DEVELOPMENT OF SOFTWARE APPLICATIONS- FALL 2020- HOMEWORK SUBMISSION REPORT

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TASK

FLIGHT BOOKING MANAGER

We used 4 scripts:

The code of Booking script:

This is the main part where we call the functions in the other scripts.

```
using System;
using System.Collections.Generic;



public class Booking
{

        public static void Main(string[] args)
        {



                IList<Flights> flights = new List<Flights>();


                do
                {
```

The menu that will be shown to the operator in order to choose from it the action that he will do to serve the client:

```
                Console.WriteLine("**********************");
                Console.WriteLine("Flight Booking Manager");
                Console.WriteLine("**********************");
                Console.WriteLine("Please type '1' to add a flight");
                Console.WriteLine("Please type '2' to check the available flights");
                Console.WriteLine("Please type '3' to check the available free places in a specific flight");
                Console.WriteLine("Please type '4' to book flight for a passenger");
                Console.WriteLine("Please type '5' to calculate the price of the booking flight for a passenger");
```

```
                Console.WriteLine("Please type '6' to check the services available for the VIP passengers");


        int choix = Convert.ToInt32(Console.ReadLine());
```

when choosing the number the switch will allow us in the program to execute the instruction wanted.

```
        switch (choix)
                {
                  case 1:
                        addFlight((List<Flights>)flights);
                       break;
```

Case one adds flights to the system.

```
                  case 2:
                        Console.WriteLine("To print all the available flights type: 1");
                        Console.WriteLine("To print all the available flights for a specific destination type: 2");
                        Console.WriteLine("To print all the available flights for a specific destination from a specific point of depart type: 3");
                        Console.WriteLine("To print all the available flights for a specific date: 4");
                        Console.WriteLine("To print all the available flights for a specific destination from a specific point of depart type for a specific date: 5");
                        Console.WriteLine("To print all the available flights for a specific destination from a specific point of depart type for a specific date: 6");
                        int c = Convert.ToInt32(Console.ReadLine());
                switch (c)
                        {
                                case 1:
                                availableFlights((List<Flights>)flights);
                                break;


                                case 2:
                                        Console.WriteLine("enter the destination: ");
                                        string des = Convert.ToString(Console.ReadLine());
```

```
availableFlights((List<Flights>)flights, des);
        break;
                case 3:
                        Console.WriteLine("enter the destination: ");
                         string des1 = Convert.ToString(Console.ReadLine());
Console.WriteLine("enter the point of the depart: ");
                         string dep = Convert.ToString(Console.ReadLine());
availableFlights((List<Flights>)flights, dep, des1);
        break;

                case 4:
                        Console.WriteLine("enter the year of the flight: ");
                        int year = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("enter the month of the flight: ");
                        int month = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("enter the day of the flight: ");
                        int day = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("enter the hour of the flight: ");
                        int hour = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("enter the minutes of the flight: ");
                        int minutes = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("enter the senconds of the flight: ");
int seconds = Convert.ToInt32(Console.ReadLine());
DateTime calendar = new DateTime(year, month, day, hour, minutes, seconds);
                        availableFlights((List<Flights>)flights, calendar);
                        break;

                case 5:
```

```
Console.WriteLine("enter the year of the flight: ");
int yeari = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("enter the month of the flight: ");
int monthi = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("enter the day of the flight: ");
int dayi = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("enter the hour of the flight: ");
int houri = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("enter the minutes of the flight: ");
int minutesi = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("enter the senconds of the flight: ");
int secondsi = Convert.ToInt32(Console.ReadLine());
DateTime calendarr = new DateTime(yeari, monthi, dayi, houri, minutesi, secondsi);
Console.WriteLine("enter the destination: ");
                                string dest = Convert.ToString(Console.ReadLine());
availableFlights((List<Flights>)flights, dest, calendarr);
            break;


                    case 6:
Console.WriteLine("enter the year of the flight: ");
int yearia = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("enter the month of the flight: ");
int monthia = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("enter the day of the flight: ");
int dayia = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("enter the hour of the flight: ");
int houria = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("enter the minutes of the flight: ");
```

```
                int minutesia = Convert.ToInt32(Console.ReadLine());
                Console.WriteLine("enter the senconds of the flight: ");
                int secondsia = Convert.ToInt32(Console.ReadLine());
                DateTime calendarra = new DateTime(yearia, monthia, dayia, houria, minutesia, secondsia);
                Console.WriteLine("enter the destination: ");
                String desti = Convert.ToString(Console.ReadLine());
                Console.WriteLine("enter the depart: ");
                String depart = Convert.ToString(Console.ReadLine());
                Booking.availableFlights((List<Flights>)flights, desti, depart, calendarra);
                break;
            }
            break;
```

Case two prints the available flights according to the information wanted by the client.

```
        case 3:
            Booking.checkForFreePlaces((List<Flights>)flights);
            break;
```

Case three for checking the available places in a specific available flight in the program.

```
        case 4:
            Booking.bookFlight((List<Flights>)flights);
            break;
```

Case four to book flight.

```
        case 5:
            Booking.calculatePrice((List<Flights>)flights);
            break;
```

Case five to calculate the price of a flight.

```
        case 6:
            Console.WriteLine("enter the flight number: ");
```

```
int fn = Convert.ToInt32(Console.ReadLine());
Console.WriteLine("enter the passenger id: ");
int id = Convert.ToInt32(Console.ReadLine());
int ff = 0;
int pp = 0;
foreach (Flights f in flights) {

   if ((f.FlightNumber == fn)) {
      foreach (Passengers p in f.Passengers) {
         if ((p.PassengerId == id)) {
            if ((p.VIP == true)) {
               Console.WriteLine("Premium Services");
               Console.WriteLine("Food");
               Console.WriteLine("....");
            }
            else {
               Console.WriteLine("Sorry, these services are available only for VIP passengers");
            }
            pp = 1;
            break;
         }
      }
      ff = 1;
      break;
   }
}
if (ff == 0)
{
```

```
                Console.WriteLine("wrong flight number");
            }
            if (pp == 0)
            {
                Console.WriteLine("wrong passengerId");
            }
```

This is used for managing VIP passengers.

```
        }
    } while (true);

}
```

The following function prints all the available flights in the system.

```
public static void availableFlights(List<Flights> flights) {
    if (string.ReferenceEquals(flights, null))
    {
        Console.WriteLine("no flight is available");
    }

    foreach (Flights flight in flights) {
        Console.WriteLine(flight.ToString());
    }

}
```

The following function shows all the available flights in the date : (DateTime c) entered .

```
public static void availableFlights(List<Flights> flights, DateTime c) {
    if (string.ReferenceEquals(flights, null)) {
        Console.WriteLine("no flight is available");
        return;
```

```
        }

        foreach (Flights flight in flights) {
            if ((flight.DepartDate == c)) {
                Console.WriteLine(flight.ToString());
            }

        }

    }
```

The following function shows all the available flights from depart place to destination place entered.

```
    public static void availableFlights(List<Flights> flights, String depart, String destination) {
        if (!string.ReferenceEquals(flights, null)) {
            foreach (Flights flight in flights)
            {
                if ((flight.Depart.Equals(depart)) && flight.Destionation.Equals(destination))
                {
                    Console.WriteLine(flight.ToString());
                }

            }

        }

    }
```

The following function shows all the available flights from depart place to destination place entered in specific date .

```
public static void availableFlights(List<Flights> flights, String depart, String destination, DateTime c) {
        if (!string.ReferenceEquals(flights, null)) {
```

```
        foreach (Flights flight in flights)
        {
            if ((flight.Depart.Equals(depart)) && flight.Destionation.Equals(destination) && (flight.DepartDate == (c)))
            {
                Console.WriteLine(flight.ToString());
            }

        }

    }

}
```

The following function shows all the available flights to destination place entered.

```
public static void availableFlights(List<Flights> flights, String Destination) {
    if (!string.ReferenceEquals(flights, null)) {

        foreach (Flights flight in flights)
        {
            if (flight.Destionation.Equals(Destination))
            {
                Console.WriteLine(flight.ToString());
            }

        }

    }

}
```

The following function shows all the available flights to destination place entered in specific date .

```
public static void availableFlights(List<Flights> flights, String Destination, DateTime cal) {
    if (!string.ReferenceEquals(flights, null)) {
        foreach (Flights flight in flights)
        {
            if ((flight.DepartDate== cal) && flight.Destionation.Equals(Destination))
            {
                Console.WriteLine(flight.ToString());
            }

        }

    }

}
```

This function checks the free places in specific flight and returns Boolean value.

```
public static bool freePlace(Flights flight) {
    if ((flight.TotalNumberOfPassengers == flight.OccupiedPlaces)) {
        return false;
    }
    else {
        return true;
    }

}
```

This function books flight for passenger in a specific flight if there is still available places in this flight.

```
public static void bookFlight(List<Flights> flights) {
    Booking.availableFlights(flights);
```

```
    int flightNumber = Convert.ToInt32(Console.ReadLine());
    Passengers passenger = Booking.addPassenger();
    Console.WriteLine(("Passenger id = "
                + (passenger.PassengerId + " added successfully")));
    if (!string.ReferenceEquals(flights, null)) {
        foreach (Flights flight in flights) {
            if ((flight.FlightNumber == flightNumber)) {
                flightNumber = flight.FlightNumber;
                if ((Booking.freePlace(flight) == true)) {
                    flight.addPassengers(flight.Passengers, passenger);
                    Console.WriteLine("flight booked successfully :) ");
                    int places = flight.Passengers.Count;
                    flight.OccupiedPlaces =places;
                    passenger.FlightNum = flight.FlightNumber;
                }
                else {
                    Console.WriteLine("flight book failed, there is no available place :( ");
                    passenger = null;
                }
                break;
            }

        }

    }

}
static int i = 0;
```

This function allows us to add new available flight to the system.

```
public static void addFlight(List<Flights> flights) {
    Console.WriteLine("enter the destination of the flight: ");
    String destination = Convert.ToString(Console.ReadLine());
    Console.WriteLine("enter the point depart of the flight: ");
    String depart = Convert.ToString(Console.ReadLine());
    Console.WriteLine("enter the year of the flight: ");
    int year = Convert.ToInt32(Console.ReadLine());
    Console.WriteLine("enter the month of the flight: ");
    int month = Convert.ToInt32(Console.ReadLine());
    Console.WriteLine("enter the day of the flight: ");
    int day = Convert.ToInt32(Console.ReadLine());
    Console.WriteLine("enter the hour of the flight: ");
    int hour = Convert.ToInt32(Console.ReadLine());
    Console.WriteLine("enter the minutes of the flight: ");
    int minutes = Convert.ToInt32(Console.ReadLine());
    Console.WriteLine("enter the seconds of the flight: ");
    int seconds = Convert.ToInt32(Console.ReadLine());
    DateTime calendar = new DateTime(year, month, day, hour, minutes, seconds);
    Console.WriteLine("enter the price of the flight: ");
    int prix = Convert.ToInt32(Console.ReadLine());
    Console.WriteLine("enter the total number of the passengers: ");
    int totalNumberOfPassengers = Convert.ToInt32(Console.ReadLine());
    Flights flight = new Flights(destination, depart, calendar, prix, totalNumberOfPassengers);
    flights.Add(flight);
    Console.WriteLine("Flight added successfully");
}
```

This function allow us to register new passenger and it will be called by the function booking.

```
public static Passengers addPassenger() {


    Console.WriteLine("enter the lastName of the passenger: ");
    String lastName = Convert.ToString(Console.ReadLine());
    Console.WriteLine("enter the firstName of the passenger: ");
    String fristName = Convert.ToString(Console.ReadLine());
    Console.WriteLine("enter the age of the passenger: ");
    int age = Convert.ToInt32(Console.ReadLine());
    Console.WriteLine("enter the weight of passenger\'s handbag in KG");
    double kiloOfHandBag = Convert.ToDouble(Console.ReadLine());
    Console.WriteLine("enter the weight of passenger\'s checked baggages");
    double kiloOfcheckedBaggage = Convert.ToDouble(Console.ReadLine());
    Packages lug = new Packages(kiloOfHandBag, kiloOfcheckedBaggage);
    Console.WriteLine("Is the passenger a VIP?\n 1: yes\n 2: no");
    int vip = Convert.ToInt32(Console.ReadLine());
    Boolean VIP = false;
    if (((vip != 1)  && (vip != 2))) {
        Console.WriteLine("Is the passenger a VIP?\n 1: yes\n 2: no");
        vip = Convert.ToInt32(Console.ReadLine());
    }
    else if ((vip == 1)) {
        VIP = true;
    }


    Passengers passenger = new Passengers(lastName, fristName, age, lug, VIP);
    return passenger;
}
```

This function to check free places in specific flight entered by the operator.

```
public static void checkForFreePlaces(List<Flights> flights) {


    Console.WriteLine("enter the flight number:");
    int flightNumber = Convert.ToInt32(Console.ReadLine());
    foreach (Flights flight in flights) {
        if ((flight.FlightNumber == flightNumber)) {
            int places = (flight.TotalNumberOfPassengers - flight.OccupiedPlaces);
            if ((places <= 0)) {
                Console.WriteLine("Unfortunatly, all the places are occupied :( ");
            }
            else {
                Console.WriteLine(("Fortunately "
                            + (places + " are still availables :D ")));
            }


            break;
        }


    }


}
```

This function calculates the price for a specific passenger in a specific flight.

```
public static void calculatePrice(List<Flights> flights) {
        //Passengers pas = null;
        Console.WriteLine("enter your flightNumber: ");
        int flightNumber = Convert.ToInt32(Console.ReadLine());
        Console.WriteLine("enter your passengerId: ");
        int passengerId = Convert.ToInt32(Console.ReadLine());
        double price = 0; int i = 0;
        foreach (Flights f in flights) {
            if ((f.FlightNumber == flightNumber)) {
                foreach (Passengers p in f.Passengers) {
                    if ((p.PassengerId == passengerId)) {
                        price = (f.Prix + p.Packages.Price);
                        if ((p.VIP == true))
                        {
                            price *= (f.PrixReductionVIP / 100);
                        }

                        Console.WriteLine(("the total price is: " + price + " Euro"));
                        break;
                    }

                }
                if(price == 0)
                {
                    Console.WriteLine("wrong passengerId or passenger not registred in tha flight: ");
                }
                i++;
```

```
                break;


            }
            if (i == 0)
            {
                Console.WriteLine("wrong flight number");
            }


        }


    }
}
```

The code of Flight script:

```
using System;
using System.Collections.Generic;

public class Flights
{

	private static int count = 0;
	private int flightNumber;

	private string Destionation_Conflict;

	private string Depart_Conflict;
	private int totalNumberOfPassengers;
	private int prix;

This is the default value of the reduction price for VIP passengers.

	private double prixReductionVIP = 0.25;
	private DateTime dateDepart;
	private int occupiedPlaces = 0;
	private IList<Passengers> passengers = new List<Passengers>();




	public Flights() : base()
	{
	}

Constructor that allows us to create  a new flight with the according  informations: destination, departure place , price total number of passengers.
	public Flights(string destionation, string depart, int prix, int totalNumberOfPassengers) :
base()
	{
		this.FlightNumber = ++count;
		Destionation_Conflict = destionation;
		Depart_Conflict = depart;
		this.prix = prix;
		this.totalNumberOfPassengers = totalNumberOfPassengers;
	}




Constructor that allows us to create  a new flight with the according  informations: destination, departure place , price total number of passengers, date.

	public Flights(string destionation, string depart, DateTime departDate, int prix, int
totalNumberOfPassengers) : base()
	{
		this.FlightNumber = ++count;
		this.Destionation_Conflict = destionation;
		this.Depart_Conflict = depart;
		this.dateDepart = departDate;
		this.prix = prix;
		this.totalNumberOfPassengers = totalNumberOfPassengers;
	}
```

Constructor that allows us to create a new flight with the according informations: destination, departure place , price total number of passengers, list of passengers.

```
	public Flights(string destionation, string depart, int prix, int totalNumberOfPassengers, IList<Passengers> passengers) : base()
	{
		this.FlightNumber = ++count;
		Destionation_Conflict = destionation;
		Depart_Conflict = depart;
		this.prix = prix;
		this.totalNumberOfPassengers = totalNumberOfPassengers;
		this.passengers = passengers;
	}
```

Constructor that allows us to create a new flight with the according informations: destination, departure place , price, total number of passengers, date ,list of passengers.

```
	public Flights(string destionation, string depart, DateTime departDate, int prix, int totalNumberOfPassengers, IList<Passengers> passengers) : base()
	{
		this.FlightNumber = ++count;
		this.Destionation_Conflict = destionation;
		this.Depart_Conflict = depart;
		this.dateDepart = departDate;
		this.prix = prix;
		this.totalNumberOfPassengers = totalNumberOfPassengers;
		this.passengers = passengers;
	}
```

