

## Lab Module

# Sea Holidays!



## 1. Introduction

A travel agency that is specialized in the organization and selling of cruises wants to automate their booking process in order to make it easier for their customers. They plan to place some POS terminals in every delegation, so the customers should be able to search in the catalogue, access to any available information about each cruise, book and even pay using the POS application.

Since they knew about the wonderful students of CPM in the EII, they trusted us to develop the visual application that must satisfy all the requirements shown in the following sections.

## 2. Goal

The main goal of the module is the development of a visual application that allow users to consult the relationship of available cruises in a travel agency, and book the one he/she is interested in<sup>1</sup>.

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<sup>1</sup> In [https://www.youtube.com/watch?v=m\\_wFEB4Oxlo](https://www.youtube.com/watch?v=m_wFEB4Oxlo) you will find an inspiring soundtrack that will motivate you positively.



### 3. Cruises, ships and extras

All the information related to the ships is stored in three text files:

- cruceros.dat
- barcos.dat
- extras.dat.

3.1. File **cruceros.dat**. It follows the following format in each line:

código crucero;zona;denominación;puerto de salida;itinerario;descripción;apto menores;duración;fechas de salida;barco

Where:

**Código crucero:** Three chars sequence and 4 numbers identifying uniquely the cruise

**Zona:** Area in which the cruise will take place.

**Denominación:** Text describing the cruise.

**Puerto de salida:** Starting point

**Itinerario:** Relationship of destinations of the cruise.

**Descripción:** Details of the cruise.

**Apto menores:** It states if the cruise allows children under 16 (S) or not (N)

**Duración:** Duration in days

**Fechas de salida:** Starting dates, separated by %

**Barco:** The code if the ship that will do the cruise.

Example:

CRU0001;Europa;Capitales Bálticas;Kiel;Kiel-Copenhague-Estocolmo-Tallin-San Petersburgo-Kiel; Esta ruta le llevará hacia el Norte de Europa a través de lugares y ciudades llenos de encanto e historia;S;9;01/11/2015%01/12/2015%01/01/2015%01/02/2015%01/12/2015%01/03/2015;B01

CRU0002;Europa;Mediterráneo histórico;Barcelona;Barcelona-Citavecchia-Nápoles-Barcelona;Reconocidas como joyas de la arquitectura y de la historia, estas ciudades del mediterráneo no te dejarán indiferente;S;7;15/11/2015%15/12/2015%15/01/2015%15/02/2015%15/12/2015%15/03/2015;B02

CRU0003;Europa;Baleares en Fiesta;Ibiza;Ibiza-Formentera-Ibiza;Las fiestas en barco se han convertido en un pilar importante de la escena discotequera de Ibiza y no hay vacaciones en Ibiza completas sin haber tenido la posibilidad de irse a navegar ¡y pegarse una buena fiesta por lo menos una vez! Bailando los mejores temas del verano bajo el sol, mirando al mar y a la hermosa costa de Ibiza, gente guapa a tu alrededor ... ¿puede haber una fiesta mejor?;N;1;15/11/2015%15/12/2015%15/01/2015%15/02/2015%15/12/2015%15/03/2015;B03

CRU0004;Caribe;Caribe occidental;Tampa;Tampa-Cozumel-George Town-Tampa;El itinerario de este crucero le ofrecerá excelentes oportunidades para bucear, conocer playas paradisíacas, flora y fauna marina, jardines botánicos así como realizar senderismo y descubrir la fascinante historia de estas localidades;S;6;15/11/2015%15/12/2015%15/01/2015%15/02/2015%15/12/2015%15/03/2015;B01

CRU0005;Caribe;Caribe oriental;Miami;Miami-St.Thomas-Islas Virgenes-Road Town-Tórtola- Nassau-Miami;Del dinamismo de Miami a las paradisíacas playas del más auténtico Caribe ¡No te lo pierdas!;S;9;15/11/2015%15/12/2015%15/01/2015%15/02/2015%15/12/2015%15/03/2015;B04

. . .

