**Structural Design Pattern Report**

Group 5

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Facade

When we receive a file from the Internet, we may use different strategies to deal with it. These strategies include four different steps: antivirus, compress files, encrypt files, and send files. Different strategies may include different steps. For example, when we received a file and want to share with specific people, we need to all the four steps to process the file. But for some files we only need to antivirus and send them.

Code:

File Name: AntiVirus.h

Author: Bichi Zhang

Date: 04/20/2019

Complier Used: C++ by Visual Studio 2017

#include<iostream>

using namespace std;

class AntiVirus

{

public:

void Operation1() { cout << "AntiVirus" << endl; }

};

File Name: CompressedFile.h

Author: Bichi Zhang

Date: 04/20/2019

Complier Used: C++ by Visual Studio 2017

#include<iostream>

using namespace std;

class CompressedFile

{

public:

void Operation2() { cout << "CompressedFile" << endl; }

};

File Name: EncryptedFile.h

Author: Bichi Zhang

Date: 04/20/2019

Complier Used: C++ by Visual Studio 2017

#include<iostream>

using namespace std;

class EncryptedFile

{

public:

void Operation3() { cout << "EncryptedFile" << endl; }

};

File Name: SendFile.h

Author: Bichi Zhang

Date: 04/20/2019

Complier Used: C++ by Visual Studio 2017

#include<iostream>

using namespace std;

class SendFile

{

public:

void Operation4() { cout << "SendFile" << endl; }

};

File Name: Operate.h

Author: Bichi Zhang

Date: 04/21/2019

Complier Used: C++ by Visual Studio 2017

#include "AntiVirus.h"

#include "CompressedFile.h"

#include "EncryptedFile.h"

#include "SendFile.h"

class Operate

{

AntiVirus anti;

CompressedFile zip;

EncryptedFile encrypt;

SendFile send;

public:

void MethodA()

{

cout << "MethodA:" << endl;

anti.Operation1();

zip.Operation2();

encrypt.Operation3();

send.Operation4();

}

void MethodB()

{

cout << "MethodB:" << endl;

anti.Operation1();

send.Operation4();

}

};

File Name: main.cpp

Author: Bichi Zhang

Date: 04/21/2019

Complier Used: C++ by Visual Studio 2017

#include "Operate.h"

int main()

{

Operate op;

op.MethodA();

op.MethodB();

return 0;

}

Screenshot:

