

FileEditSelectionViewGoRunTerminalHelp

OOPS By Apna College

EXPLORER

OOPS BY APNA COLLEGE

1.ClassObject

1.ClassObject.cpp

2.Encapsulation.cpp

3.Costructor

3.Costructor.cpp

4.Typeofconstructor

4.Typeofconstructor.cpp

5.thispoiner.cpp

6.Copyconstructor.cpp

7.swallowcopy.cpp

8.deepcopy.cpp

9.destructor.cpp

10.inheritance.cpp

11.polymorphism

11.polymorphism.cpp

12.runtimeploy.cpp

13.Abstruction.cpp

14.static.cpp

tempCodeRunnerFile.cpp

tempCodeRunnerFile.exe

1.ClassObject.cpp > main()

```
1  #include <bits/stdc++.h>
2  using namespace std;
3
4  class teacher{
5      private:
6          double salary;
7      public:
8          //properties / attributes
9          string name;
10         string subject;
11         string dept;
12         //methods / member function
13         void changedept(string newDept){
14             dept=newDept;
15         }
16         //setter
17         void setSalary(double s){
18             salary=s;
19         }
20         //getter
21         double getSalary(){
22             return salary;
23         }
24     };
25
26     int main()
27     {
28         teacher t1;
29         t1.name="Monjur";
30         t1.subject="C++";
31         t1.dept="ICE";
32         t1.setSalary(25000);
33         cout<<t1.name<<endl;
34         cout<<t1.getSalary()<<endl;
35         return 0;
36     }
```

PROBLEMS

OUTPUT

DEBUG CONSOLE

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PORTS

PS D:\Programming\OOPS C++\OOPS By Apna College> cd "d:\Programming\OOPS C++\OOPS By Apna College\" ; if (\$?) { g++ tempCodeRunnerFile.cpp -o tempCodeRunnerFile } ; if (\$?) { .\tempCodeRunnerFile }
Monjur
25000
PS D:\Programming\OOPS C++\OOPS By Apna College>

Code

Code

Ln 36, Col 2 Spaces: 4 UTF-8 CRLF {} C++ Win32

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← →

🔍 OOPS By Apna College

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EXPLORER

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> OUTLINE

> TIMELINE

1.Classobject

1.Classobject.cpp

2.Encapsulation.cpp

3.Costructor

3.Costructor.cpp

4.Typeofconstructor

4.Typeofconstructor.cpp

5.thispoiner.cpp

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11.polymorphism.cpp

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13.Abstruction.cpp

14.static.cpp

tempCodeRunnerFile.cpp M

tempCodeRunnerFile.exe M

1.Classobject.cpp

2.Encapsulation.cpp

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11.polymorphism.cpp

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13.Abstruction.cpp

14.static.cpp

tempCodeRunnerFile.cpp

tempCodeRunnerFile.exe

3.Costructor.cpp

teacher

1 #include <bits/stdc++.h>

2 using namespace std;

3

4 class teacher{

5 public:

6 //properties / attributes

7 string name;

8 string subject;

9 string dept;

10 //Constructor

11 teacher(){

12 cout<<"Hi!,I am a Constructor"<<endl;

13 dept="ICE";

14 }

15 };

16 int main()

17 {

18 teacher t1;//Constructor called Automatically

19 t1.name="Monjur";

20 t1.subject="C++";

21 //t1.dept="ICE";

22 cout<<t1.name<<endl;

23 cout<<t1.dept<<endl;

24 return 0;

25 }

PROBLEMS

OUTPUT

DEBUG CONSOLE

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PS D:\Programming\OOPS C++\OOPS By Apna College> cd "d:\Programming\OOPS C++\OOPS By Apna College\" ; if (\$?) { g++ tempCodeRunnerFile.cpp -o tempCodeRunnerFile.exe ; if (\$?) { .\tempCodeRunnerFile.exe }
Hi!,I am a Constructor
Monjur
ICE
PS D:\Programming\OOPS C++\OOPS By Apna College>

+ v ... ^ x

Code

Code

main*

Run Testcases

0 0 0

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Ln 15, Col 1

Spaces: 4

UTF-8

CRLF

{ } C++

Win32

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EXPLORER

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> OUTLINE

> TIMELINE

4.Typeofconstructor.cpp • 5.thispoiner.cpp 6.Copyconstructor.cpp 7.swallowcopy.cpp 8.deepcopy.cpp 9.destructor.cpp 10.inherita

4.Typeofconstructor.cpp > main()

```
1 #include <bits/stdc++.h>
2 using namespace std;
3
4 class teacher{
5     public:
6         string name;
7         string subject;
8         string dept;
9         //non-paramiterized
10        teacher(){
11            cout<<"Hi!,I am a Constructor"<<endl;
12            dept="ICE";
13        }
14        //paramiterized
15        teacher(string n,string sub,string dep){
16            name=n;
17            subject=sub;
18            dept=dep;
19        }
20        void getInfo(){
21            cout<<name<<endl;
22            cout<<subject<<endl;
23        }
24    };
25
26
27 int main()
28 {
29     teacher t1={"Monjur","C++","ICE"};
30     t1.getInfo();
31     return 0;
32 }
```

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Code + - 📄 🗑️ ... ^ X

PS D:\Programming\OOPS C++\OOPS By Apna College> cd "d:\Programming\OOPS C++\OOPS By Apna College\" ; if (\$?) { g++ tempCodeRunnerFile.cpp -o tempCodeRunnerFile } ; i
f (\$?) { .\tempCodeRunnerFile }
Monjur
C++
PS D:\Programming\OOPS C++\OOPS By Apna College>

Ln 32, Col 2 Spaces: 4 UTF-8 CRLF {} C++ Win32

File Edit Selection View Go Run Terminal Help

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EXPLORER

📁 OOPS BY APNA COLLEGE

📄 1.Classobject

📄 1.Classobject.cpp

📄 2.Encapsulation.cpp

📄 3.Costructor

📄 3.Costructor.cpp

📄 4.Typeofconstructor

📄 4.Typeofconstructor.cpp

📄 5.thispointer.cpp

📄 6.Copyconstructor.cpp

📄 7.swallowcopy.cpp

📄 8.deeppcopy.cpp

📄 9.destructor.cpp

📄 10.inheritance

📄 11.polymorphism

📄 11.polymorphism.cpp

📄 12.runtimeemploy.cpp

📄 13.Abstruction.cpp

📄 14.static.cpp

📄 tempCodeRunnerFile.cpp M

📄 tempCodeRunnerFile.exe M

5.thispointer.cpp

main()

```
1 #include <bits/stdc++.h>
2 using namespace std;
3
4 class teacher{
5     public:
6         string name;
7         string subject;
8         string dept;
9         //non-paramiterized
10        teacher(){
11            cout<<"Hi!,I am a Constructor"<<endl;
12            dept="ICE";
13        }
14        //paramiterized
15        teacher(string name,string subject,string dept){
16            this->name=name;
17            this->subject=subject;
18            this->dept=dept;
19            //first one is object,second one is parameter
20        }
21        void getInfo(){
22            cout<<name<<endl;
23            cout<<subject<<endl;
24        }
25    };
26
27 int main()
28 {
29     teacher t1={"Monjur","C++","ICE"};
30     t1.getInfo();
31     return 0;
32 }
```

PROBLEMS

OUTPUT

DEBUG CONSOLE

TERMINAL

PORTS

📄 Code +

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```
PS D:\Programming\OOPS C++\OOPS By Apna College> cd "d:\Programming\OOPS C++\OOPS By Apna College\" ; if ($?) { g++ tempCodeRunnerFile.cpp -o tempCodeRunnerFile } ; i
f ($?) { .\tempCodeRunnerFile }
Monjur
C++
PS D:\Programming\OOPS C++\OOPS By Apna College>
```

main*

🏃 Run Testcases

🔍 0

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🚫 0

Ln 32, Col 2

Spaces: 4

UTF-8

CRLF

{ } C++

Win32

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🔍 OOPS By Apna College

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EXPLORER

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📁 OOPS BY APNA COLLEGE

📄 1.Classobject

📄 1.Classobject.cpp

📄 2.Encapsulation.cpp

📄 3.Costructor

📄 3.Costructor.cpp

📄 4.Typeofconstructor

📄 4.Typeofconstructor.cpp

📄 5.thispoiner.cpp

📄 6.Copyconstructor.cpp

📄 7.swallowcopy.cpp

📄 8.deepcopy.cpp

📄 9.destructor.cpp

📄 10.inheritance

📄 11.polymorphism

📄 11.polymorphism.cpp

📄 12.runtimeploy.cpp

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📄 14.static.cpp

📄 tempCodeRunnerFile.cpp

📄 tempCodeRunnerFile.exe

4.Typeofconstructor.cpp

5.thispoiner.cpp

6.Copyconstructor.cpp

7.swallowcopy.cpp

8.deepcopy.cpp

9.destructor.cpp

10.inherita

▶⚙️📄...

6.Copyconstructor.cpp > main()

```
1 #include <bits/stdc++.h>
2 using namespace std;
3
4 class teacher{
5     public:
6         string name;
7         string subject;
8         string dept;
9         //non-paramiterized
10        teacher(){
11            cout<<"Hi!,I am a Constructor"<<endl;
12            dept="ICE";
13        }
14        //paramiterized
15        teacher(string name,string subject,string dept){
16            this->name=name;
17            this->subject=subject;
18            this->dept=dept;
19            //first one is object,second one is parameter
20        }
21        //copy constructor
22        teacher(teacher &orgobj){ //pass by reference
23            this->name=orgobj.name;
24            this->subject=orgobj.subject;
25            this->dept=orgobj.dept;
26            cout<<"I am Custom Copy Constructor"<<endl;
27        }
28        void getInfo(){
29            cout<<name<<endl;
30            cout<<subject<<endl;
31        }
32    };
33
34    int main()
35    {
36        teacher t1={"Monjur","C++","ICE"};
37        teacher t2=t1;//copy custom constructor ->invoked
38        t2.getInfo();
39        return 0;
40    }
```

PROBLEMS

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📄 Code + v 📄 🗑️ ... ^ x

PS D:\Programming\OOPS C++\OOPS By Apna College> cd "d:\Programming\OOPS C++\OOPS By Apna College\" ; if (\$?) { g++ tempCodeRunnerFile.cpp -o tempCodeRunnerFile } ; i
f (\$?) { .\tempCodeRunnerFile }
I am Custom Copy Constructor
Monjur
C++
PS D:\Programming\OOPS C++\OOPS By Apna College>

main* 🔁 ▶ Run Testcases 0 0 0 0

Ln 40, Col 2 Spaces: 4 UTF-8 CRLF {} C++ Win32 🔔

FileEditSelectionViewGoRunTerminalHelp

←→

🔍 OOPS By Apna College

📄 5

EXPLORER

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> OUTLINE

> TIMELINE

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EXPLORER

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📁 OOPS BY APNA COLLEGE

📄 1.Classobject

📄 1.Classobject.cpp

📄 2.Encapsulation.cpp

📄 3.Costructor

📄 3.Costructor.cpp

📄 4.Typeofconstructor

📄 4.Typeofconstructor.cpp

📄 5.thispoiner.cpp

📄 6.Copyconstructor.cpp

📄 7.swallowcopy.cpp

📄 8.deepcopy.cpp

📄 9.destructor.cpp

📄 10.inherita

📄 11.polymorphism

📄 11.polymorphism.cpp

📄 12.runtimeemploy.cpp

📄 13.Abstruction.cpp

📄 14.static.cpp

📄 tempCodeRunnerFile.cpp

📄 tempCodeRunnerFile.exe

📄 4.Typeofconstructor.cpp

📄 5.thispoiner.cpp

📄 6.Copyconstructor.cpp

📄 7.swallowcopy.cpp X

📄 8.deepcopy.cpp

📄 9.destructor.cpp

📄 10.inherita

📄 7.swallowcopy.cpp

📄 main()

1#include <bits/stdc++.h>

2using namespace std;

3

4class student

5{

6public:

7string name;

8double *cgpaPtr;

9

10student(string name, double cgpa)

11{

12this->name = name;

13cgpaPtr=new double;

14*cgpaPtr=cgpa;

15}

16student(student &obj)

17{

18this->name = obj.name;

19this->cgpaPtr = obj.cgpaPtr;

20}

21void getInfo()

22{

23cout << name << endl;

24cout << *cgpaPtr << endl;

25}

26};

27

28int main()

29{

30student s1{"Monjur", 3.42};

31student s2(s1);

32s1.getInfo();

33*(s2.cgpaPtr)=3.5;

34s1.getInfo();

35}

36

PROBLEMS

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📄 Code

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f (\$?) { .\tempCodeRunnerFile }

Monjur

3.42

Monjur

3.5

PS D:\Programming\OOPS C++\OOPS By Apna College>

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main*

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▶ Run Testcases

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Ln 35, Col 2

Spaces: 4

UTF-8

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{ } C++

Win32

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EXPLORER

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ifconstructor.cpp

5.thispoiner.cpp

6.Copyconstructor.cpp

7.swallowcopy.cpp

8.deepecopy.cpp

9.destructor.cpp

10.inheritance.cpp

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📁 OOPS BY APNA COLLEGE

📄 1.Classobject

🔗 1.Classobject.cpp

📄 2.Encapsulation.cpp

🔗 3.Costructor

🔗 3.Costructor.cpp

📄 4.Typeofconstructor

🔗 4.Typeofconstructor.cpp

🔗 5.thispoiner.cpp

🔗 6.Copyconstructor.cpp

🔗 7.swallowcopy.cpp

🔗 8.deepecopy.cpp

🔗 9.destructor.cpp

🔗 10.inheritance.cpp

📄 11.polymorphism

🔗 11.polymorphism.cpp

🔗 12.runtimeploy.cpp

🔗 13.Abstruction.cpp

🔗 14.static.cpp

🔗 tempCodeRunnerFile.cpp

tempCodeRunnerFile.exe

🔗 10.inheritance.cpp > student > getInfo()

