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Symbol Table Implementation

Code:

#include<iostream>

using namespace std;

int main(){

int len1,len2,len3,len4;

string str, str1="", str2="",str3="", str4="", identity="";

cin>>str;

len1 = str.length();

for(int i=0;i<len1;i++){

if((str[i]<='z'&& str[i]>='a') || (str[i]<='Z'&& str[i]>='A')|| (str[i]<='9'&& str[i]>='0')){

str2 += str[i];

identity += 'i';

}

else if(str[i]=='('|| str[i]==')'|| str[i]=='['|| str[i]==']'){

str3 += str[i];

identity += 'b';

}

else{

str4 += str[i];

identity += 'o';

}

}

cout<<"SYMBOL\t addr \t type"<<endl;

for(int i=0;i<len1;i++){

cout<<" "<<str[i]<<"\t"<<(void \*) &(str[i])<<"\t";

if(identity[i]=='i')

cout<<"identifier\n";

else if(identity[i]=='o')

cout<<"operator\n";

else

cout<<"bracket\n";

}

cout<<endl<<"the brackets are: ";

for(int i=0;i<str3.length();i++)

cout<<str3[i]<<" ";

cout<<endl<<"the operators are: ";

for(int i=0;i<str4.length();i++)

cout<<str4[i]<<" ";

cout<<endl<<"the identifiers are: ";

for(int i=0;i<str2.length();i++)

cout<<str2[i]<<" ";

cout<<endl;

return 0;

}

Output:

