

## **ABSTRACT**

This project “Periodic Table” is developed on the basis of gaining knowledge and making it easy to memorize the elements of periodic table as well as information related to that particular group. This project is prepared in Turbo C++. This project is sort off of rearranging elements of periodic table which will develop interest among the students for learning the periodic table in easy manner.

## **ACKNOWLEDGEMENT**

Working on this project “Periodic Table” was a source of immense knowledge for us. We are really grateful to our Dr. (Prof.) Parth Shah, HOD - Department Of Information Technology, Dean - Faculty of Technology & Engineering for providing us with an opportunity to undertake this project in this university. We are highly thankful to Prof. Nirav Bhatt for their active support, valuable time and advice during the study and in completing the assignment of preparing the said project within the time provided. The successful completion of this project would not have been possible without the dedicated support from all our mentors and friends.

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## **Chapter 1**

### **INTRODUCTION**

#### **1.1) Aim Of the project**

Using the concepts of C++ graphics, preparing a periodic table with displaying entire modern periodic table as well as separate groups as per user's demand. Obtaining information about specific element as per user's input. Information like(name, atomic no, atomic weight, charge, etc)

#### **1.2) Purpose**

The main purpose of this project is to develop interest among the students for understanding periodic table in better manner. It also focuses on making the periodic table to learn thoroughly and memorizing the information related to specific elements.

#### **1.3) Scope**

This project is appropriate way for the students to memorize the elements of periodic table. This project also provides information about specific element thus making it easy and interesting for the students to learn.

## **Chapter 2**

### **SYSTEM ANALYSIS**

#### **2.1) User Characteristics**

User must be familiar with concepts of C++ graphics and the modern periodic table as it contains symbols of elements of periodic table.

#### **2.2) Tools and Technology**

Software requirement :

Any operating system that can support Turbo C4

Programming Language:

C++ with graphics

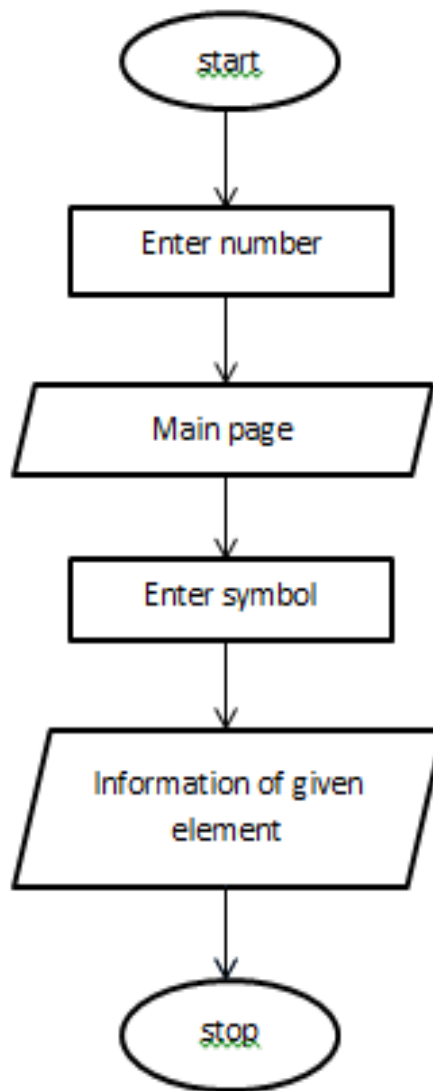
Hardware requirement :

- Keyboard
- RAM – 512 MB or above
- Space Required : Atleast 100 MB
- Processor : Intel Dual Core or above

## Chapter 3

### SYSTEM DESIGN

#### 3.1 Flow of System



## **Chapter 4**

### **IMPLEMENTATION PLANNING**

#### **4.1) Implementation Environment (Single vs Multi user, GUI vs Non GUI)**

- Single user
- GUI

#### **4.2) Module Specifications**

Environment required for this project is Turbo C4.

- Open turbo C4: run the given module and output will be obtained on console screen.
- On console screen, user needs to enter their choice for printing either enter modern periodic table or a specific group and related output will be obtained there.
- For the next case, it will ask for rearrangement of elements of any specific group. User needs to select a specific group for rearrangement.
- For the last, user needs to entire an atomic number and information related to it will be see in next screen.

#### 4.4) Snapshots of project

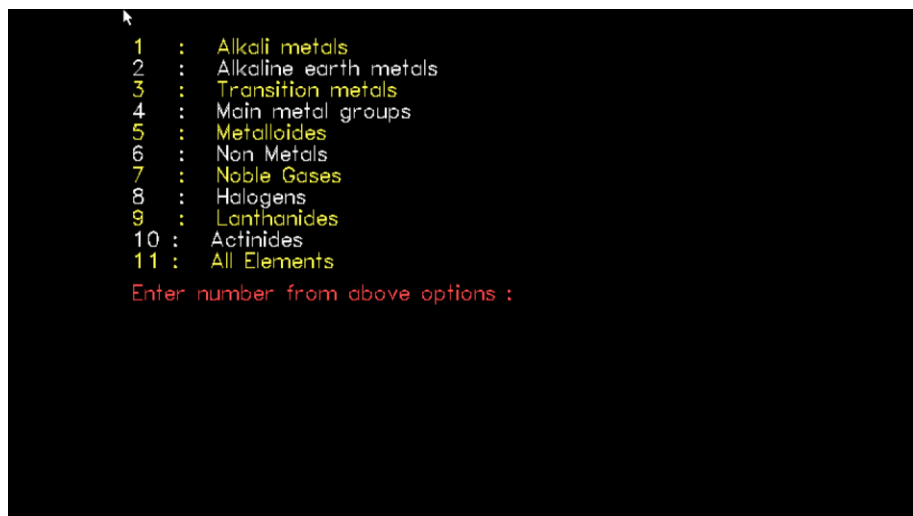


Figure 1 : List of groups of periodic table.

THE MODERN PERIODIC TABLE																	
H																	He
Li	Be											B	C	N	O	F	Ne
Na	Mg											Al	Si	P	S	Cl	Ar
K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
Cs	Ba	La	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
Fr	Ra	Ac	Rf	Db	Sg	Bh	Hs	Mt	Ds	Rg	Cn	Nh	Fl	Mc	Lv	Ts	Og
			Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	
			Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	

Figure 2 : The modern periodic table



```
Name = vanadium  
Number = 23  
Group = 5  
Period = 4  
Formula = V  
Charge = 5+ \ 4+  
Mass = 50.94  
Special = None
```

Figure 3 : Information of the element as per user's input

## **Chapter 5**

### **CONSTRAINTS AND FUTURE ENHANCEMENT**

#### **Constraints:**

- Module requires turbo C4 with graphics .Its little tough to run the module in different environment or any programming language.
- Memory out of space.
- Cannot with multiple users.

#### **Future enhancement**

- Can create a shuffling game in which the elements of the periodic table are shuffled and the user needs to arrange them. This will make learning periodic table in much easier and interesting way.
- Combining it with database, can help it to run in any environment with less errors.

## **Chapter 6**

### **CONCLUSION**

Making this project has helped us to understand various concepts of C++ and graphics. This project was made successfully just to make periodic table interesting and easy to learn for students. The project was completed within the given time period. No major problems were encountered and no major risk was involved during development of the project. All the system error has been removed successfully. The program runs successfully.

## References

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