

Lab Task-3

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

Class

```
class Person
{
```

private:

string name;

int age;

public:

Person()

{

cout << "Empty Constructor" << endl;

}

Person(string name, int age)

{

cout << "Parameterized Constructor" << endl;

this->name = name;

this->age = age;

}

void setAll (string name, int age)

{

 this-> name = name;

 this-> age = age;

}

string getName ()

{

 return name;

}

int getAge ()

{

 return age;

}

void showAll ()

{

 cout << "Name : " << name << endl;

 cout << "Age : " << age << endl;

}

};


```
class Teacher : public Person
{
```

```
    double  
private:
```

```
    double salary;
```

```
public:
```

```
    Teacher()
```

```
{
```

```
    cout << "Empty Constructor" << endl;
```

```
}
```

```
    Teacher(string name, int age, double salary) : Person(name, age)
```

```
{
```

```
    cout << "Parameterized Constructor" << endl;
```

```
    this->salary = salary;
```

```
}
```

```
    void setAll(string name, int age, double salary)
```

```
{
```

```
        Person::setAll(name, age);
```

```
        this->salary = salary;
```

```
}
```

```
double getSalary ()
```

```
{
```

```
    return salary;
```

```
}
```

```
void showAll ()
```

```
{
```

```
    Person :: showAll ();
```

```
    cout << "Salary : " << salary << endl;
```

```
}
```

```
};
```

```
class Student : public Person
```

```
{
```

```
    private: data
```

```
        double cgpa;
```

```
    public:
```

```
        Student ()
```

```
{
```

```
    cout << "Empty Constructor" << endl;
```

```
}
```



```
Student(string name, int age, double cgpa): Person(name, age)
```

```
{
```

```
cout << "Parameterized Constructor" << endl;
```

```
    this->cgpa = cgpa;
```

```
}
```

```
void setAll(string name, int age, double cgpa)
```

```
{
```

```
    this->cgpa = cgpa; ; ("bida") ;
```

```
    Person::setAll(name, age); ; "name" >>
```

```
}
```

```
double getCGPA()
```

```
{
```

```
    return cgpa; ; ("bida") ;
```

```
}
```

```
void showAll()
```

```
{
```

```
    Person::showAll();
```

```
}
```

```
Person::showAll();
```

```

    cout << "CGPA : " << cpga << endl;
}
};

```

```

int main()
{
    Person p1;
    p1.setAll("Abid", 24);
    cout << "Name : " << p1.getName() << endl;
    cout << "Age : " << p1.getAge() << endl;
    p1.showAll();
}

```

```

Person p2("Zavid", 26);
cout << "Name : " << p2.getName() << endl;
cout << "Age : " << p2.getAge() << endl;
p2.showAll();
}

```



```
Teacher t1;
t1.setAll("Hawking", 40, 50000);
cout << "Name : " << t1.getName() << endl;
cout << "Age : " << t1.getAge() << endl;
cout << "Salary : " << t1.getSalary() << endl;
t1.showAll();
```

```
Teacher t2("Tesla", 35, 10000);

cout << "Name : " << t2.getName() << endl;
cout << "Age : " << t2.getAge() << endl;
cout << "Salary : " << t2.getSalary() << endl;
t2.showAll();
```

```
Student s1;
s1.setAll("Akib", 21, 3.85);
cout << "Name : " << s1.getName() << endl;
cout << "Age : " << s1.getAge() << endl;
cout << "CGPA : " << s1.getCGPA() << endl;
s1.showAll();
```

```
Student s2("Rakib", 22, 3.75);
```

```
cout << "Name: " << s2.getName() << endl;
```

```
cout << "Age: " << s2.getAge() << endl;
```

```
cout << "CGPA: " << s2.getCGPA() << endl;
```

```
s2.showAll();
```

```
s2.showAll();
```

```
}
```