This function allow us to get and set the flight number from the outside of the class.

```
	public virtual int FlightNumber
	{
		get
		{
			return this.flightNumber;
		}
		set
		{
			this.flightNumber = value;
		}
	}
```

This function allow us to get and set the destination from the outside of the class.

```
	public virtual string Destionation
	{
		get
		{
			return Destionation_Conflict;
		}
		set
		{
			Destionation_Conflict = value;
		}
	}
```

This function allow us to get and set the depart from the outside of the class.

```
	public virtual string Depart
	{
		get
		{
			return Depart_Conflict;
		}
		set
		{
			Depart_Conflict = value;
		}
	}
```

This function allow us to get and set flight time from the outside of the class.

```
	public virtual DateTime DepartDate
	{
		get
		{
			return this.dateDepart;
		}
		set
		{
			this.dateDepart = value;
		}
	}
```

This function allow us to get and set the total number of passengers from the outside of the class.

```
	public virtual int TotalNumberOfPassengers
	{
		get
		{
			return this.totalNumberOfPassengers;
		}
		set
		{
			this.totalNumberOfPassengers = value;
		}
	}
```

This function allow us to get and set the price from the outside of the class.

```
	public virtual int Prix
	{
		get
		{
			return prix;
		}
		set
		{
			this.prix = value;
		}
	}
```

This function allow us to get and set the price reduction for VIP from the outside of the class.

```
public virtual double PrixReductionVIP
{
	get
	{
		return prixReductionVIP;
	}
	set
	{
		this.prixReductionVIP = value;
	}
}
```

This function allow us to get and set the occupied places from the outside of the class.

```
public virtual int OccupiedPlaces
{
	get
	{
		if (this.passengers.Count == 0)
		{
			return 0;
		}
		this.occupiedPlaces = this.passengers.Count;
		return this.occupiedPlaces;
	}
	set
	{
		this.occupiedPlaces = value;
	}
}
```

This function allow us to get and set the list of passengers from the outside of the class.

```
public virtual IList<Passengers> Passengers
{
	get
	{
		return passengers;
	}
	set
	{
		this.passengers = value;
	}
}
```

This function allow us to add a passenger to the list of passengers of the created flight from the outside of the class.

```
public virtual void addPassengers(IList<Passengers> passengers, Passengers passenger)
{
	this.passengers.Add(passenger);
}
```

This function allow us to us print all the available informations of the flight that are not null from the outside of the class.

```
        public override string ToString()
        {
                return "Flight [Flight Number =" + flightNumber + ", " +
(!string.ReferenceEquals(Destionation, null) ? "Destionation =" + Destionation + ", " : "") +
(!string.ReferenceEquals(Depart, null) ? "Depart =" + Depart + ", " : "") + (dateDepart != null ?
"DepartDate =" + dateDepart + ", " : "") + "Total Number Of Passengers = =" +
totalNumberOfPassengers + ", Prix =" + prix + " , Prix Reduction VIP = " + prixReductionVIP + ",
Occupied Places =" + occupiedPlaces +
                 (!string.ReferenceEquals(passengers, null) ? "Passengers =" + Passengers.ToString() +
","  : "") + "]";
        }

}
```

The code of Passengers script:

```
public class Passengers
{
        private static int id = 0;
        private static int passengerId;
        private string lastName;
        private string fristName;
        private int age;
        private Packages packages;
        private int flightNum;
        private bool VIP_Conflict;

        public Passengers() : base()
        {
        }
```

Constructor that allows us to create a new passenger with the according informations:last name , first name, age, its packages, and if it is VIP passenger or not.

```
        public Passengers(string lastName, string fristName, int age, Packages packages, bool vIP) :
base()
        {
                this.PassengerId = ++id;
                this.lastName = lastName;
                this.fristName = fristName;
                this.age = age;
                this.packages = packages;
                VIP_Conflict = vIP;
        }
```

Constructor that allows us to create a new passenger with the according informations:last name , first name, age, its luggages, and if it is VIP passenger or not, flight number.

```
        public Passengers(string lastName, string fristName, int age, Packages packages, int
flightNum, bool vIP) : base()
        {
                this.PassengerId = ++id;
                this.lastName = lastName;
                this.fristName = fristName;
                this.age = age;
                this.packages = packages;
                this.flightNum = flightNum;
                VIP_Conflict = vIP;
        }
```

This function allow us to get and set the passenger Id from the outside of the class.

```
public virtual int PassengerId
{
	get
	{
		return passengerId;
	}
	set
	{
		Passengers.passengerId = value;
	}
}
```

This function allow us to get and set the last name of the passenger from the outside of the class.

```
public virtual string LastName
{
	get
	{
		return lastName;
	}
	set
	{
		this.lastName = value;
	}
}
```

This function allow us to get and set the first name of the passenger from the outside of the class.

```
public virtual string FristName
{
	get
	{
		return fristName;
	}
	set
	{
		this.fristName = value;
	}
}
```

This function allow us to get and set the age of the passenger from the outside of the class.

```
public virtual int Age
{
	get
	{
		return age;
	}
	set
	{
		this.age = value;
	}
}
```

This function allow us to get and set the packages of the passenger from the outside of the class.

```
	public virtual Packages Packages
	{
		get
		{
			return packages;
		}
		set
		{
			this.packages = value;
		}
	}
```

This function allow us to get and set the flight number e of the passenger from the outside of the class.

```
	public virtual int FlightNum
	{
		get
		{
			return flightNum;
		}
		set
		{
			this.flightNum = value;
		}
	}
```

This function allow us to get and set the true value of the Passenger Id from the outside of the class.

```
	public virtual bool VIP
	{
		get
		{
			return VIP_Conflict;
		}
		set
		{
			VIP_Conflict = value;
		}
	}
```