```
1 #include <bits/stdc++.h>
2 using namespace std;
3
4 class person{
5     public:
6     string name;
7     int age;
8     // person(){
9     //     cout<<"I am parent Constructor"<<endl;
10    // }
11    person(string name,int age){
12        this->name=name;
13        this->age=age;
14    }
15
16 };
17 class student:public person{
18     public:
19     int rollno;
20     // student(){
21     //     cout<<"I am Child Constructor"<<endl;
22     // }
23     student(string name,int age,int rollno):person(name,age){
24         this->rollno=rollno;
25     }
26     void getInfo(){
27         cout<<"Name: "<<name<<endl;
28         cout<<"Age: "<<age<<endl;
29         cout<<"Roll No: "<<rollno<<endl;
30     }
31 };
32 int main()
33 {
34     student s1("Monjur",25,220601);
35     // s1.name="Monjur";
36     // s1.age=25;
37     // s1.rollno=220601;
38     s1.getInfo();
39 }
40
```

PROBLEMS

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📄 Code

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```
PS D:\Programming\OOPS C++\OOPS By Apna College> cd "d:\Programming\OOPS C++\OOPS By Apna College\" ; if ($?) { g++ tempCodeRunnerFile.cpp -o tempCodeRunnerFile } ; i
f ($?) { .\tempCodeRunnerFile }
Name: Monjur
Age: 25
Roll No: 220601
PS D:\Programming\OOPS C++\OOPS By Apna College>
```

🏠

🔗 main*

▶ Run Testcases

🔗 0

🔗 0

🔗 0

Ln 29, Col 41

Spaces: 4

UTF-8

CRLF

{ } C++

Win32

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FileEditSelectionViewGoRunTerminalHelp

←→

🔍 OOPS By Apna College

📄 6

EXPLORER

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poiner.cpp

6.Copyconstructor.cpp

7.swallowcopy.cpp

8.deepcopy.cpp

9.destructor.cpp

10.inheritance.cpp

11.polymorphism.cpp X

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> OUTLINE

> TIMELINE

11.polymorphism.cpp > main()

```
1  #include <bits/stdc++.h>
2  using namespace std;
3
4  class print{
5      public:
6          //function overloading
7          void show(int x){
8              cout<<x<<endl;
9          }
10         void show(char ch){
11             cout<<ch<<endl;
12         }
13     };
14
15     int main()
16     {
17         print p1;
18         p1.show('%');
19     }
```

PROBLEMS

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📄 Code

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PS D:\Programming\OOPS C++\OOPS By Apna College> cd "d:\Programming\OOPS C++\OOPS By Apna College\" ; if (\$?) { g++ tempCodeRunnerFile.cpp -o tempCodeRunnerFile } ; if (\$?) { .\tempCodeRunnerFile }
%
PS D:\Programming\OOPS C++\OOPS By Apna College>

