

{ printf("Invalid Input\n");

goto W;}

WEU:

printf("select one element :");

printf("\t1. N \t2. P \t3. As \t4. Sb \t5. Bi \t6. Mc \n");

scanf("%d",&b);

if(b>6)

{ printf("Invalid Input\n");

goto WEU;}

if(a==1){

switch(b){

case 1 : printf("compound exists : BN\n");

break;

case 2 : printf("compound exists : BP\n");

break;

case 3 : printf("compound exists : BAs\n");

break;

case 4 : printf("compound exists : BSb\n");

break;

case 5 : printf("compound exists : BBi\n");

break;

case 6 : printf("compound doesn't exist\n ");

break;

default : printf("Invalid input");

break;

}}

if(a==2){

switch(b){

case 1 : printf("compound exists : AlN\n");

break;

case 2 : printf("compound exists : AlP\n");

break;

case 3 : printf("compound exists : AlAs\n");

break;

case 4 : printf("compound exists : AlSb\n");

break;

case 5 : printf("compound exists : AlBi\n");

break;

case 6 : printf("compound doesn't exist\n");

break;

default : printf("Invalid input");

break;

}}

if(a==3){

switch(b){

case 1 : printf("compound exists : GaN\n");

break;

case 2 : printf("compound exists : GaP\n");

break;

case 3 : printf("compound exists : GaAs\n");

break;

case 4 : printf("compound exists : GaSb\n");

break;

case 5 : printf("compound exists : BiGa\n");

break;

case 6 : printf("compound doesn't exist\n");

break;

default : printf("Invalid input");

break;

}}

if(a==4){

switch(b){

case 1 : printf("compound exists : InN\n");

break;

case 2 : printf("compound exists : InP\n");

break;

case 3 : printf("compound exists : InAs\n");

break;

case 4 : printf("compound exists : InSb\n");

break;

case 5 : printf("compound exists : BiIn\n");

break;

case 6 : printf("compound doesn't exist\n");

break;

default : printf("Invalid input");

break;

}}

if(a==5){

switch(b){

case 1 : printf("compound exists : Tl3N\n");

break;

case 2 : printf("compound exists : TlP\n");

break;

case 3 : printf("compound exists : AsTl\n");

break;

case 4 : printf("compound exists : TlSb\n");

break;

case 5 : printf("compound exists : BiTl\n");

break;

case 6 : printf("compound doesn't exist\n");

break;

default : printf("Invalid input");

break;

}}

if(a==6){

switch(b){

case 1 : printf("compound doesn't exist\n");

break;

case 2 : printf("compound doesn't exist\n");

break;

case 3 : printf("compound doesn't exist\n");

break;

case 4 : printf("compound doesn't exist\n");

break;

case 5 : printf("compound doesn't exist\n");

break;

case 6 : printf("compound doesn't exist\n");

break;

default : printf("Invalid input");

break;

}}

} if(s>3)

{ printf("\nInvalid Input\n");

goto WER; }

}

void exam(struct logreg \*w,int q){

int countr=0;

getchar();

printf("\n\n\t\t Hello,%s lets start the exam :\n\n\n",w->name);

printf("\n\n\t\t\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*INSTRUCTION FOR EXAM \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\t\t");

printf("\n\t\t \* There are 15 questions in test \n");

printf("\n\t\t \* Each question got one mark\n");

printf("\n\t\t \* Press Enter to go to next question \n");

printf("\n\t\t \* After each question the correct answer to the question is provided \n");

printf("\n\t\t \* If the score in test is greater than your previous test the your highest score will be changed in profile\n");

printf("\n\n\t\t\t Press Enter to Start exam \n");

for(int i=1;i<16;i++){

getchar();

switch(i)

{

case 1:

system("cls");

printf("\n\n\n What element has an atomic number of 1 ?");

printf("\n\nA.Helium\t\tB.Oxygen\n\nC.Hydrogen\t\tD.Gold\n\n");

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

if (toupper(getchar())=='C')

{

printf("\n\n\n\nCorrect!!!");

countr++;getchar();

break;}

else

{

printf("\n\nWrong!!! The correct answer is C.Hydrogen");getchar();

break;

}

case 2:

system("cls");

printf("\n\n\nWhat is the name of the family of elementrs that has a full outer shell of electrons ?");

printf("\n\nA.Noble gases\t\tB.Alkali metals\n\nC.Actinides\t\tD. Halogens");

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

if (toupper(getchar())=='A')

{

printf("\n\nCorrect!!!");countr++;getchar();

break;}

else

{

printf("\n\nWrong!!! The correct answer is A.Noble gases");getchar();

break;