This function allow us to us print all the available informations of the passenger that are not null from the outside of the class.

```
	public override string ToString()
	{
		return "Passengers [PassengerId =" + PassengerId + ", " +
(!string.ReferenceEquals(LastName, null) ? "Last Name =" + LastName + ", " : "") +
(!string.ReferenceEquals(FristName, null) ? "Frist Name =" + FristName + ", " : "") + "getAge =" +
Age + ", " + (Packages != null ? "getPackages =" + Packages + ", " : "") + "getFlightNum =" +
FlightNum + ", isVIP =" + VIP + "]";
	}

}
```

The code of Packages script:

```
using System;

public class Packages
{

	private double kilo_HandBag = 10;
	private double kilo_CheckedBaggages = 30;
	private double price = 10;

	public Packages() : base()
	{
	}
```

Constructor that allows us to create a new package for the user with the according informations: weight in Kilo of the hand bag and the weight in kilo of the checked luggages.

```
	public Packages(double kilo_HandBag, double kilo_CheckedBaggages) : base()
	{
		if (kilo_HandBag > 10)
		{
			Console.WriteLine("kilo of handbag baggages more than the allowed kilos (10 kg)");
			return;
		}
		this.kilo_HandBag = kilo_HandBag;
		this.kilo_CheckedBaggages = kilo_CheckedBaggages;
	}
```

This function allow us to get and set the weight in Kilo for the hand bag of a specific passenger from the outside of the class.

```
	public virtual double Kilo_HandBag
	{
		get
		{
			return kilo_HandBag;
		}
		set
		{
			this.kilo_HandBag = value;
		}
	}
```

This function allow us to get and set the weight in Kilo for the checked luggages of a specific passenger from the outside of the class.

```
	public virtual double Kilo_CheckedBaggages
	{
		get
		{
			return kilo_CheckedBaggages;
		}
		set
		{
			this.kilo_CheckedBaggages = value;
		}
	}
```

This function allow us to get and set the price of the hand bag and the checked luggages of a specific passenger from the outside of the class.

```
	public virtual double Price
	{
		get
		{
			if (this.Kilo_CheckedBaggages > 30)
			{
				this.price = (this.Kilo_CheckedBaggages - 30) * (this.price);
			}
			return price;
		}
		set
		{
			this.price = value;
		}
	}
```

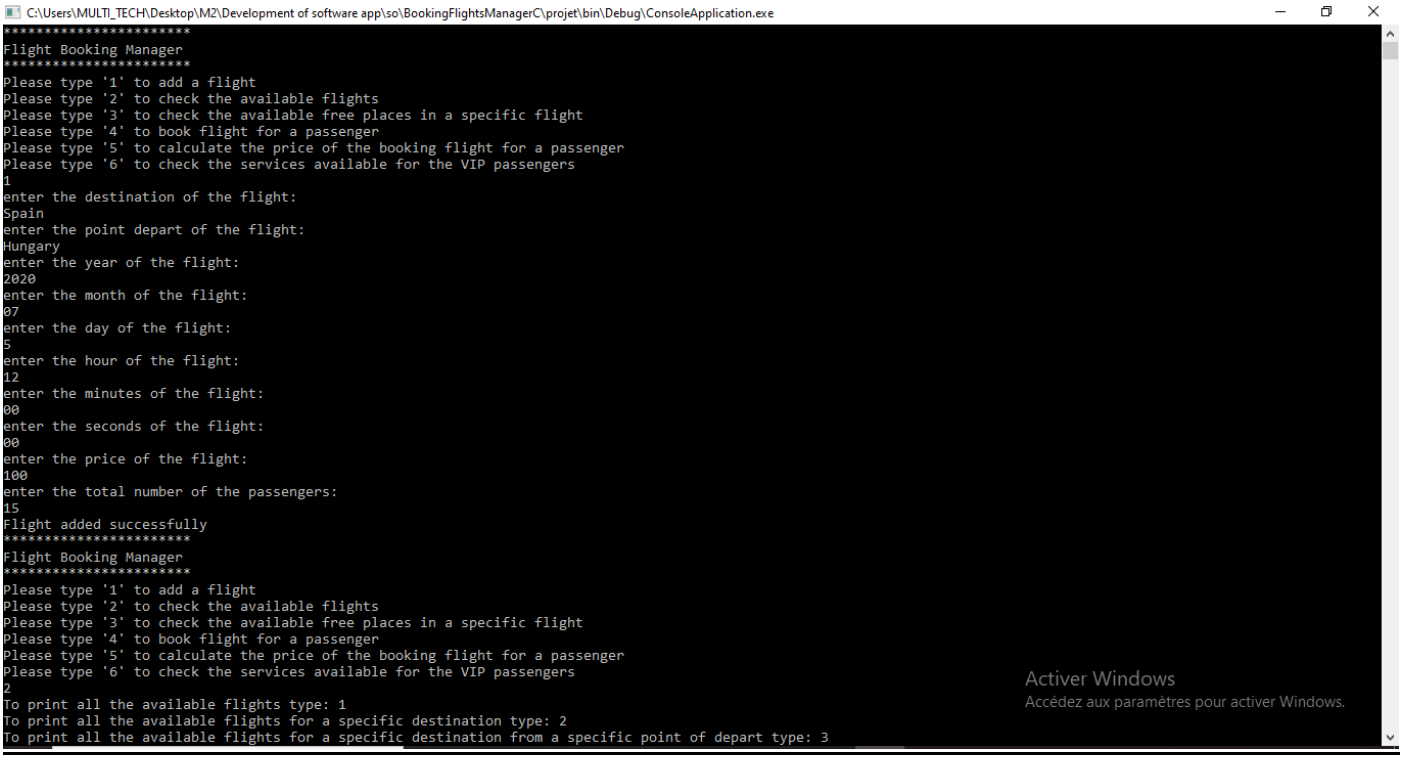
This function allow us to us print all the informations of the luggages rom the outside of the class.

