

From storyboards to multimedia language training programmes

Anca Dinu
University of Bucharest

Liviu P. Dinu
University of Bucharest

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Continuous process of two ways feedback between the designers of the programme and the programmers:

- **Feedback from the programmers to the designers:**
 - As the programmers implemented the story boards, the designers became increasingly aware of specific multimedia possibilities and so they modified the storyboards accordingly and designed the next storyboards more complex.
 - There were also some opposite cases, where the designers, after seeing the multimedia possibilities of the programming languages (Flash), requested too complex animations or tasks via the storyboards.

Continuous process of two ways feedback between the designers of the programme and the programmers.

- An **example** of a result of such a dialog and cooperation between the two is the compromise solution given to the designer's request for a microphone button that should allow the user to record his own pronunciation of words or sentences in the target language in order to compare it to the recorded pronunciation of a native speaker. Due to the fact that recording user's voice and storing this sound file in some location on the host computer could potentially cause technical troubles in some cases, the compromise solution was to allow the user to listen in the head phones his own voice and pronunciation only in real time, without storing it any ware.

Continuous process of two ways feedback between the designers of the programme and the programmers.

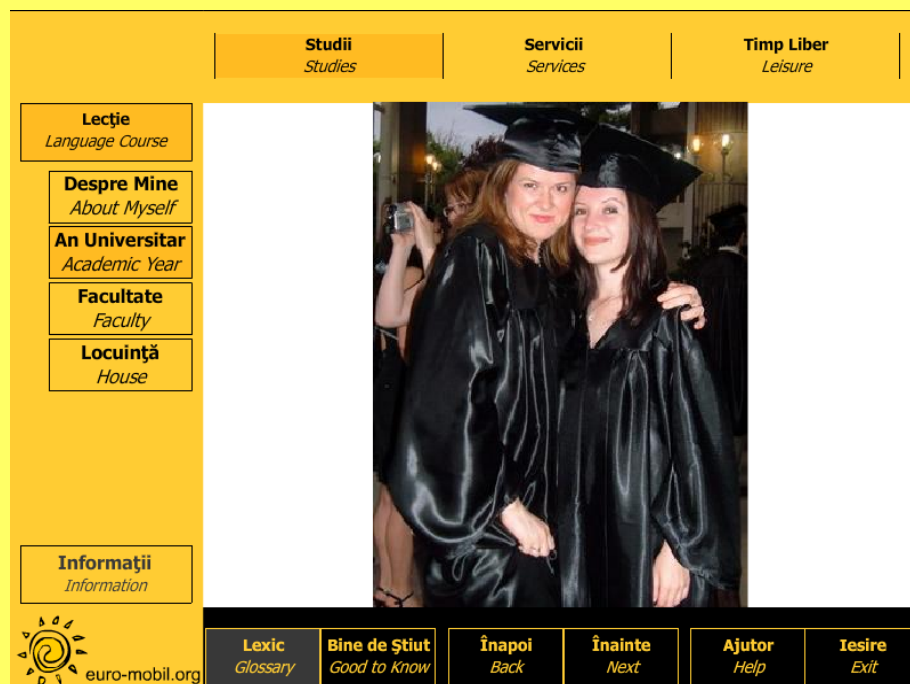
Feedback from the designers to the programmers:

- The main modification asked by the designers after seeing partial implementation concerned the user friendly characteristics, such as the simplicity of the navigation, the homogeneity of the colors throughout the entire programme, maximum usage of all the screen space, highlighting / hiding text or buttons for didactic purposes.
- For **example**, in listen and comprehension activities, the Romanian transcript and English translation of the sound were visible on the screen all the time, thus disregarding different user's levels of proficiency in Romanian. So the team decided to add buttons for the Romanian transcript and for the English translation, such that the user may choose when and if to see them.

The multimedia means and techniques used during Euromobil Romanian programme development.

The programme structure:

- The Romanian programme is structured in 3 units:
 - Studies,
 - Services
 - Leisure
- Has at all times on the screen buttons for:
 - Glossary
 - Good to know
 - Back
 - Next
 - Help
 - Exit.
- Each of the 3 units has 4 thematically grouped modules and an information section



The multimedia means and techniques used during Euromobil Romanian programme development.

- Each module comprises a linear succession of screens: a number of screens with teaching objectives followed by a number of screens containing different activities for infixing and testing the knowledge just acquired.
- It is easy to navigate through the Romanian programme due to next/back buttons and to the presence of highlighted buttons which help the user to know where he/she is at all times.
- The Romanian programme has a mixture of linear and hierarchical nonlinear structure, where the user may choose whatever order of access he/she wants. This implied designing the teaching/activities such that in any location at any time the language knowledge prerequisites (vocabulary or grammar) are minimal.