main*

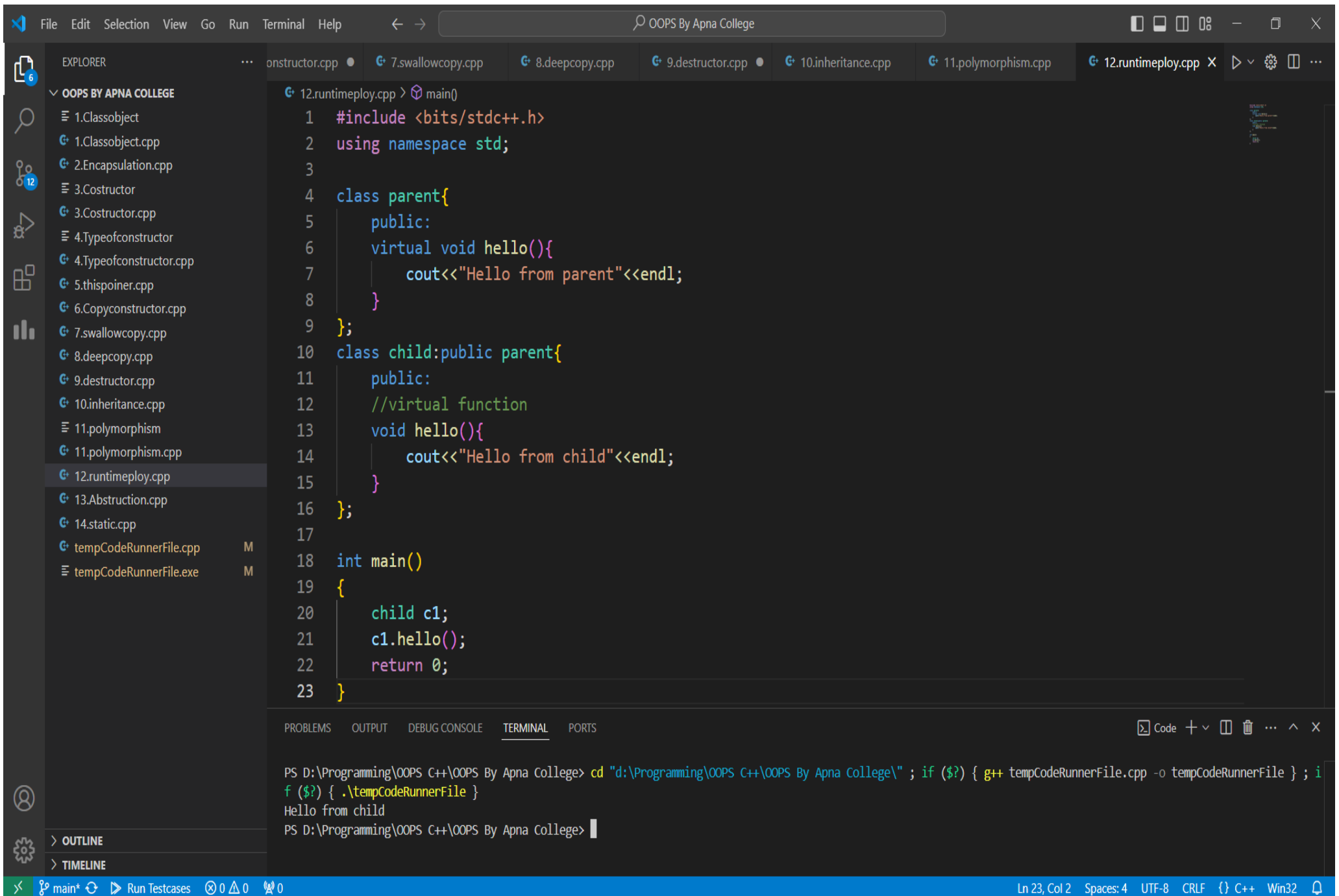
🔄

▶ Run Testcases

🔍 0 ⚠️ 0

🚫 0

Ln 19, Col 2 Spaces: 4 UTF-8 CRLF {} C++ Win32



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OOPS By Apna College

EXPLORER

OOPS BY APNA COLLEGE

1.Classobject

1.Classobject.cpp

2.Encapsulation.cpp

3.Costructor

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4.Typeofconstructor

4.Typeofconstructor.cpp

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8.deepcopy.cpp

9.destructor.cpp

10.inheritance.cpp

11.polymorphism

11.polymorphism.cpp

12.runtimeemploy.cpp

13.Abstruction.cpp

14.static.cpp

tempCodeRunnerFile.cpp

tempCodeRunnerFile.exe

14.static.cpp > main()

1 #include <bits/stdc++.h>

2 using namespace std;

3 // void fun(){

4 // static int x=0;

5 // cout<<x<<endl;

6 // x++;

7 // };

8 class person{

9 public:

10 person(){

11 cout<<"Constructor"<<endl;

12 }

13 ~person(){

14 cout<<"destructor"<<endl;

15 }

16 };

17 int main()

18 {

19 // fun();

20 // fun();

21 // fun();

22 if (true)

23 {

24 static person obj;

25 }

26 cout<<"End of Main function"<<endl;

27 return 0;

28 }

PROBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS

Code + -

PS D:\Programming\OOPS C++\OOPS By Apna College> cd "d:\Programming\OOPS C++\OOPS By Apna College\" ; if (\$?) { g++ tempCodeRunnerFile.cpp -o tempCodeRunnerFile } ; if (\$?) { .\tempCodeRunnerFile }

Constructor

End of Main function

destructor

PS D:\Programming\OOPS C++\OOPS By Apna College>

< main* Run Testcases 0 0 0

Ln 28, Col 2 Spaces: 4 UTF-8 CRLF {} C++ Win32