

ECE2036: Week 12 – Polymorphic Global Function

Instructions: Find the output of the following code

```
#include <iostream>
using namespace std;

class Base
{
public:
    virtual void Func1() = 0;
    void Func2();
    virtual void Func3();
    void Func4(); };
class Sub1 : public Base
{public:
    virtual void Func1();
    void Func2(); };
class Sub2 : public Sub1 {
public:
    virtual void Func1();
    void Func2();
    virtual void Func3(); };
class Sub3 : public Sub2
{public:
    virtual void Func1();
    void Func2(); };

void Base::Func2()
{ std::cout << "Hello from Base::Func2()" << std::endl; };
void Base::Func3()
{ std::cout << "Hello from Base::Func3()" << std::endl; };
void Base::Func4()
{ std::cout << "Hello from Base::Func4()" << std::endl;
Func1();
Func2(); };
void Sub1::Func1()
{ std::cout << "Hello from Sub1::Func1()" << std::endl; };
void Sub1::Func2()
{ std::cout << "Hello from Sub1::Func2()" << std::endl; };
void Sub2::Func1()
{ std::cout << "Hello from Sub2::Func1()" << std::endl; };
void Sub2::Func2()
{ std::cout << "Hello from Sub2::Func2()" << std::endl; };
void Sub2::Func3()
{ std::cout << "Hello from Sub2::Func3()" << std::endl; };
void Sub3::Func1()
{ std::cout << "Hello from Sub3::Func1()" << std::endl; };
void Sub3::Func2()
{ std::cout << "Hello from Sub3::Func2()" << std::endl; };

void globalFunction(Base * b)
{
    b->Func1();
    b->Func2();
    b->Func3();
    b->Func4();
}

int main()
{
    Sub2 s2;
    Sub3 s3;

    globalFunction(&s2);
    cout << endl;
    globalFunction(&s3);
}
```