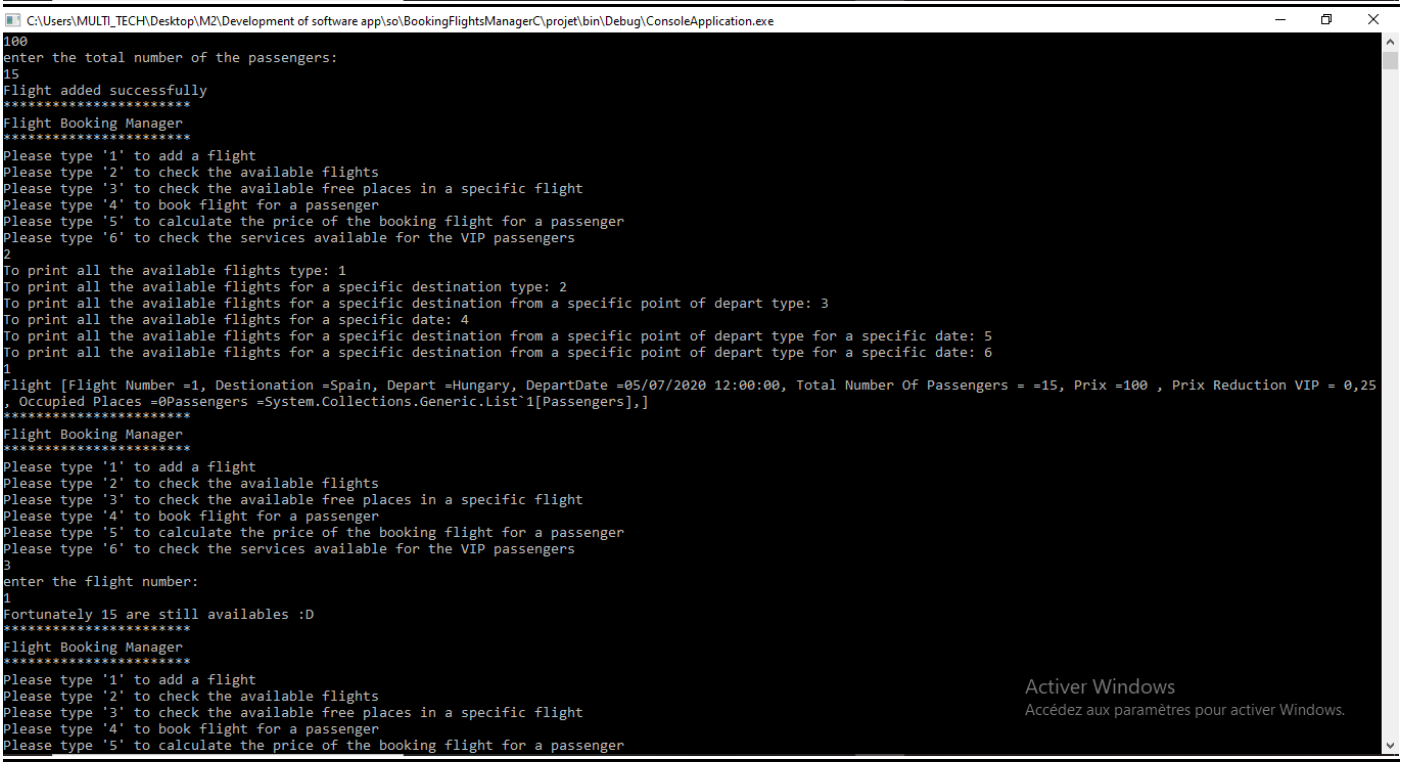
```
	public override string ToString()
	{
		return "Packages [Kilo_HandBag =" + Kilo_HandBag + ", Kilo_CheckedBaggages =" +
Kilo_CheckedBaggages + ", Price =" + Price + "]";
	}
```

Running the Program :

In order to run the program correctly the operator should first register a flight in the system than check, add a passenger and check prices or any service wanted by the user.

I join pictures for an example application for the program.