}

case 3:

system("cls");

printf("\n\n\n Abbrevation of Element Gold ");

printf("\n\nA.G\t\tB.Go\n\nC.Au\t\tD.A");

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

if (toupper(getchar())=='C')

{

printf("\n\nCorrect!!!");countr++;getchar();

break;}

else

{

printf("\n\nWrong!!! The correct answer is C.Au");getchar();

break;}

case 4:

system("cls");

printf("\n\n\nWhich of these does not reflect the periodicity of the Elements?");

printf("\n\nA.Neutron/proton ratio\t\tB.Bonding Behaviour\n\nC.Electronegativity\t\tD.Ionization Energy");

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

if (toupper(getchar())=='A')

{printf("\n\n\n\n\t\t");

printf("\n\nCorrect!!!");countr++;getchar();

break;}

else

{

printf("\n\nWrong!!! The correct answer is A.Neutron/proton ratio");getchar();

break;

}

case 5:

system("cls");

printf("\n\n\nThe tenth elements in the periodic table resembles with the ?");

printf("\n\nA.First Period\t\tB.Second Period\n\nC.Fourth group\t\tD.Ninth group");

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

if (toupper(getchar())=='B')

{printf("\n\nCorrect!!!");countr++;getchar(); break;}

else

{

printf("\n\nWrong!!! The correct answer is B.Second Period");

getchar();

break;

}

case 6:

system("cls");

printf("\n\n\n An Element of atomic number 29 belongs to ?");

printf("\n\nA.s-block\t\tB.p-block\n\nC.d-block\t\tD.f-block");

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

if (toupper(getchar())=='C' )

{printf("\n\nCorrect!!!");countr++;getchar();

break;}

else

{printf("\n\nWrong!!! The correct answer is C.d-block");

getchar();

break;}

case 7:

system("cls");

printf("\n\n\nDiagonal relationship is shown by ?");

printf("\n\nA.Elements of first period\t\tB.Elements of second period\n\nC.Elements of third period\t\tD. B and C both");

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

if (toupper(getchar())=='D')

{printf("\n\nCorrect!!!");countr++;getchar();

break;}

else

{printf("\n\nWrong!!! The correct answer is D. B and C both");getchar();

break;}

case 8:

system("cls");

printf("\n\n\nWhich group of periodic table contains only metals?");

printf("\n\nA.IIA\t\tB.IB\n\nC.IA\t\tD.None of the above");

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

if (toupper(getchar())=='B')

{printf("\n\nCorrect!!!");countr++;getchar(); break;}

else

{printf("\n\nWrong!!! The correct answer is B. IB");getchar();

// goto score;

break;}

case 9:

system("cls");

printf("\n\n\nAluminium is diagonally related to (in periodic table)?");

printf("\n\nA.Be\t\tB.B\n\nC.C\t\tD.Li");

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

if (toupper(getchar())=='A')

{printf("\n\nCorrect!!!");countr++; getchar();

break;}

else

{printf("\n\nWrong!!! The correct answer is A.Be");getchar();

break;}

case 10:

system("cls");

printf("\n\n\nAlkali metals in each period have ?");

printf("\n\nA.Lowest Ionization potential\t\tB.Highest ionization potential\n\nC.smallest size\t\tD.Highest Electronegativity ");

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

if (toupper(getchar())=='A')

{printf("\n\nCorrect!!!");countr++;getchar(); break;}

else

{printf("\n\nWrong!!! The correct answer is A.Lowest Ionization Potential");getchar();

break;

}

case 11:

system("cls");

printf("\n\n\nChemical behaviour of atom is determined by?");

printf("\n\nA.Mass Number\t\tB.Binding Energy\n\nC.Atomic Number\t\tD.Number of isotopes");

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

if (toupper(getchar())=='C')

{printf("\n\nCorrect!!!");countr++;getchar();

break;}

else

{printf("\n\nWrong!!! The correct answer is C.Atomic Number");getchar();

break;

}

case 12:

system("cls");

printf("\n\n\nWhich of the following is a inert element?");

printf("\n\nA.He\t\tB.Li\n\nC.H\t\tD.Na");

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

if (toupper(getchar())=='A')

{printf("\n\nCorrect!!!");countr++;

getchar();

break;}

else

{ printf("\n\nWrong!!! The correct answer is A.He");

getchar();

break;

}

case 13:

system("cls");

printf("\n\n\nChoose the typical element?");

printf("\n\nA.K\t\tB.Sc\n\nC.Au\t\tD.Na");

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

if (toupper(getchar())=='D')

{printf("\n\nCorrect!!!");countr++;getchar();

break;}

else

{printf("\n\nWrong!!! The correct answer is D.Na");getchar();

break;

