**North South University**

**Personal Project Report**

**Project Name :**

* **Periodic Table Elements Details**

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**Submission date :** 11.08.2016

**CSE115 LAB \* Summer 16 \* Section:02(RjP)**

Project Title : Periodic Table Elements Details

**PROBLEM** DESCRIPTION:

To get information about any elements of periodic table, you have to use periodic table which is made of paper, or you are going to use any software, then you have to wait to download that particular software. Sometimes you get irritated, because the downloaded software are not getting the exact information as per your requirement.

**PROJECT** DESCRIPTION :

This program will help students to get the details of each elements in periodic table by entering atomic number or symbol. It is easy to run and will display 27 information of an elements.

FUNCTIONAL REQUIREMENTS :

1. Structure has been used as there is two types of variable in one element.

2. Switch Case has been used to take input (atomic number or symbol) from users.

3. taken information has been passed to a Function.

4. input data is compared using 'if-else' statement.

5. To read files , 'fopen' function has been used.

6. While loop has been used to read files until the end of the file & print it to console.

**SOURCE COCE :**

**#include<stdio.h>**

**#include<string.h>**

**struct elements**

**{**

**char symbol[3];**

**int AtomicNumber;**

**};**

**void printfile(struct elements E)**

**{**

**FILE \*fp;**

**if (E.AtomicNumber == 1 || strcmp(E.symbol,"H") == 0) {**

**fp = fopen("1.txt", "r");**

**char c;**

**while((c = getc(fp))!= EOF){**

**putchar(c);**

**}**

**fclose(fp);**

**}**

**.**

**.**

**.**

**else printf("Wrong Input!!");**

**return ;**

**}**

**int main(void)**

**{**

**struct elements E;**

**int x;**

**printf("Search by:\n1.Atomic Number\n2.Symbol\n");**

**scanf("%d", &x);**

**switch (x) {**

**case 1 :**

**printf("Please enter the Atomic Number : ");**

**scanf("%d", &E.AtomicNumber);**

**break;**

**case 2 :**

**printf("Please enter the Symbol : ");**

**scanf("%s", E.symbol);**

**break;**

**default :**

**printf("Wrong Input!");**

**break;**

**}**

**printfile(E);**

**return 0;**

**}**

BUGS :

If I put '2' to compare the condition of 'if' for Helium , then the program prints the details of 'He' ( Helium ) for any symbol entered by the users.

**Tools & Resources:** C programming language & Code :: Blocks.

**References : Wikipedia.**