|  |  |  |
| --- | --- | --- |
| Student | String name String id  String department float cgpa | Member fields declare private |
| ShowInfo |  |
| Properties for each field | Example:  For name the property should be Name |
|  |
|  | | |
| Triangle | int x int y int z  Properties for each field | Member fields declare private |
| ShowInfo |  |
| TestTriangle() | It will check whether the triangle is equilateral (3 equal sides),  isosceles (2 equal sides), scalene (no equal sides) |
|  | | |
| Account | String accName String acid  int balance  Properties for each field | Member fields declare private |
| Deposit(int amount) |  |
| Withdraw(int amount) |  |
| Course | String courseName String courseCode int courseCredit  Properties for each field | Member fields declare private |
| ShowCourseInfo() |  |
|  | | |

using System;

class Student

{

private string name;

private string id;

private string department;

private float cgpa;

public string Name

{

get { return name; }

set { name = value; }

}

public string ID

{

get { return id; }

set { id = value; }

}

public string Department

{

get { return department; }

set { department = value; }

}

public float CGPA

{

get { return cgpa; }

set { cgpa = value; }

}

public void ShowInfo()

{

Console.WriteLine("Name: " + Name);

Console.WriteLine("ID: " + ID);

Console.WriteLine("Department: " + Department);

Console.WriteLine("CGPA: " + CGPA);

}

}

class Triangle

{

private int x;

private int y;

private int z;

public int X

{

get { return x; }

set { x = value; }

}

public int Y

{

get { return y; }

set { y = value; }

}

public int Z

{

get { return z; }

set { z = value; }

}

public void ShowInfo()

{

Console.WriteLine("Side X: " + X);

Console.WriteLine("Side Y: " + Y);

Console.WriteLine("Side Z: " + Z);

}

public void TestTriangle()

{

if (X == Y && Y == Z)

{

Console.WriteLine("Equilateral Triangle");

}

else if (X == Y || Y == Z || Z == X)

{

Console.WriteLine("Isosceles Triangle");

}

else

{

Console.WriteLine("Scalene Triangle");

}

}

}

class Account

{

private string accName;

private string accId;

private int balance;

public string AccountName

{

get { return accName; }

set { accName = value; }

}

public string AccountID

{

get { return accId; }

set { accId = value; }

}

public int Balance

{

get { return balance; }

}

public Account(string accountName, string accountID)

{

accName = accountName;

accId = accountID;

balance = 0;

}

public void Deposit(int amount)

{

if (amount > 0)

{

balance += amount;

Console.WriteLine("Deposit successful. New balance: " + Balance);

}

else

{

Console.WriteLine("Invalid deposit amount.");

}

}

public void Withdraw(int amount)

{

if (amount > 0 && amount <= Balance)

{

balance -= amount;

Console.WriteLine("Withdrawal successful. New balance: " + Balance);

}

else

{

Console.WriteLine("Invalid withdrawal amount.");

}

}

}

class Course

{

private string courseName;

private string courseCode;

private int courseCredit;

public string CourseName

{

get { return courseName; }

set { courseName = value; }

}

public string CourseCode

{

get { return courseCode; }

set { courseCode = value; }

}

public int CourseCredit

{

get { return courseCredit; }

set { courseCredit = value; }

}

public void ShowCourseInfo()

{

Console.WriteLine("Course Name: " + CourseName);

Console.WriteLine("Course Code: " + CourseCode);

Console.WriteLine("Course Credit: " + CourseCredit);

}

}

class Program

{

static void Main()

{

// Create a Student object and set its properties

Student student = new Student();

student.Name = "John";

student.ID = "12345";

student.Department = "Computer Science";

student.CGPA = 3.5;

// Display student information

Console.WriteLine("Student Information:");

student.ShowInfo();

Console.WriteLine();

// Create a Triangle object and set its side lengths

Triangle triangle = new Triangle();

triangle.X = 3;

triangle.Y = 3;

triangle.Z = 3;

// Display triangle information and test its type

Console.WriteLine("Triangle Information:");

triangle.ShowInfo();

triangle.TestTriangle();

Console.WriteLine();

// Create an Account object and perform deposit and withdrawal operations

Account account = new Account("John's Account", "ACC123");

account.Deposit(1000);

account.Withdraw(500);

// Display account information

Console.WriteLine("Account Information:");

Console.WriteLine("Account Name: " + account.AccountName);

Console.WriteLine("Account ID: " + account.AccountID);

Console.WriteLine("Account Balance: " + account.Balance);

Console.WriteLine();

// Create a Course object and set its properties

Course course = new Course();

course.CourseName = "Introduction to Programming";

course.CourseCode = "CS101";

course.CourseCredit = 3;

// Display course information

Console.WriteLine("Course Information:");

course.ShowCourseInfo();

}

}