```cpp
#include <iostream>
#include <string>

using namespace std;

class Employee{
private:
    string name;
    string id;
    int salary;

public:
    Employee(string n, string i, int s){
        id=i;
        name=n;
        salary = s;
    }
    ~Employee(){
        cout<<"Deleting Employee\n";
    }
    void getEmployee(){
        cout<<"Employee id: "<<id<<"\nEmployee Name: "<<name<<"\nEmployee salary: "<<salary<<endl;
    }
};

class Scientist: protected Employee{
private:
    int num_publications;
    int num_awards;
    string *publications;
    string *awards;
```

```cpp
public:
    Scientist(int num_pub, string *pub, string *aw,int n_a, string name, string id, int salary):Employee(name,id,salary){
        num_publications = num_pub;
        num_awards = n_a;
        publications = new string[num_publications];
        for(int i=0;i<num_publications;i++){
            publications[i] =pub[i];
        }
        awards = new string[n_a];
        for(int i=0;i<n_a;i++){
            awards[i] =aw[i];
        }
    }
    ~Scientist(){
        cout<<"\nDeleting Scientist\n";
        delete[] publications;
        delete[] awards;
    }
    void getScientist(){
        cout<<"\nScientist Details:\n";
        getEmployee();
        cout<<"\nTotal publications: "<<num_publications<<endl;
        cout<<"Publications:\n";
        for(int i=0;i<num_publications;i++){
            cout<<" "<<publications[i]<<endl;
        }
        cout<<"\nTotal Awards: "<<num_awards<<endl;
        cout<<"Awards:\n";
        for(int i=0;i<num_awards;i++){
            cout<<" "<<awards[i]<<endl;
        }cout<<"\n";
    }
```

```cpp
};


class Manager : protected Employee{
private:
    string title;
    int yrs_of_exp;
    int teams;
public:
    Manager(string t, int yrs, int tm,string name, string id, int salary):Employee(name,id,salary){
        title=t;
        yrs_of_exp=yrs;
        teams = tm;
    }
    ~Manager(){
        cout<<"\nDeleting Manager\n";
    }
    void getManager(){
        cout<<"\nManager Details: \n";
        getEmployee();
        cout<<"Title as Manager: "<<title<<endl;
        cout<<"Years of Experience: "<<yrs_of_exp<<endl;
        cout<<"Teams Managed: "<<teams<<endl;
    }
};


class Laborer : protected Employee{
private:
    int overtime;
    int wage_over;
    int leaves;
public:
```

```cpp
    Laborer(int o, int w_o, int l,string name, string id, int salary) :Employee(name,id,salary){
        overtime = o;
        wage_over = w_o;
        leaves = l;
    }
    ~Laborer(){
        cout<<"\nDeleting Laborer\n";
    }
    void getLaborer(){
        cout<<"\nLabourer Details: \n"<<endl;
        getEmployee();
        cout<<"Overtime: "<<overtime<<endl;
        cout<<"Wage in overtime: "<<wage_over<<endl;
        cout<<"Total leaves: "<<leaves<<endl;
    }
};


int main(){
    string a1[]={"alpha", "beta"}, p1[]={"one","two"},a2[]={"gamma", "delta"},p2[]={"three","four"};
    Scientist s1(2, p1,a1,2,"Paras","100",100);
    Scientist s2(2, p2,a2,2,"Naman","103",10010);
    s1.getScientist();
    s2.getScientist();

    Manager m1("General Manager",6, 10, "Tanmay Vig", "101", 10000000);
    Manager m2("Assistant Manager",3, 6, "Manuj Monga", "104", 1000000);
    m1.getManager();
    m2.getManager();

    Laborer l1(8,500,1,"Rishabh","102",10000);
    Laborer l2(10,10,2,"Almas","105",-1000);
    l1.getLaborer();
```

```
        l2.getLaborer();

    return 0;

}
```

Output:

```
D:\sem-5\oop_Lab\10.exe

Scientist Details:
Employee id: 100
Employee Name: Paras
Employee salary: 100

Total publications: 2
Publications:
 one
 two

Total Awards: 2
Awards:
 alpha
 beta


Scientist Details:
Employee id: 103
Employee Name: Naman
Employee salary: 10010

Total publications: 2
Publications:
 three
 four

Total Awards: 2
Awards:
 gamma
 delta


Manager Details:
Employee id: 101
Employee Name: Tanmay Vig
Employee salary: 10000000
Title as Manager: General Manager
Years of Experience: 6
Teams Managed: 10

Manager Details:
Employee id: 104
Employee Name: Manuj Monga
Employee salary: 1000000
Title as Manager: Assistant Manager
Years of Experience: 3
Teams Managed: 6
```

```
Teams Managed: 10

Manager Details:
Employee id: 104
Employee Name: Manuj Monga
Employee salary: 1000000
Title as Manager: Assistant Manager
Years of Experience: 3
Teams Managed: 6

Labourer Details:

Employee id: 102
Employee Name: Rishabh
Employee salary: 10000
Overtime: 8
Wage in overtime: 500
Total leaves: 1

Labourer Details:

Employee id: 105
Employee Name: Almas
Employee salary: -1000
Overtime: 10
Wage in overtime: 10
Total leaves: 2

Deleting Laborer
Deleting Employee

Deleting Laborer
Deleting Employee

Deleting Manager
Deleting Employee

Deleting Manager
Deleting Employee

Deleting Scientist
Deleting Employee

Deleting Scientist
Deleting Employee

---------------------------------
Process exited after 0.2527 seconds with return value 0
Press any key to continue . . .
```