The multimedia means and techniques used during Euromobil Romanian programme development.

- This independency of separate modules was not too difficult to achieve, because the target users are exchange students of beginner's level, so the learning process had to be kept as simple as possible in the first place.
- The simplicity requirement was reinforced during the tests on foreign students made after implementation of a third of the programme: some of them complained that the programme is too difficult for beginner's level (could not understand sentences, dialogs, too much information to be learned at once), so the storyboards had to be modified accordingly.
- Thus, the feedback was received not only from the designers and from the programmers, but, equally important, from the potential users.

Equilibrium between playing and learning.

- A multimedia language learning should be attractive (not dull or boring), so the Romanian programme used pictures, audios, videos, animation, interactive tasks, etc. It uses drag and drop, check boxes, option buttons, scrolling lists, buttons for checking the correctness, for rewinding, for listing transcripts and English translations, etc.
- But it should not resemble too much to a game where too little is learned, so it has a consistent part (in the good to know section) of language information (mostly grammar) and a glossary.

Equilibrium between playing and learning.

Studi
Studies
Servicii
Services
Timp Liber
Leisure

Lecție
Language Course

Despre Mine
About Myself

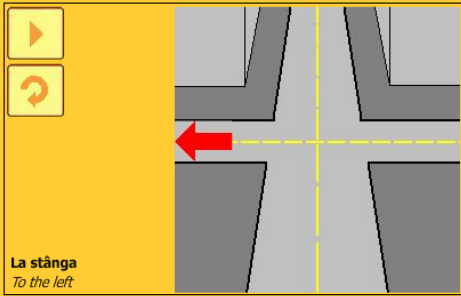
An Universitar
Academic Year

Facultate
Faculty

Locuință
House

Facultatea
The Faculty 5/12

Aflați încotro se deplasează săgeata apăsând butonul Play.
Find out where the arrow is going by clicking on Play.



La stânga
To the left

Lexic
Glossary
Bine de Știut
Good to Know
Înapoi
Back
Înainte
Next
Ajutor
Help
Iesire
Exit

Colegi Classmates 2/3				
Good to know				
The article The definite article:				
Case	Singular		Plural	
	Masculine	Feminine	Masculine	Feminine
nominative =accusative	-ul (nouns ending in a consonant, -i, -o) băiatul, taxiul, boleroul	-a (replaces the singular ending: casă-casa) masa, pisica, fiica	-i băieții, tații, codrii, pereții, peștii	-le casele, mesele, pisicile, fiicele, basmalele, cafelele, zilele
genitive=dative	-lui (nouns ending in a vowel) tatălui, codrului -ului (nouns ending in a consonant) băiatului, omului	-i casei, mesei, pisicii, fiicei, basmalei, cafelei, zilei	-lor băieților, fetelor, oamenilor, zilelor	
vocative (only some nouns)	-(u)le băiatule, omule	-o fato, pisico	-lor fetelor, băieților	
Back / Înapoi Next / Înainte				

Technical aspects of the implementation of Romanian programme.

Basic interactive elements in flash:

The simplest interactive elements in flash are images, sounds and movies. The first two are imported in flash directly, but to use movies a flash component (for exemple MediaPlayer) must be used to load the movie (specified through an url) and to render it. This component offers to the user the possibility to modify the volume of the sounds, to start/stop the movie and to replay certain sequences of the movie.

Technical aspects of the implementation of Romanian programme.

Learning Interactions in Flash:

- Macromedia Flash offers six types of predefined interactions which may be used in interactive materials. Those are reunited in Learning Interactions library. The six types of interactions are:
- True / False— The user answers by true or false
- Multiple choice – The user answers by choosing an answer from a number of different variants
- Fill in the blank – The user gives an answer which has to have meaning in a given context
- Drag and drop – The user answers a question by dragging an object on a target object
- Hot spot – The user answers a question by pressing a region of the screen
- Hot object— The user answers a question by pressing an object

Technical aspects of the implementation of Romanian programme.

Each interaction has a number of unique parameters which allow the configuration of the way the interaction will look and react. The interactions are implemented in Flash as Flash components, thus permitting a simple way of use and configuration.

Other types of interactive materials:

- When the standard components offered by Flash are not sufficient or cannot be used in the form they are offered, other components may be written, using the existing or new components to which one adds interactivity through the scripting language ActionScript.

