Typeid Operator

Syntax

typeid (type)	(1)
typeid (expression)	(2)

- We have used typeid for getting the type of the variables. typeid is an operator which is used where dynamic type of an object need to be known.
- typeid(x).name () return shorthand name of the data type of x, for example, it returns i for integers, d for doubles, Pi for the pointer to integer etc. full name depends on compiler.
- The header <typeinfo> must be included before using typeid (if the header is not included, every use of the keyword typeid makes the program ill-formed.

```
#include<iostream>
#include<string>
#include<typeinfo>
using namespace std;
int main ()
{
   int a=10;
   auto b=20;
   string str = "Mumbai";
   auto s='a';
   char c;

   auto t=&a;
   cout << typeid(a).name () << end
        << typeid(b).name () << end
        << typeid(str).name () << end
        << typeid(s).name () << end
        << typeid(c).name () << end
        << typeid(t).name () << end;
}
```

OUTPUT
i
i
NSt7__cxx1112basic_stringIcSt11char_traitsIcESaIcEEE
c
c
Pi