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GITHUB LINK= https://github.com/mayank5654/OOPs-Based-System-for-Storing-School-Data-Using-Design-Patterns

Create an OOP Based System for Storing School Data Using Design Patterns.

SOURCE CODE

School data – OOPS:

Program.cs

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

namespace SchoolData_OOPS
{
    internal class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("--------RAINBOW SCHOOL DATA---------");
            Console.WriteLine("                                      ");
            Console.WriteLine("--------STUDENTS---------");

            //student
            Console.WriteLine("Enter the no of students :");

            int n = int.Parse(Console.ReadLine());

            Student[] stud = new Student[n];

            for (int i = 0; i < n; i++)
            {


                Console.WriteLine("Enter student name");
                string name = Console.ReadLine();

                Console.WriteLine("Enter class");
                int cls = int.Parse(Console.ReadLine());

                Console.WriteLine("Enter section");
                char section = char.Parse(Console.ReadLine());
```

```
    stud[i] = new Student(name, cls, section);
    Console.WriteLine("---------------");
}

Console.WriteLine("---------------------------------");

//teachers
Console.WriteLine("--------TEACHERS---------");


Console.WriteLine("Enter the no of teachers :");

int n1 = int.Parse(Console.ReadLine());

Teacher[] teach = new Teacher[n1];

for (int i = 0; i < n1; i++)
{


    Console.WriteLine("Enter teacher name");
    string name = Console.ReadLine();


    Console.WriteLine("Enter subject name");
    string subject = Console.ReadLine();

    teach[i] = new Teacher(name, subject);
    Console.WriteLine("---------------");
}

Console.WriteLine("---------------------------------");

//subject

Console.WriteLine("--------SUBJECT---------");


Console.WriteLine("Enter the no of subject :");

int n2 = int.Parse(Console.ReadLine());

Subject[] sub = new Subject[n2];

for (int i = 0; i < n2; i++)
{


    Console.WriteLine("Enter subject name");
    string name = Console.ReadLine();


    Console.WriteLine("Enter subjectcode");
    string code = Console.ReadLine();

    sub[i] = new Subject(name, code);

    Console.WriteLine("---------------");
}

Console.ForegroundColor = ConsoleColor.Green;
```

```
            Console.WriteLine("----------PRINTING DETAILS OF STUDENTS-----------
------------");

            foreach (var item in stud)
            {


                Console.WriteLine($"Name    : {item.Name}");
                Console.WriteLine($"Class   : {item.Class}");
                Console.WriteLine($"Section : {item.Section}");
                Console.WriteLine("---------------");

            }
            Console.WriteLine("----------PRINTING DETAILS OF TEACHERS-----------
------------");

            foreach (var item in teach)
            {


                Console.WriteLine($"Name       : {item.Name}");
                Console.WriteLine($"Subject    : {item.Subject}");
                Console.WriteLine("---------------");

            }

            Console.WriteLine("----------PRINTING DETAILS OF SUBJECTS-----------
------------");

            foreach (var item in sub)
            {


                Console.WriteLine($"Name           : {item.Name}");
                Console.WriteLine($"Subject Code   : {item.SubCode}");
                Console.WriteLine("---------------");

            }



        }
    }
}
```

Student.cs

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

namespace SchoolData_OOPS
{
    internal class Student
    {

             private string _name;
```

```
            public string Name
            {
                  get { return _name; }
                  set { _name = value; }
            }

            private int _class;

            public int Class
            {
                  get { return _class; }
                  set { _class = value; }
            }

            private char _section;

            public char Section
            {
                  get { return _section; }
                  set { _section = value; }
            }

            public Student(string n, int c, char s)
            {
                  Name = n;
                  Class = c;
                  Section = s;

            }


      }
}
```

Teacher.cs

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

namespace SchoolData_OOPS
{
    internal class Teacher
    {

        private string _name;

        public string Name
        {
            get { return _name; }
            set { _name = value; }
        }


        private string _subject;

            public string Subject
            {
                  get { return _subject; }
                  set { _subject = value; }
            }
```

```
            public Teacher(string name, string subject)
            {
                  Name = name;
                  Subject = subject;
            }

      }
}
```

Subject.cs

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

namespace SchoolData_OOPS
{
    internal class Subject
    {

            private string _subname;

            public string Name
            {
                  get { return _subname; }
                  set { _subname = value; }
            }

            private string _subCode;

            public string SubCode
            {
                  get { return _subCode; }
                  set { _subCode = value; }
            }

            public Subject(string n, string c)
            {
                  Name = n;
                  SubCode = c;

            }

      }
}
```