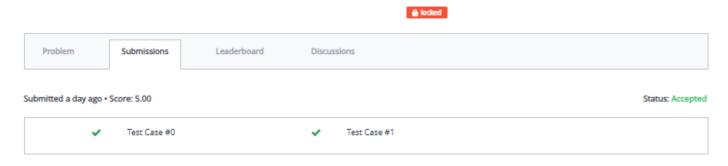
#### Week 5

#### 1. Secure Bank Account with Private Data

# Secure Bank Account with Private Data

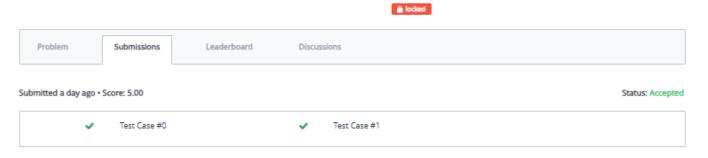


```
Language: C++
                                                                                                                   P Open in editor
1 #include <cmath>
2 #include <cstdio>
3 #include <vector>
4 #include <iostream>
5 #include <algorithm>
6 using namespace std;
8 class BankAccount{
     int balance;
10
      public:
11
          BankAccount(int amount){
12
              balance=amount;
13
14
          void deposit(int amount){
15
              balance+=amount:
16
17
          void displayBalnce(){
              cout<<"Updated Balance: "<<balance<<endl;</pre>
18
19
20 };
21 int main() {
      /* Enter your code here. Read input from STDIN. Print output to STDOUT */
23
       int inital, amount;
     cin>>inital>>amount;
25
      BankAccount bac(inital);
26
      bac.deposit(amount);
      bac.displayBalnce();
27
28
      return 0;
29 }
30
```

# Week 5

#### 2. Student Grades with Protected Access

# Student Grades with Protected Access

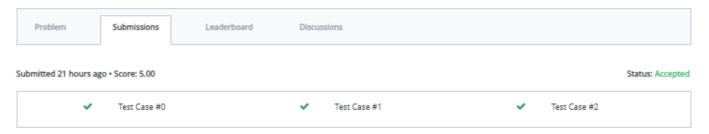


```
Language: C++
                                                                                                                      P Open in editor
 1 #include <cmath>
 2 #include <cstdio>
 3 #include <vector>
4 #include <iostream>
5 #include <algorithm>
6 using namespace std;
8 class Student{
      protected:
10
         int mark;
11 };
12
13 class Result:public Student{
     public:
15
          Result(int m){
16
17
              mark=m;
          void display(){
18
               cout<<"Marks: "<<mark<<endl;
19
20
21 };
22 int main() {
      /\star Enter your code here. Read input from STDIN. Print output to STDOUT \star/
23
       int mark;
24
25
      cin>>mark;
      if(mark>=0 && mark<=100){
26
27
           Result res(mark);
28
           res.display();
29
       return 0;
30
31 }
32
```

#### Week 5

#### 3. Private Salary & Public Raise Function

# Private Salary & Public Raise Function

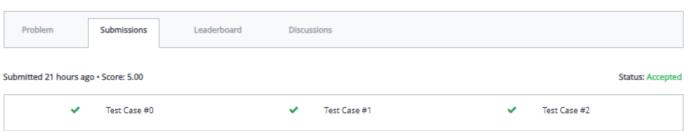


```
Language: C++
                                                                                                                          {\mathcal V} Open in editor
 1 #include <cmath>
 2 #include <cstdio>
 3 #include <vector>
 4 #include <iostream>
 5 #include <algorithm>
 6 using namespace std;
8 class Employee{
       private:
10
       double salary;
11
       public:
12
13
       Employee(double sal){
           salary=sal;
14
15
       void raiseSalary(double percentage){
16
           percentage=1+(percentage/100);
17
            salary*=percentage;
18
19
       void display(){
20
           cout<<"New Salary: "<<salary<<endl;
21
22 };
23 int main() {
       /* Enter your code here. Read input from STDIN. Print output to STDOUT */
25
       double salary;
26
       int percentage;
       cin>>salary;
27
28
       cin>>percentage;
29
       if(1000<=salary && salary<=1e6){
30
31
               Employee emp(salary);
if(0<=percentage && percentage<=100){</pre>
32
                        emp.raiseSalary(percentage);
33
34
                emp.display();
35
36
37 }
       return Θ;
38
```

