SE 201 Object Oriented Programming
Lab Manual Spring 2022

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Semester: <u>   Spring   </u> Section: <u>   A   </u>

Group   : <u>Software Engineering</u>

Date   : 20 July 2022

Lab #11

Composition

Exercise:

Create a class employee , the member data should include employee number(type int), name of employee (to be allocated dynamically) and salary (comprising of three float variables; gross pay, deductions and net pay). Also include date of joining of employee. The date should comprise of three integers representing day , month and year. You need to specify separate classes for date and salary. Include necessary constructors, destructors and member function to enter and display data in each class.

CODE:

```cpp
#include<iostream>
#include <cstring>
using namespace std;

class Salary
{
public:
    float grosspay;
    float deduction;
    float netpay;
    Salary()
    {}
    Salary(float gp,float de,float net_pay)
    {
        grosspay=gp;
        deduction=de;
        netpay=net_pay;
    }
};

class Date
{
public:
    int day;
    int month;
    int year;
    Date()
    {}
```

```cpp
    Date(int d, int mon, int yr)
    {
        day=d;
        month=mon;
        year=yr;
    }
};

class Employee
{
private:
    int Employee_No;
    char *Name;
    Salary S;
    Date D;
public:
    Employee()
    {
    }
    Employee(int en, char *name, int da, int mth, int yr, float gp, float
ded, float net_pay)
    {
        Employee_No=en;
        Name = new char[80];
        strcpy(Name, name);
        Date(da, mth, yr);
        Salary(gp, ded, net_pay);
    }
    void getemployee()
    {
        cout<<"Enter employee no:";
        cin>>Employee_No;
        cout<<"Enter employee name:";
        Name = new char[50];
        cin>>Name;
        cout<<"Enter gross pay:";
        cin>>this->S.grosspay;
        cout<<"Enter deduction from salary:";
        cin>>this->S.deduction;
        cout<<"Enter net pay:";
        cin>>this->S.netpay;
        cout<<"Enter date as day, month and year";
        cin>>this->D.day;
```

```cpp
        cin>>this->D.month;
        cin>>this->D.year;
    }
    void display()
    {
        cout<<"Employee details are:"<<endl;
        cout<<"Employee number:"<<Employee_No<<endl;
        cout<<"Employee name:"<<Name<<endl;
        cout<<"Salary details are:"<<"\n"<<"Gross pay:"<<this-
>S.grosspay<<endl;
        cout<<"Deductions:"<<this->S.deduction<<endl;
        cout<<"Net pay:"<<this->S.netpay<<endl;
        cout<<"Date of joining was:"<<this->D.day<<"/"<<this-
>D.month<<"/"<<
this->D.year<<endl;
    }
};

int main()
{
    Employee emp;
    emp.getemployee();
    emp.display();
    system("pause");
    return 0;}
```

OUTPUT:

```
Enter employee no:39
Enter employee name:Moin
Enter gross pay:20000
Enter deduction from salary:100
Enter net pay:200000000
Enter date as day, month and year12
1
22
Employee details are:
Employee number:39
Employee name:Moin
Salary details are:
Gross pay:20000
Deductions:100
Net pay:2e+08
Date of joining was:12/1/22
Press any key to continue . . .
```