

ASSIGNMENT-4

CSE1002 OOP with C++



JULY 10, 2021 BIMAL PARAJULI 20BDS0405



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Registration number: 20BDS0405

Time Remaining: 02:36:14

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Switch to other questions

!!!Caution!!!

Copy/Paste is Disabled for Assessments. Do not Try to overcome by Shortcut Keys or Drag/Drop You will Lose Data

Find maximum possible stolen value from houses

Language

There are n houses build in a line, each of which contains some value in it. A thief is going to steal the maximal value of these houses, but he can't steal in two adjacent houses because the owner of the stolen houses will tell his two neighbors left and right side. What is the maximum stolen value?

Test case: Input: hval[] = {6, 7, 1, 3, 8, 2, 4} Output: 19 Explanation: The thief will steal 6, 1, 8 and 4 from the house.

Font Size 18

Editor Theme

Select a Theme \$



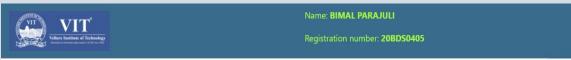
#include<iostream> using namespace std; int stolen(int *x) int sum=0; for(int i=0; i<7; i=i+2) sum += *x; X++; X++; return sum; int main() int housearray[7]; for(int i=0; i<7; i++) cin>> housearray[i]; cout << stolen(housearray) << endl;</pre> return 0;



Pause Test

Submit Code

Status:



Switch to other questions

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Time Remaining: 02:20:41

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Find maximum possible stolen value from houses

There are n houses build in a line, each of which contains some value in it. A thief is going to steal the maximal value of these houses, but he can't steal in two adjacent houses because the owner of the stolen houses will tell his two neighbors left and right side. What is the maximum stolen value?

```
Test case: Input: hval[] = {5, 3, 4, 11, 2}
Output: 16
Explanation: Thief will steal 5 and 11
```

| Font Size | |
|-----------|--|
| 18 | |

Editor Theme

Select a Theme \$

code has Passed Execution

Language

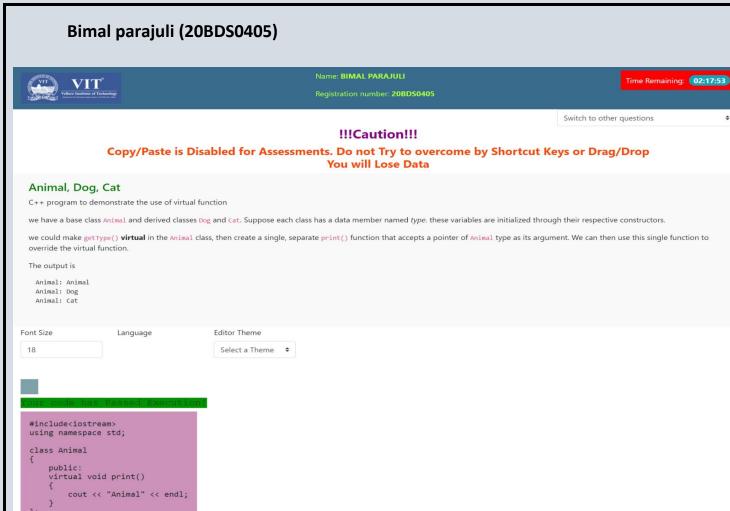
```
#include<iostream>
using namespace std;
int stolen(int *x)
{
    int sum=0;
    for(int i=0; i<5; i=i+3)
    {
        sum+= *x;
        x++;x++;x++;
    }
    return sum;
}
int main()
{
    int myarray[5];
    for(int i=0;i<5; i++)
    {
        cin >> myarray[i];
    }
    cout << stolen(myarray) << endl;
    return 0;
}</pre>
```



Pause Test

Submit Code

Status:



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```
};
class Dog : public Animal
{
     void print()
          cout << "Dog" << endl;
};
class Cat : public Animal
{
     void print()
          cout << "Cat" << endl;
};
int main()
{
     Animal a;
a.print();
Animal * animalptr;
     Dog d;
Cat c;
     animalptr = &d;
animalptr -> print();
     animalptr = &c;
animalptr -> print();
     return 0;
```

Pause Test

Status:

```
C: > Users > Bimal > Desktop > 😅 array_of_objects.cpp > 🗘 arra
     #include<iostream>
     using namespace std;
     class-Student-
                                                 ·····//-student-calss
         char name[50];
int total;
     public:
         -void getdata()
             cout << "Enter your Roll: "
                 -<< endl;</pre>
             cin >> roll;
             cout << "Enter your Name: "
                 << endl;</pre>
            cin.ignore();
cin.get(name, 50);
            cin >> total;
         int pos(Student obj[], int size)
             int pos = 0;
int max = obj[0].total;
for (int i = 0; i < size; i++)
                 if (obj[i].total > max)
                     max = obj[i].total;
             return pos;
          void putdata()
             cout << "Roll: " << roll
                << endl;</pre>
             cout << "Name: " << name
                 << endl;
             cout << "Total Marks: "
                 << total << endl;</pre>
     woid arrayOfObjects()
         Student s[3], s1;
         int pos;
for (int i = 0; i < 3; i++)
             s[i].getdata();
         pos = s1.pos(s, 3);
         cout << "maximum scoreing is:" << endl;</pre>
         s[pos].putdata();
     int-main()
         arrayOfObjects();
         return 0;
```

```
c:\Users\Bimal\Desktop>cd "c:\Users\Bimal\Desktop\" && g++ array_of_objects.cpp -o array_of_objects && "c:\Users\Bimal\Desktop\"array_of_objects
Enter your Roll:
Enter your Name:
bimal
Enter your Total Marks:
1234
Enter your Roll:
Enter your Name:
Enter your Total Marks:
124256
Enter your Roll:
Enter your Name:
almirah
Enter your Total Marks:
maximum scoreing is:
Roll: 45
Name: bim
Total Marks: 124256
```

Exception handling:

```
C: > Users > Bimal > Desktop > ← exception_handling.cpp > ♦ main()
     #include <iostream>
     using namespace std;
     // This function can only throw ints, chars, and doubles.
     void Xhandler(int test) throw(int, char, double)
     if (test == 0)
     throw test; // throw int
     if (test == 1)
     throw 'a'; // throw char
     if (test == 2)
10
     throw 123.23; // throw double
     int main()
     cout << "start\n";</pre>
     try
     {
     Xhandler(2);
18
     }
     catch (int i)
20
     cout << "Caught an integer\n";</pre>
     • • • }
     catch (char c)
     cout << "Caught char\n";</pre>
     . . . }
     catch (double d)
     cout << "Caught double\n";</pre>
     • • • • }
     cout << "end";</pre>
     ···return 0;
 PROBLEMS
           OUTPUT
                   TERMINAL
                            DEBUG CONSOLE
```

start
Caught double
end
c:\Users\Bimal\Desktop>

Pure Virtual Functions:

```
C: > Users > Bimal > Desktop > ♥ pure_vf.cpp > ♥ Base > ♥ Base(int)
    #include <iostream>
    using namespace std;
    class-Base
    protected:
       int x;
    public:
       virtual void fun() = 0;
       Base(int i)
           x = i;
           cout << "base constructor\n";</pre>
       Н
    class Derived : public Base
       int y;
    public:
       Derived(int i, int j) : Base(i) { y = j; }
       void fun() { cout << "x = " << x << ", y = " << y << '\n'; }</pre>
    int main(void)
       Derived d(0, 0);
       d.fun();
       Base *ptr = new Derived(4, 4);
       ptr->fun();
       return 0;
                                  DEBUG CONSOLE
 PROBLEMS
            OUTPUT
                      TERMINAL
c:\Users\Bimal\Desktop>cd "c:\Users\Bimal\Desktop\" && g++ pure_vf.cpp -o pure_vf && "c:\Users\Bimal\Desk
base constructor
x = 0, y = 0
base constructor
x = 4, y = 4
c:\Users\Bimal\Desktop>
```

| Bimal parajuli (20BDS0405) | |
|--|----------------------------|
| Only Vpropel problems attached here. | |
| Other practice problems: | |
| bimal-parajuli/c | cpp at master (github.com) |
| remaining codes will be updated by tomorrow in master bran | |
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