### 3.2. File **barcos.dat**. The format:

código      barco;denominación;descripción;num.camarotes      dobles      interior;num.camarotes      dobles  
exterior;num. camarotes familiares interior;num. camarotes familiares interior;precio camarote doble  
interior; precio camarote doble exterior; precio camarote familiar interior; precio camarote familiar  
exterior

Where:

**Código barco:** One char and 2 numbers identifying the ship.

**Denominación:** Name of the ship

**Descripción:** Details of the ship

**Número de camarotes:** Number of cabins per type that exist in the ship.

**Precio camarotes:** Different prices per person and day according to the type of cabin.

Example:

B01;New Horizon;Es el buque insignia de nuestra agencia. Su silueta es inconfundible por su elegancia y su diseño estilizado. El nivel de confort es altísimo, tanto por su forma de navegación como por la categoría de sus camarotes elegantemente decorados. Los atrios rebosantes de luz solar aportan carácter a la personalidad propia y el estilo único del buque  
New Horizon;50;30;20;10;40;55;35;50

B02;Pacific Princess II;Es una de las obras maestras de la navegación en buques de recreo de pasajeros. Construido en 2013, el perfil del Pacific Princess II se dibuja en el horizonte con un diseño elegante y moderno. La restauración es una de las especialidades del buque con dos restaurantes atendidos por personal de altamente cualificado. Cuenta también con bares donde poder disfrutar en la mejor compañía;30;20;5;5;50;55;30;40

B03;Holiday;Diseñado para la máxima diversión y confort de sus pasajeros, este barco cuenta con tres piscinas exteriores así como discoteca y varios bares y restaurantes;20;20;0;0;100;150;0;0

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### 3.3. File **extras.dat**. Format:

código extra;denominación;precio

Where:

**Código extra:** One char and two numbers identifying uniquely the extra.

**Denominación:** Name of the extra

**Precio:** the price that must be added to the booking per person and day, with the exception of the extra bed, that will be added per day.

Example:

E01;Jacuzzi;6  
E02;Cama supletoria;20  
E03;Desayuno especial;5  
E04;Cama extragrande;12  
. . .

Taxes are included in all the prices!

**3.4** Both cruises and ships will have a descriptive picture associated. This picture will be named with the code and the **jpg** extension. For example, **CRU0001.jpg** would be the file corresponding to the cruise “Capitales Británicas”. The pictures in the files can have different dimensions. **The application must adapt dynamically the size of each picture to the size of the component that shows it.**

## 4. Functional Requirements

**4.1** The main goal of the application is to allow users to **consult** the relationship of available cruises in a travel agency and to **book** any of them for the dates and number of persons he/she wants.

**4.2** All the data of a cruise contained in the previously commented files will be shown to the user the way the student considers more interesting. The **codes** of cruise, ships and extras **are considered internal data** so **they will never be shown** to the user of the application. They will only be used during the book file generation as shown in point 4.7.

**4.3.** Whenever the applications starts, two of the cruises of the travel agency will be offered with a 15% discount. These two cruises will be selected randomly. This discount must be notified the way the student considers more interesting.

**4.4** The user must state the number of cabins to book, the number of persons for each of them and the age of each traveler. Also, he/she must specify every extra he/she wants to book for each of the cabins. The maximum number of extra beds are 1 per cabin, and only a child under 16 can use it.

The system must guarantee that:

- There cannot be placed more travelers in a cabin than the officially allowed. However, they can be used for less persons than the limit, but then the cabin will be charged as if it was full (for example, family cabin used by just one person)

[Optional requirement:]

- It cannot be booked more cabins than the actual capacity of the cruise for a specific date

El sistema ha de garantizar que:

**4.5** The booking process will be driven the way the student considers more convenient. However, the different scenarios tested during seminar 2 must be tested and satisfied by the application.

**4.6** A customer must be allowed to change his/her booking any time before its formalization (i.e, increase or reduce the number of cabins, add or remove an extra, modify travelers age, etc.)

**4.7** The user must introduce name, surname, national ID and contact phone to formalize the booking. The application must **show in the screen** a summary of the booking following the format described below. If the users agrees, he/she will confirm the payment and the booking will turn formalized. The national ID and the date of the booking will form name of the text file in which the booking data shown in the screen should be stored as a payment receipt.