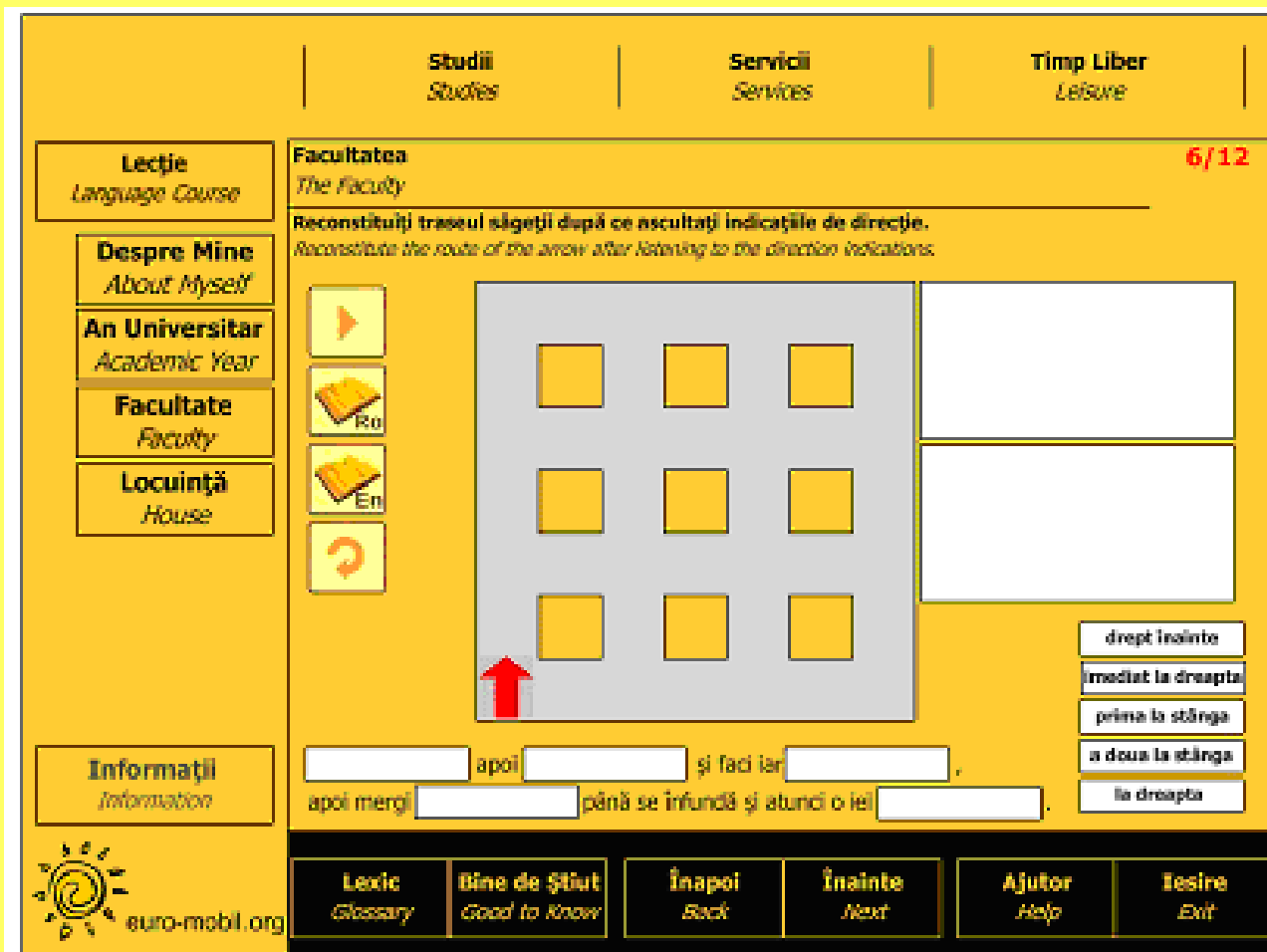
Technical aspects of the implementation of Romanian programme.

The components defined and used for Euromobil programme are:

- Navigation buttons (next, back, back to the first page) are Flash buttons which act on the timeline (advance or go back to a frame)
- The buttons which put up the Romanian transcript or the English translation work together with Dynamic Text components, modifying the text
- Customized drag and drop components were used due to their flexibility in comparison with the standard drag and drop components. Thus the customized drag and drop components permit rendering a sound when the chosen variant is wrong, putting up an explicative text, while the standard drag and drop components do not permit all these facilities and have a bulky validation (the answers may be validated all at once, but not individual, etc)

Technical aspects of the implementation of Romanian programme.