}

case 14:

system("cls");

printf("\n\n\nHighest density is of ?");

printf("\n\nA.Os\t\tB.Ir\n\nC.Pb\t\tD.Hg");

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

if (toupper(getchar())=='A')

{ printf("\n\nCorrect!!!");countr++;

getchar();

break;}

else

{ printf("\n\nWrong!!! The correct answer is A.Os");getchar();

break;

}

case 15:

system("cls");

printf("\n\n\nWhich is metalloid ?");

printf("\n\nA.Pb\t\tB.Sb\n\nC.Bi\t\tD.Mg");

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

if (toupper(getchar()=='B'))

{ printf("\n\nCorrect!!!");countr++;

getchar();

break;

}

else

{ printf("\n\nWrong!!! The correct answer is B.Sb");

getchar();

break;}

}

}

system("cls");

printf("\n\n\n\t Your correct answers are %d out of 15 questions \n",countr);

if(countr> w->highestscore)

w->highestscore =countr;

return;

}

void results(struct logreg\* m,int i){

printf(" \n\n \t\t Name : %s\n\n ",m->name);

printf(" \t\t Highest score secured on Today : %d \n\n",m->highestscore);

double f;

f=((float)(m->highestscore)/15)\*100;

printf(" \t\t Percentage secured : %lf %%\n\n",f);

}

int main(){

mainscreen1();

return 0;}

**GITHUB LINK :** [**https://github.com/carpediem170/command-on-chemistry/**](https://github.com/carpediem170/command-on-chemistry/)

1. **Testing**

**Login**

1) At first place, It shows a welcome note

Text

Description automatically generated

2) There will be a choice of user and developer.

Text

Description automatically generated

3) By selecting developer,

Text

Description automatically generated

4) By selecting user,It gives us a list of users

A picture containing application

Description automatically generated

5) If user choose user option then There will a choice of login and register.

Text

Description automatically generated

6) By selecting login , we can see the below picture

Text

Description automatically generated

7)If the password is incorrect,then you have to enter credentials again or if the username is new ,then it will redirect to the register option and asks user to relogin.

Graphical user interface, text

Description automatically generated

Text

Description automatically generated

Text

Description automatically generated

**8)RESULTS**

**MENU**

8) after logging in successfully,user can view menu display and asks for a choice.

Text

Description automatically generated

9)Upon selecting exam option,user can see instructions and questions,if the answer is right it displays correct or wrong if it is incorrect.

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10)By selecting info and and entering any element name or number,

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11)By selecting reactions and entering required choices,user can see reactions of elements.

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12)By selecting results,user can see their exam results.

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**Comparing with the existing system**

The project COMMAND ON CHEMISTRY is a helpful tool for the students and teachers interested in chemistry. This new way of learning brings enthusiasm in learner and brings more interest towards the subject. This project is a starting attempt of replacing static education and old methods of teaching.

The main goal of the project is being handy to the learner any time with plenty detailed information ,It is a computerized framework system. This system also keeps the records of users and their standard in subject. The project is user friendly and menu driven, Thus making it useful.

Goals of proposed system:

* The system should be easy to operate.
* Practicing subject in an well organized manner.
* Providing detail and accurate information.
* Testing the user knowledge in the subject topic.
* Providing the supervision on all users to developer.

**Additional Learning**

The project is really a big task in tight schedule but with a good plan and perfect implementation, It can done with joy. The project helped us to learn to plan and manage time. As it was a bulk ,we managed to break the complex task into parts and steps and redefined understanding through discussion and explanation. We gave and received feedback on performance. By challenging assumptions we developed stronger communication and coding skills.

Group projects can help students develop a host of skills that are increasingly important in the professional world. Positive group experiences, moreover, have been to contribute to student learning, retention and overall college success.

**Discussion and Future Work**

The main will behind the project is to make this application available to students who want to learn chemistry in a new way . As we are working with limited resources we couldn’t make it large but with enough resource we can develop this project by including much more information and multiple tests and various typical reactions of elements. Using the data structures to store the information would be a good idea and looking forward on it. Also the project can be made available in internet to reach students across the globe. Increasing the features must not slow down the application, so we must find new ways to organise the data. By updating the project with GUI ,It can be made more attractive and user friendly.

**References**

The links provided below was helpful to design and collect information to make the project successfully.

<https://en.wikipedia.org/wiki/Chemical_element>

<http://www.chem4kids.com/files/elem_intro.html>

<https://www.proprofs.com/quiz-school/topic/element>

**GITHUB LINK :** [**https://github.com/carpediem170/command-on-chemistry/**](https://github.com/carpediem170/command-on-chemistry/)