JUSTIFICANTE RESERVA – (NOMBRE EMPRESA) – FECHA RESERVA

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(NOMBRE NIF TELEFONO DE CONTACTO DEL CLIENTE)

**\*\* DATOS DEL CRUCERO \*\***

Crucero: (Nombre / Código))

Barco:

Fecha de salida:

Días:

Salida:

N. Pasajeros:

Camarotes / extras: (Camarotes/ extras separados por , y ;)

**\*\* PAGADO RESERVA \*\***

Camarotes:

XXX €

Extras:

YYY €

Descuento oferta:

ZZ €

Importe Total:

XXX+YYY-ZZ €

Total ..... ZZZZ €

The date format can be in the system's format. The discount will be shown only if the cruise was discount granted.

Example:

JUSTIFICANTE RESERVA – EII CRUCEROS – 01/12/2015

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NOMBRE: ALEJANDRO GARCÍA LÓPEZ NIF: 0987654321A

TEL: 606101202

**\*\* DATOS DEL CRUCERO \*\***

Crucero: Caribe occidental / CRU0004

Barco: New Horizon

Fecha de salida: 15/01/2015

Días: 6

Salida: Tampa

N. Pasajeros: 7

Camarotes: 1 doble exterior / jacuzzi, desayuno especial; 1 familiar exterior /cama extra, desayuno especial

**\*\* PAGADO RESERVA \*\***

Camarotes:

1860 €

Extras:

324 €

Importe Total:

2184 €

The format of this file could be slightly different to the example, but the data must be exactly that one.

**4.8** As soon as a user finishes a booking, the application must be prepared to be used by the next customer.

**4.9** The application must have a complete **Help Support (at least 5 html pages)**

## 5. Non Functional Requirements

**5.1** The application must **satisfy as far as possible the original design** delivered after the mockup seminar. **Any change must be justified** in the documentation.

**5.2** The application must be prepared to show **any combination of /cruises/ships/extras** contained in the files. We can assume that the format of the file is correct and the data consistent. **The module will not be reviewed in case there was any modification of the format of any of the input files.**

## 6. Some implementation, GUI and evaluation aspects.

Remember that a **clear separation** between the business logic and the interface must be maintained. **The GUI must be consequent with any principle, rule or recommendation given all along the course. Also, the main window must be resized correctly.**

## 7. Documentation

The student must deliver:

1. Every file that belongs to the project. The name of the project must follow the format: name\_surname\_nationalId
2. A document explaining the given solution for this problem. This document will have cover and table of contents, and at least:
  - a. Introduction, describing the problem
  - b. Prototype (Interface prototype built during the seminars). The development and evolution of the two first prototypes must be described: original approach, tests, changes adopted after the first testing phase, and final version development. Screen shots of the last prototype should be included.
  - c. Development aspects.
    - i. Interface: Screenshots of every view of the application, with a relationship of the user interface components in each and a justification of their use.
    - ii. Brief description of the business classes developed in the application (attributes, methods, etc.).

The name of the zip file must be the national ID of the student without letters or punctuation symbols.

## 8. Delivery

### 8.1. For every student

A zip file named with the national **ID of the student**, with the following structure inside:

- **Readme.txt** file with the name, national ID, UO code and lab group of the student
- The document described before
- The project folder (without workspace neither bin folder).

The delivery will be done through the virtual campus before **January 10<sup>th</sup> at 21.00**. Delayed or email deliveries **will not be accepted**.

### 8.2. Students that did not deliver the evaluated prototype.

Those students that did not delivered the work developed during the first seminars (screen design, scenarios testing and mockup development) must deliver also a document with the prototype and the

results of the tests, according the documentation available in the virtual campus. This document must be delivered before **December 19<sup>th</sup> at 21:00** using the corresponding task in the virtual campus.

## 9. Others

**The development of this module is strictly individual.** The students that collaborated in the same group during the seminars can share the interface design, **but no the implementation**. Also, each student is responsible of **preventing his project from being copied** in any way. Copied modules (as it happens with any other exams) is a very serious transgression that **will involve disciplinary consequences**.

The defense of the module will be done **January 14<sup>th</sup> at 14:30**, as the second lab exam of the course. However, in case the professors consider it convenient, any student could be asked to assist to an individual defense of the module.