

Inheritance :**Example (1): - Create inheritance relation among classes(person , student ,and employee)**

Solution :

Form1.Cs

```

using System;
using System.Collections.Generic;
using System.ComponentModel;
using System.Data;
using System.Drawing;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
using System.Windows.Forms;

namespace classes__person__student
{
    public partial class Form1 : Form
    {
        public Form1()
        {
            InitializeComponent();
        }

        private void Form1_Load(object sender, EventArgs e)
        {
            Person person = new Person("Ahmed ali", "123 Somewhere",
"415-555-1212", "aa@yahoo.com");
            MessageBox.Show("person:" + person.ToString());
            Person student = new Student("mohmed hassan", "555 School Street", "650 - 555
- 1212", "mh@yahoo.com", "primary");
            MessageBox.Show("student:" + student.ToString());
            Person employee = new Employee("basem jasim", "777 B Street",
"40-88-889-999", "bj@xyahoo.com", "zayona", 30.7m, "1/1/2017");
            MessageBox.Show("employee:" + employee.ToString());
        }
    }
}

```

Person.Cs

```

using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace classes__person__student
{
    //Person Class
    class Person
    {
        private string name;
    }
}

```

```
private string address;
private string phone_number;
private string email_address;
public Person() { }
public Person(string newName, string newAddress, string
newPhone_number, string newEmail)
{
    name = newName;
    address = newAddress;
    phone_number = newPhone_number;
    email_address = newEmail;
}
public void setName(String newName)
{
    name = newName;
}
public String getName()
{
    return name;
}
public void setAddress(String newAddress)
{
    address = newAddress;
}
public String getAddress()
{
    return address;
}
public void setPhone(String newPhone_number)
{
    phone_number = newPhone_number;
}
public String getPhone()
{
    return phone_number;
}
public void setEmail(String newEmail)
{
    email_address = newEmail;
}
public String getEmail()
{
    return email_address;
}
public override string ToString()
{
    return "Name :" + getName();
}
} // end of class person
}
```

Student.Cs

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace classes__person__student
```

```

{
    class Student:Person
    {
        public string class_status;
        public Student(string name, string address, string phone, string
email, string classStatus) : base
(name, address, phone, email) {
            class_status = classStatus;
        }
        public override string ToString()
        {
            return base.getName() + "Student Status: " + class_status;
        }
    }
} // end of class student
}

```

Employee.Cs

```

using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace classes__person__student
{
    class Employee:Person
    {
        private string office;
        private decimal salary;
        private string hire;
        public Employee(string name, string address, string phone, string
email, string office, decimal salary, string hire
) : base(name, address, phone, email)
        {
            this.office = office;
            this.salary = salary;
            this.hire = hire;
        }

        public string Office
        {
            set { office = value; }
            get { return office; }
        }
        public decimal Salary
        {
            set { salary = value; }
            get { return salary; }
        }
        public string Hire
        {
            set { hire = value; }
            get { return hire; }
        }
        public override string ToString()
        {
            return base.getName() + "\tOffice: " + Office + "\tsalary:" +
Salary;
        }
    }
} // end of class employee

```

```
}
```

Exercises:

1) Create inheritance relation among classes (circle ,rectangle ,and square shape) ,

2) Create inheritance relation among classes person , student teacher ,staf

f 3) Create inheritance relation among classes automobile ,car ,bus .

4)Create inheritance relation class bankaccount and savingaccount and checking account.