Write any program that demonstrates the use of multiple catch handling, re-throwing an exception, and catching all exception.

```
#include <iostream>
#define SUCCESS 0
using namespace std;
class DIVZERO{};
class DIVMINUS{};
int main()
{
 int a, b;
 float ans;
 try {
  cout << "a";
  cin >> a;
  cout << "b";
  cin >> b;

  try {
   if(b < 0)
    throw DIVMINUS();
   if(b == 0)
    throw DIVZERO();
   ans = a/b;
  }
  catch (DIVZERO)
  {
   cerr << "rethrowing DIVZERO exception" << endl;
   throw;
  }
  catch (DIVMINUS)
  {
   cerr << "divison by minus in not allowed"<< endl;
  }
 } catch (...) {
  cerr << "caught exception";
 }
 cout << ans;
 return SUCCESS;
}
```

```
#include<iostream>//or
using namespace std;
class Check
{
   int x;
   public:
   Check()
   {
      cout<<"Enter a number between 0 and 100: ";
      cin>>x;
   }
   class Smaller{};
   class Larger{};
   void check()
   {
      try
      {
         if(x<0)
         {
            throw Smaller();
         }
         if(x>100)
         {
            throw Larger();
         }
      }
      catch(Larger)
      {
         cout<<"Rethrowing greater exception"<<endl;
         throw;
      }
   }
};
int main()
{
   Check obj;
   try
   {
      obj.check();
      cout<<"The number is valid"<<endl;
```

```
    }
    catch(Check::Smaller)
    {
       cout<<"The number is less than 0"<<endl;
    }
    catch(Check::Larger)
    {
       cout<<"The number is greater than 100"<<endl;
    }
    return 0;
}
```