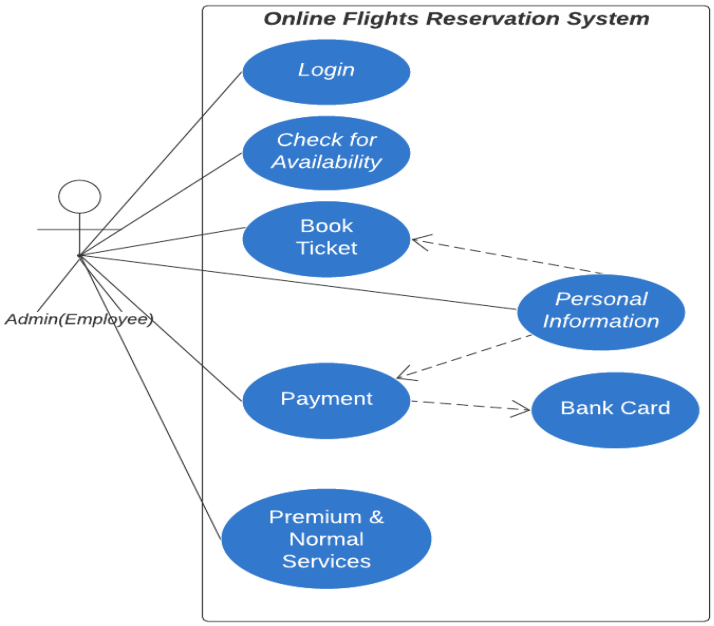

C:\Users\MULTI_TECH\Desktop\M2\Development of software app\so\BookingFlightsManagerC\projet\bin\Debug\ConsoleApplication.exe
****
Flight Booking Manager
****
Please type '1' to add a flight
Please type '2' to check the available flights
Please type '3' to check the available free places in a specific flight
Please type '4' to book flight for a passenger
Please type '5' to calculate the price of the booking flight for a passenger
Please type '6' to check the services available for the VIP passengers
1
enter the destination of the flight:
Spain
enter the point depart of the flight:
Hungary
enter the year of the flight:
2020
enter the month of the flight:
07
enter the day of the flight:
5
enter the hour of the flight:
12
enter the minutes of the flight:
00
enter the seconds of the flight:
00
enter the price of the flight:
100
enter the total number of the passengers:
15
Flight added successfully
****
Flight Booking Manager
****
Please type '1' to add a flight
Please type '2' to check the available flights
Please type '3' to check the available free places in a specific flight
Please type '4' to book flight for a passenger
Please type '5' to calculate the price of the booking flight for a passenger
Please type '6' to check the services available for the VIP passengers
2
To print all the available flights type: 1
To print all the available flights for a specific destination type: 2
To print all the available flights for a specific destination from a specific point of depart type: 3
Activer Windows
Accédez aux paramètres pour activer Windows.


C:\Users\MULTI_TECH\Desktop\M2\Development of software app\so\BookingFlightsManagerC\projet\bin\Debug\ConsoleApplication.exe
100
enter the total number of the passengers:
15
Flight added successfully
****
Flight Booking Manager
****
Please type '1' to add a flight
Please type '2' to check the available flights
Please type '3' to check the available free places in a specific flight
Please type '4' to book flight for a passenger
Please type '5' to calculate the price of the booking flight for a passenger
Please type '6' to check the services available for the VIP passengers
2
To print all the available flights type: 1
To print all the available flights for a specific destination type: 2
To print all the available flights for a specific destination from a specific point of depart type: 3
To print all the available flights for a specific date: 4
To print all the available flights for a specific destination from a specific point of depart type for a specific date: 5
To print all the available flights for a specific destination from a specific point of depart type for a specific date: 6
1
Flight [Flight Number =1, Destionation =Spain, Depart =Hungary, DepartDate =05/07/2020 12:00:00, Total Number Of Passengers = =15, Prix =100 , Prix Reduction VIP = 0,25
, Occupied Places =0Passengers =System.Collections.Generic.List`1[Passengers],]
****
Flight Booking Manager
****
Please type '1' to add a flight
Please type '2' to check the available flights
Please type '3' to check the available free places in a specific flight
Please type '4' to book flight for a passenger
Please type '5' to calculate the price of the booking flight for a passenger
Please type '6' to check the services available for the VIP passengers
3
enter the flight number:
1
Fortunately 15 are still availables :D
****
Flight Booking Manager
****
Please type '1' to add a flight
Please type '2' to check the available flights
Please type '3' to check the available free places in a specific flight
Please type '4' to book flight for a passenger
Please type '5' to calculate the price of the booking flight for a passenger
Activer Windows
Accédez aux paramètres pour activer Windows.

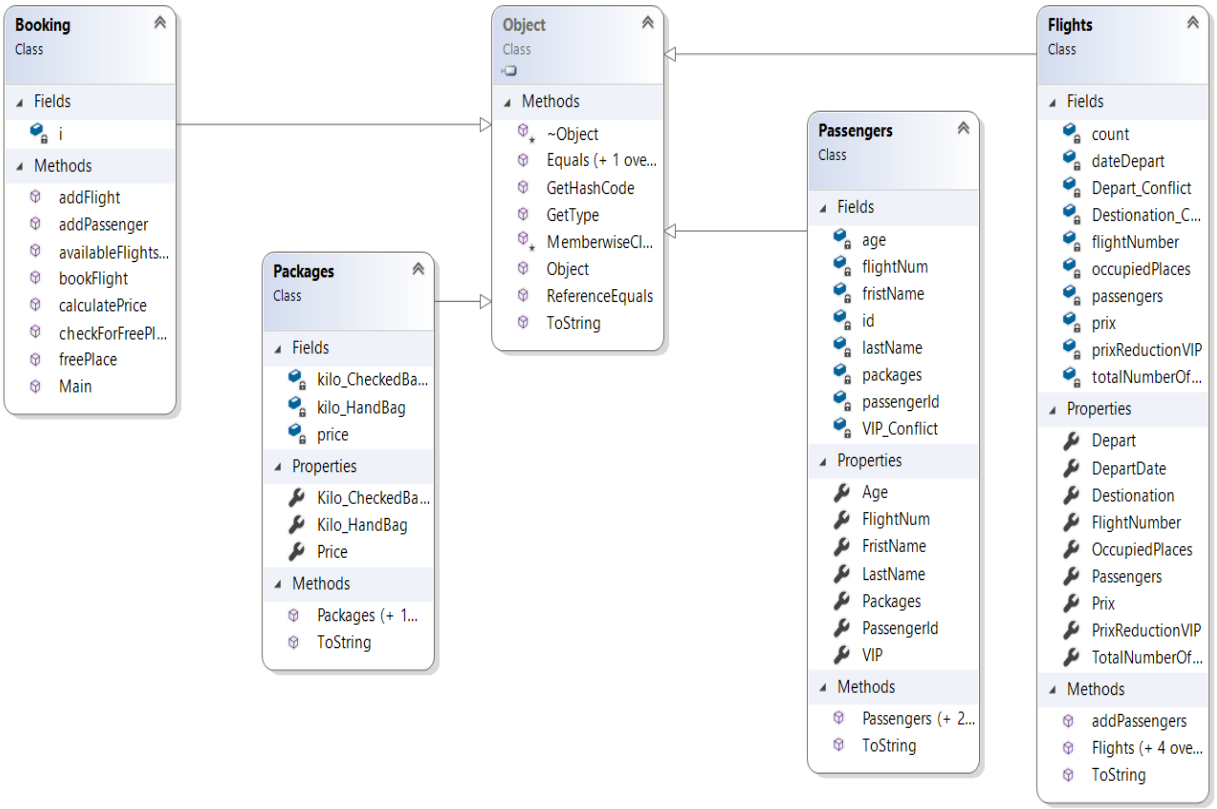
```
C:\Users\MULTI_TECH\Desktop\M2\Development of software app\so\BookingFlightsManagerC\projet\bin\Debug\ConsoleApplication.exe
enter the weight of passenger's checked baggages
5
Is the passenger a VIP?
 1: yes
 2: no
2
Passenger id = 1 added successfully
flight booked successfully :)
**********************
Flight Booking Manager
**********************
Please type '1' to add a flight
Please type '2' to check the available flights
Please type '3' to check the available free places in a specific flight
Please type '4' to book flight for a passenger
Please type '5' to calculate the price of the booking flight for a passenger
Please type '6' to check the services available for the VIP passengers
5
enter your flightNumber:
1
enter your passengerId:
1
the total price is: 110 Euro
**********************
Flight Booking Manager
**********************
Please type '1' to add a flight
Please type '2' to check the available flights
Please type '3' to check the available free places in a specific flight
Please type '4' to book flight for a passenger
Please type '5' to calculate the price of the booking flight for a passenger
Please type '6' to check the services available for the VIP passengers
6
enter the flight number:
1
enter the passenger id:
1
Sorry, these services are available only for VIP passengers
**********************
Flight Booking Manager
**********************
Please type '1' to add a flight
Please type '2' to check the available flights
Please type '3' to check the available free places in a specific flight
```