#### Week 5

### 4. Vehicle Speed Display System

# Vehicle Speed Display System



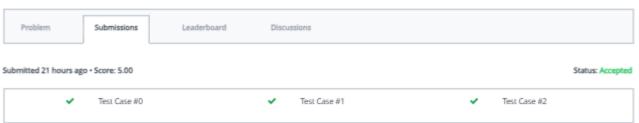
```
Language: C++
                                                                                                                     P Open in editor
Z #1nclude <cstd10>
3 #include <vector>
4 #include <iostream>
5 #include <algorithm>
6 using namespace std;
8 class Vehicles{
10
          string registerNumber, modal;
11 };
12 class Cars:public Vehicles{
13
14
           float maxSpeed:
           Cars(string reg, string mod, float speed){
15
16
               registerNumber=reg;
17
               modal=mod;
18
19
               maxSpeed=speed;
               display();
20
21
           void display(){
22
               if(120<maxSpeed){
23
                   cout<<"Reg: "<<registerNumber<<", Brand: "<<modal<<", Speed: "<<maxSpeed<<", Status: Overspeeding"
   <<endl;
24
25
                   cout<<"Reg: "<<registerNumber<<", Brand: "<<modal<<", Speed: "<<maxSpeed<<", Status: Normal"<<endl;</pre>
26
27
28 };
29 int main() {
30
       /\star Enter your code here. Read input from STDIN. Print output to STDOUT \star/
31
       string reg, mod;
32
       float speed;
33
       cin>>reg>>mod;
34
       cin>>speed;
35
       if(0<=speed && speed<=300){
36
           Cars car(reg, mod, speed);
37
       return Θ;
39 }
```

# Week 5

### 5. Teacher Payroll System

# **Teacher Payroll System**





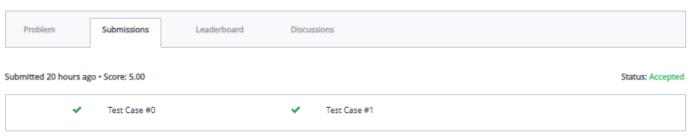
```
Language: C++
                                                                                                                               P Open in editor
 1 #include <cmath>
 2 #include <cstdio>
 3 #include <vector>
 4 #include <iostream>
 5 #include <algorithm>
 6 using namespace std;
8 class Teacher{
      protected:
           string name;
            string subject;
12
13 };
           float salary;
14
15 class Payroll:public Teacher{
16
17
       public:
           int extraClass;
18
           float extraPay;
19
           float totalSalary;
20
21
22
           Payroll(string nam, string sub, float sal, int exCl, float exPay){
              name=nam;
subject=sub;
23
24
                salary=sal;
               extraClass=exCl;
25
26
27
28
                payroll();
                display();
29
30
           void payroll(){
   extraPay=extraClass*extraPay;
31
32
33
                totalSalary=extraPay+salary;
           void display(){
34
                cout<<name<<", Subject: "<<subject<<", Base: "<<salary<<", Extra Pay: "<<extraPay<<", Total: "
  <<totalSalary<<endl;
35
36 };
38
       /\star Enter your code here. Read input from STDIN. Print output to STDOUT \star/
39
40
       string nam, sub;
       float sal, exPay;
41
42
43
       int exCl;
cin>>nam>>sub>>sal;
       if(0<sal){
44
45
46
47
           cin>>exCl>>exPay;
Payroll pay(nam, sub, sal, exCl, exPay);
       return 0;
48 }
```

#### Week 5

### 6. Employee Attendance Logger

# Employee Attendance Logger





```
Language: C++
                                                                                                                  P Open in editor
1 #include <cmath>
2 #include <cstdio>
3 #include <vector>
4 #include <iostream>
5 #include <algorithm>
6 #include <iomanip>
7 using namespace std;
9 class Person{
     protected:
          string name;
           int ID;
13 };
14 class Attendance: public Person{
15
      public:
       int totalWorkingDays, dayPresent;
16
17
      float attendance;
18
          Attendance(string nam, int id, int workingdays, int daypresent){
19
              name=nam;
20
              ID=id;
               totalWorkingDays=workingdays;
22
               dayPresent=daypresent;
23
               display();
25
26
              attendance=(static_cast<float>(dayPresent)/totalWorkingDays)*100;
27
               cout<<"Name: "<<name<<"\nID: "<<ID<<"\nAttendance: "<<fixed<<setprecision(2)<<attendance<<"%"<<endl;
28
               if(attendance<75){
29
                  cout<<"Status: Low Attendance"<<endl;
30
               }else{
31
                   cout<<"Status: Good"<<endl;
32
33
34 };
35 int main() {
       /* Enter your code here. Read input from STDIN. Print output to STDOUT */
       string empName;
       int empID, talWrkDy, preDy;
39
      cin>>empName>>empID>>talWrkDy>>preDy;
       if(preDy<=talWrkDy){
41
           Attendance atten(empName, empID, talWrkDy, preDy);
42
43
       return 0:
44 }
45
```