using System;

using System.Collections.Generic;

using System.Linq;

using System.Text;

using System.Threading.Tasks;

/\*

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\* Date: January 19, 2022

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namespace Assignment\_1

{

class Program

{

static void Main(string[] args)

{

// Create a Car Object

Car car1 = new Car(2001, "Audi", "A8", 1000000);

Console.WriteLine(car1);

Car car2 = new Car(2002, "BMW", "X3", 52990,false);

Console.WriteLine(car2);

Car car3 = new Car(2003, "Honda", "Civic", 46200);

Console.WriteLine(car3);

Car car4 = new Car(2004, "GMC", "Hummer", 41350);

Console.WriteLine(car4);

Car car5 = new Car(2005, "Bugatti", "Chiron", 2998000, false);

Console.WriteLine(car5);

// Create a Date Object

Date dt = new Date(2016, 5, 4);

Console.WriteLine(dt);

int comand ;

Console.WriteLine("\n To add days in current date press 1" +

"\n To add days,and months in current date press 2" +

"\n To add days, month and year in current date press 3" +

"\n To exit press 4");

comand = Convert.ToInt32(Console.ReadLine());

while (comand < 3)

{

if (comand == 1)

{

Console.WriteLine("Enter days");

dt.Add(Convert.ToInt32(Console.ReadLine()));

Console.WriteLine(dt);

}

else if (comand == 2)

{

int td;

int tm;

Console.WriteLine("Enter days");

td = Convert.ToInt32(Console.ReadLine());

Console.WriteLine("Enter months");

tm = Convert.ToInt32(Console.ReadLine());

dt.Add(tm, td);

Console.WriteLine(dt);

}

else if (comand == 3)

{

int td;

int tm;

int ty;

Console.WriteLine("Enter days");

td = Convert.ToInt32(Console.ReadLine());

Console.WriteLine("Enter months");

tm = Convert.ToInt32(Console.ReadLine());

Console.WriteLine("Enter years");

ty = Convert.ToInt32(Console.ReadLine());

Date tdt = new Date(ty, tm, td);

dt.Add(tdt);

Console.WriteLine(dt);

}

else

{

Console.WriteLine("\nWrong input");

}

Console.WriteLine("\n To add days in current date press 1" +

"\n To add days,and months in current date press 2" +

"\n To add days, month and year in current date press 3" +

"\n To exit press 4");

comand = Convert.ToInt32(Console.ReadLine());

};

}

class Car

{

private int year; //field

private string manufacturer; //field

private string model; //field

private bool isDrivable; //field

private double price; //field

// Constuctor with default parameter

public Car(int year, string manufacturer, string model, double price, bool isDrivable = true)

{

this.year = year;

this.manufacturer = manufacturer;

this.model = model;

this.isDrivable = isDrivable;

this.price = price;

}

// Printing meaningfull Object details

public override string ToString()

{

return base.ToString() + ":-\n " +

"\tManufacturer: " + this.manufacturer + "\n"+

"\tYear: " + this.year.ToString() + "\n" +

"\tModel: " + this.model + "\n" +

"\tPrice: " + this.price.ToString() + "\n" +

"\tIs Drivable: " + this.isDrivable.ToString() + "\n" ;

}

}

class Date

{

private int year; // Field

private int month; // Field

private int day; // Field

readonly int[] month30s = { 4, 6, 9, 11 };

readonly int[] month31s = { 1, 3, 5, 7, 8, 9, 10, 12 };

readonly int[] month28or29 = { 2 };

// Constructor

public Date(int year, int month, int day)

{

this.year = year;

this.month= month;

this.day = day;

}

// Add method with day perameter

public void Add(int days)

{

this.day += days;

this.Normalize();

}

// Add method with day,month perameter

public void Add(int month,int days)

{

this.month += month;

this.day += days;

this.Normalize();

}

// Add method with day,month,year perameter

public void Add(Date other)

{

this.month += other.month;

this.day += other.day;

this.year += other.year;

this.Normalize();

}

// normalize function

private void Normalize()

{

bool x = false;

while (!x)

{

if (this.month31s.Contains(this.month) && this.day > 31)

{

this.month++;

this.day -= 31;

}

else if (this.month30s.Contains(this.month) && this.day > 30)

{

this.month++;

this.day -= 30;

}

else if (this.month28or29.Contains(this.month) && Convert.ToBoolean(this.year % 4) && this.day > 29)

{

this.month++;

this.day -= 29;

}

else if (this.month28or29.Contains(this.month) && !Convert.ToBoolean(this.year % 4) && this.day > 28)

{

this.month++;

this.day -= 28;

}

else {

if (this.month > 12)

{

this.year++;

this.month -= 12;

x = false;

}

else

{

x = true;

}

}

}

}

// Tostring() function

public override string ToString()

{

return "Date Object note:-" + " \*Displyed date will be in MM-DD-YYYY formate" +

"\nDate:- " + this.month.ToString() + "-" + this.day + "-" + this.year +

"\n";

}

}

}

}