**ASSIGNMENT 2 - Student Information System (SIS)**

**TASK 1**

**1.Implement class**

using System;

namespace StudentInformationSystems

{

class Student

{

public int StudentId;

public string FirstName;

public string LastName;

public string DateOfBirth;

public string Email;

public string PhoneNumber;

}

class Course

{

public int CourseId;

public string CourseName;

public string CourseCode;

public string InstructorName;

}

class Enrollment

{

public int EnrollmentId;

public int StudentId;

public int CourseId;

public string EnrollmentDate;

}

class Teacher

{

public int TeacherId;

public string FirstName;

public string LastName;

public string Email;

}

class Payment

{

public int PaymentId;

public int StudentId;

public double Amount;

public string PaymentDate;

}

**TASK 2**

**Implement Constructors**

using System;

namespace StudentInformationSystems

{

class Student

{

public int StudentId;

public string FirstName;

public string LastName;

public string DateOfBirth;

public string Email;

public string PhoneNumber;

public Student(int studentId, string firstName, string lastName, string dob, string email, string phone)

{

StudentId = studentId;

FirstName = firstName;

LastName = lastName;

DateOfBirth = dob;

Email = email;

PhoneNumber = phone;

}

}

class Course

{

public int CourseId;

public string CourseName;

public string CourseCode;

public string InstructorName;

public Course(int courseId, string courseName, string courseCode, string instructorName)

{

CourseId = courseId;

CourseName = courseName;

CourseCode = courseCode;

InstructorName = instructorName;

}

}

class Enrollment

{

public int EnrollmentId;

public int StudentId;

public int CourseId;

public string EnrollmentDate;

public Enrollment(int enrollmentId, int studentId, int courseId, string enrollmentDate)

{

EnrollmentId = enrollmentId;

StudentId = studentId;

CourseId = courseId;

EnrollmentDate = enrollmentDate;

}

}

class Teacher

{

public int TeacherId;

public string FirstName;

public string LastName;

public string Email;

public Teacher(int teacherId, string firstName, string lastName, string email)

{

TeacherId = teacherId;

FirstName = firstName;

LastName = lastName;

Email = email;

}

}

class Payment

{

public int PaymentId;

public int StudentId;

public double Amount;

public string PaymentDate;

public Payment(int paymentId, int studentId, double amount, string paymentDate)

{

PaymentId = paymentId;

StudentId = studentId;

Amount = amount;

PaymentDate = paymentDate;

}

}

class SIS

{

public SIS()

{

Console.WriteLine("Student Information System.");

}

}

}

**TASK 3**

**Implement methods**

public void DisplayStudent()

{

Console.WriteLine($"Student: {StudentId}, {FirstName} {LastName}, DOB: {DateOfBirth}, Email: {Email}, Phone: {PhoneNumber}");

}

public void UpdateStudent(string fname, string lname, string dob, string email, string phone)

{

FirstName = fname;

LastName = lname;

DateOfBirth = dob;

Email = email;

PhoneNumber = phone;

}

public void DisplayCourse()

{

Console.WriteLine($"Course: {CourseId}, {CourseName}, Code: {CourseCode}, Instructor: {InstructorName}");

}

public void UpdateCourse(string name, string code, string instructor)

{

CourseName = name;

CourseCode = code;

InstructorName = instructor;

}

public void DisplayEnrollment()

{

Console.WriteLine($"Enrollment: {EnrollmentId}, Student ID: {StudentId}, Course ID: {CourseId}, Date: {EnrollmentDate}");

}

public void UpdateEnrollmentDate(string date)

{

EnrollmentDate = date;

}

public void DisplayTeacher()

{

Console.WriteLine($"Teacher: {TeacherId}, {FirstName} {LastName}, Email: {Email}");

}

public void UpdateTeacher(string fname, string lname, string email)

{

FirstName = fname;

LastName = lname;

Email = email;

}

public void DisplayPayment()

{

Console.WriteLine($"Payment: {PaymentId}, Student ID: {StudentId}, Amount: {Amount}, Date: {PaymentDate}");

}

public void UpdatePayment(string amount, string date)

{

Amount = amount;

PaymentDate = date;

}

**Complete Program(Task 1,2,3)**

using System;

class Student

{

public int StudentId;

public string FirstName;

public string LastName;

public string DateOfBirth;

public string Email;

public string PhoneNumber;

public Student(int id, string fname, string lname, string dob, string email, string phone)

{

StudentId = id;

FirstName = fname;

LastName = lname;

DateOfBirth = dob;

Email = email;

PhoneNumber = phone;

}

public void DisplayStudent()

{

Console.WriteLine($"Student: {StudentId}, {FirstName} {LastName}, DOB: {DateOfBirth}, Email: {Email}, Phone: {PhoneNumber}");

}

public void UpdateStudent(string fname, string lname, string dob, string email, string phone)

{

FirstName = fname;

LastName = lname;

DateOfBirth = dob;

Email = email;

PhoneNumber = phone;

}

}

class Course

{

public int CourseId;

public string CourseName;

public string CourseCode;

public string InstructorName;

public Course(int id, string name, string code, string instructor)

{

CourseId = id;

CourseName = name;

CourseCode = code;

InstructorName = instructor;

}

public void DisplayCourse()

{

Console.WriteLine($"Course: {CourseId}, {CourseName}, Code: {CourseCode}, Instructor: {InstructorName}");

}

public void UpdateCourse(string name, string code, string instructor)

{

CourseName = name;

CourseCode = code;

InstructorName = instructor;

}

}

class Teacher

{

public int TeacherId;

public string FirstName;

public string LastName;

public string Email;

public Teacher(int id, string fname, string lname, string email)

{

TeacherId = id;

FirstName = fname;

LastName = lname;

Email = email;

}

public void DisplayTeacher()

{

Console.WriteLine($"Teacher: {TeacherId}, {FirstName} {LastName}, Email: {Email}");

}

public void UpdateTeacher(string fname, string lname, string email)

{

FirstName = fname;

LastName = lname;

Email = email;

}

}

class Payment

{

public int PaymentId;

public int StudentId;

public string Amount;

public string PaymentDate;

public Payment(int id, int studentId, string amount, string date)

{

PaymentId = id;

StudentId = studentId;

Amount = amount;

PaymentDate = date;

}

public void DisplayPayment()

{

Console.WriteLine($"Payment: {PaymentId}, Student ID: {StudentId}, Amount: {Amount}, Date: {PaymentDate}");

}

public void UpdatePayment(string amount, string date)

{

Amount = amount;

PaymentDate = date;

}

}

class Program

{

static void Main(String[]args)

{

Console.WriteLine("Enter Student Details:");

Console.Write("ID: ");

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

Console.Write("First Name: ");

string fname = Console.ReadLine();

Console.Write("Last Name: ");

string lname = Console.ReadLine();

Console.Write("Date of Birth (yyyy-mm-dd): ");

string dob = Console.ReadLine();

Console.Write("Email: ");

string email = Console.ReadLine();

Console.Write("Phone: ");

string phone = Console.ReadLine();

Student student = new Student(studentId, fname, lname, dob, email, phone);

Console.WriteLine("\nEnter Course Details:");

Console.Write("Course ID: ");

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

Console.Write("Course Name: ");

string courseName = Console.ReadLine();

Console.Write("Course Code: ");

string courseCode = Console.ReadLine();

Console.Write("Instructor Name: ");

string instructor = Console.ReadLine();

Course course = new Course(courseId, courseName, courseCode, instructor);

Console.WriteLine("\nEnter Teacher Details:");

Console.Write("Teacher ID: ");

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

Console.Write("First Name: ");

string tFname = Console.ReadLine();

Console.Write("Last Name: ");

string tLname = Console.ReadLine();

Console.Write("Email: ");

string tEmail = Console.ReadLine();

Teacher teacher = new Teacher(teacherId, tFname, tLname, tEmail);

Console.WriteLine("\nEnter Payment Details:");

Console.Write("Payment ID: ");

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

Console.Write("Amount: ");

string amount = Console.ReadLine();

Console.Write("Payment Date (yyyy-mm-dd): ");

string payDate = Console.ReadLine();

Payment payment = new Payment(paymentId, studentId, amount, payDate);

Console.WriteLine("\n Information ");

student.DisplayStudent();

course.DisplayCourse();

teacher.DisplayTeacher();

payment.DisplayPayment();

}

}