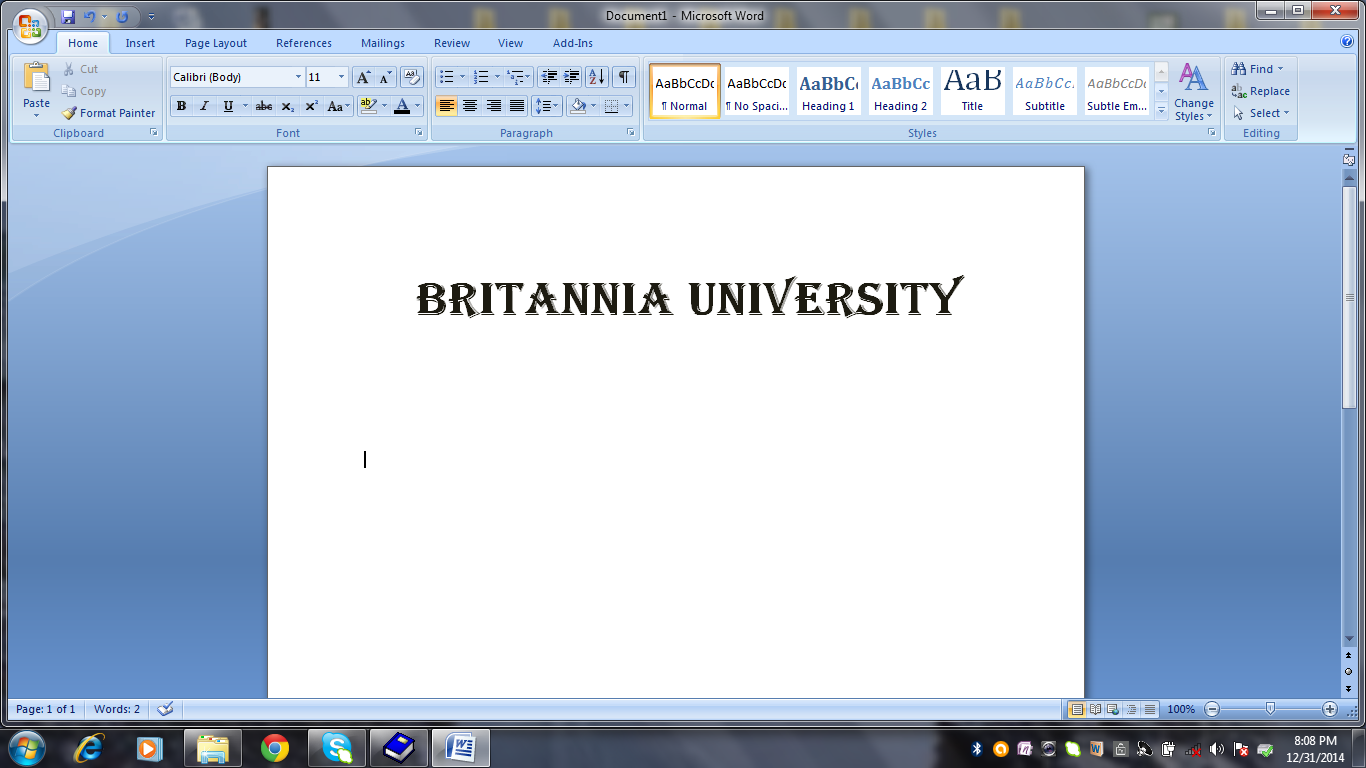


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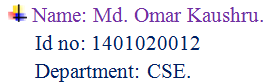
**Course title:** Compiler Design.

**Assignment on:** To check validity of an input number.



Date of Submission: 20-06-2016

Submitted by:

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* A C++ program to check validity of an input number.

**#include <iostream>**

**#include <cstdio>**

**#include <cstring>**

**using namespace std;**

**int main()**

**{**

**char num[10001],c[32][10]={"auto","break","case","char","const",**

**"continue","default","do","double","else","enum","extern","float",**

**"for","goto","if","int","long","register","return","short","signed",**

**"sizeof","static","struct","switch","typedef","union","unsigned",**

**"void","volatile","while"};**

**int l,i,j;**

**while(gets(num))**

**{**

**l=strlen(num);**

**int con=0,identifier=0,iden=0,fraction=0,invalid=0,keyword=0;**

**for(i=0; i<l; i++)**

**{**

**for(j=0; j<32; j++)**

**if(strcmp(c[j],num)==0)**

**{**

**keyword=1;**

**break;**

**}**

***///This condition to check such case !aa,@aa,@22 and so on***

**if((num[i]>=33 && num[i]<=47)||(num[i]>=58 && num[i]<=64)||(num[i]>=91 && num[i]<=96) || (num[i]>=123 && num[i]<=126))**

**{**

**invalid=1;**

**}**

**if((num[0]>='a' && num[0]<='z') || (num[0]>='A' && num[0]<='Z'))**

**{**

**identifier=1;**

***///This condition to check such case aa.aa, aa]aa, aa>aa and so on***

**if((num[i]>=33 && num[i]<=47)||(num[i]>=58 && num[i]<=64)||(num[i]>=91 && num[i]<=96) || (num[i]>=123 && num[i]<=126))**

**{**

**iden++;**

**break;**

**}**

**}**

**switch(num[i])**

**{**

**case '0':**

**case '1':**

**case '2':**

**case '3':**

**case '4':**

**case '5':**

**case '6':**

**case '7':**

**case '8':**

**case '9':**

**con++;**

**break;**

**case '.':**

**fraction++;**

**}**

**if(((num[0]>='0' && num[0]<='9')))**

**{**

**if(i>0 && ((num[i]>='a' && num[i]<='z') || (num[i]>='A' && num[i]<='Z')))**

**{**

**invalid=1;**

**break;**

**}**

**}**

**}**

**if(con==l)**

**cout<<num<<" is Constant.\n";**

**else if(fraction==1 && con==(l-1))**

**cout<<num<<" is Fractional Constant.\n";**

**else if(identifier==1 && iden==0 && keyword!=1)**

**cout<<num<<" is Identifier.\n";**

**else if(keyword==1)**

**cout<<num<<" is Keyword.\n";**

**else if(fraction>1 || invalid==1 || iden!=0)**

**cout<<num<<" is invalid.\n";**

**}**

**return 0;**

**}**

**Sample input/output:**

