**Chapter 19 Notes**

**Alex Yang**

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1. Base/derived objects in C++

#include<iostream>

using std::cout;

class A{

public:

A(int a){ this->a = a;}

int getA(void){ return this->a;}

private:

int a;

};

class B:public A{

public:

B(int b):A(b){

this->b = b;

}

int getB(void){return this->b;}

private:

//int a;

int b;

};

int main(void){

A a(123);

B b(456);

cout<<"A.a = "<<a.getA()<<"\n";

cout<<"B.b = "<<b.getB()<<"\n";

// cout<<"a.b = "<<a.getB()<<"\n"; //Error

cout<<"B.b = "<<b.getA()<<"\n";

return 0;

}

1. “setprecision” in iomanip

#include<iostream>

#include<iomanip>

#include<cmath>

using namespace std;

int main() {

double s=20.7843000;

cout << s << endl;

cout << "setprecision( 1 )"<< setprecision( 1 )<< s << endl;

cout << "setprecision( 2 )"<< setprecision( 2 )<< s << endl;

cout << "setprecision( 3 )"<< setprecision( 3 )<< s << endl;

cout << "setprecision( 4 )"<< setprecision( 4 )<< s << endl;

cout << "setprecision( 5 )"<< setprecision( 5 )<< s << endl;

cout << "setprecision( 6 )"<< setprecision( 6 )<< s << endl;

cout << "setprecision( 7 )"<< setprecision( 7 )<< s << endl;

cout << "setprecision( 8 )"<< setprecision( 8 )<< s << endl;

cout << fixed; //Specify the number of digits in the fractional part

cout << "After fixed, setprecision( 8 )"<< setprecision( 6 )<< s << endl;

return 0;

}

1. “setiosflags” in iomanip

#include<iostream>

#include<iomanip>

//#include<cmath>

using namespace std;

int main() {

double s=20.7843000;

cout << s << endl;

cout << setiosflags( ios::fixed ); //Control # of digits in fractional part

cout << "setprecision( 1 )"<< setprecision( 1 )<< s << endl;

cout << "setprecision( 2 )"<< setprecision( 2 )<< s << endl;

cout << "setprecision( 3 )"<< setprecision( 3 )<< s << endl;

cout << "setprecision( 4 )"<< setprecision( 4 )<< s << endl;

cout << "setprecision( 5 )"<< setprecision( 5 )<< s << endl;

cout << "setprecision( 6 )"<< setprecision( 6 )<< s << endl;

cout << "setprecision( 7 )"<< setprecision( 7 )<< s << endl;

cout << "setprecision( 8 )"<< setprecision( 8 )<< s << endl;

return 0;

}

#include<iostream>

#include<iomanip>

using namespace std;

int main() {

double s=20.7843000;

cout << s << endl;

cout << setiosflags( ios::fixed);

cout << "setprecision( 0 )"<< setprecision( 0 )<< s << endl;

cout << "setprecision( 1 )"<< setprecision( 1 )<< s << endl;

cout << "setprecision( 2 )"<< setprecision( 2 )<< s << endl;

cout << "setprecision( 3 )"<< setprecision( 3 )<< s << endl;

cout << setiosflags( ios::fixed|ios::showpoint );

//if setprecision( 0 ), dot will be shown

cout << "setprecision( 0 )"<< setprecision( 0 )<< s << endl;

cout << "setprecision( 1 )"<< setprecision( 1 )<< s << endl;

cout << "setprecision( 2 )"<< setprecision( 2 )<< s << endl;

cout << "setprecision( 3 )"<< setprecision( 3 )<< s << endl;

return 0;

}