UML DIAGRAMS

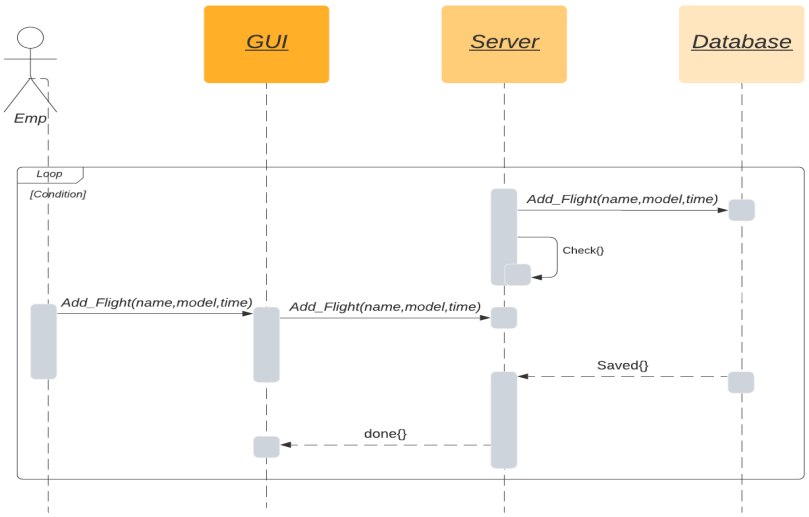
1) UML USE CASE DIAGRAM

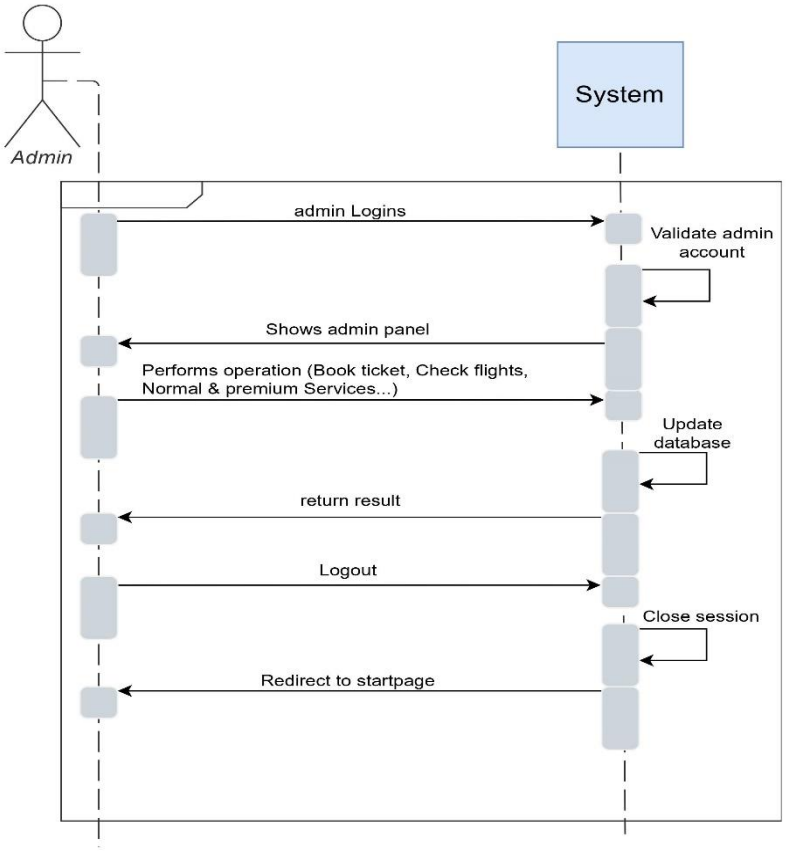


2) UML CLASS DIAGRAM



3) UML SEQUENCE DIAGRAMS





4) EXTRA WORK

https://github.com/sanahaddou/Homework-of-Developpement-of-Software-applications