•The animations are made using the motion tween technique, which consists of creating the initial and final frame, the intermediate frames being automatically created by Flash. The animations may be accompanied by sounds rendered automatically or by pressing a button



The screenshot shows a web-based interface for a Romanian language program. At the top, there are three main navigation tabs: "Studii" (Studies), "Servicii" (Services), and "Timp Liber" (Leisure). Below these, the current page is titled "Facultatea" (The Faculty) with a progress indicator "6/12".

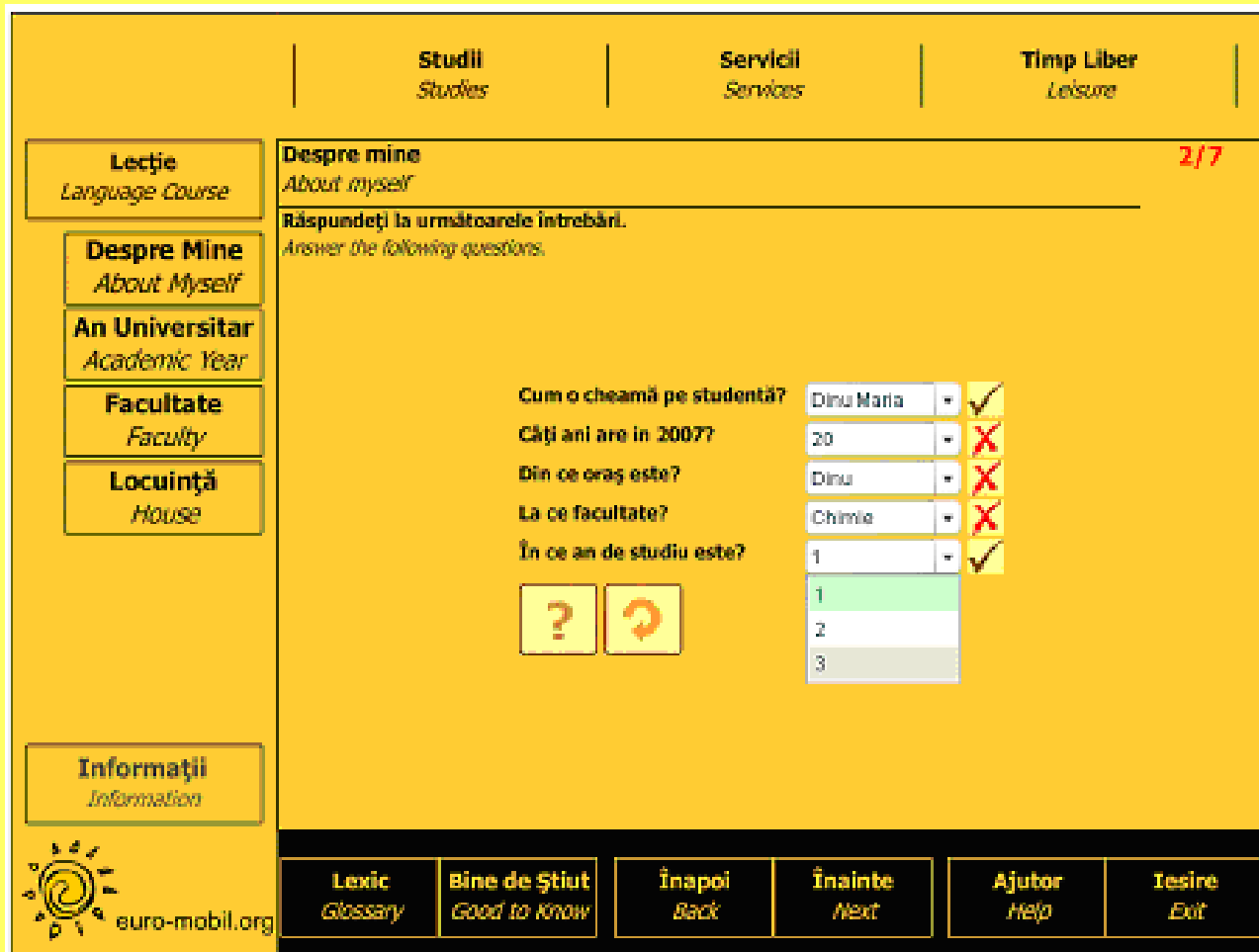
The main content area features a 3x3 grid of yellow squares on a grey background, representing a maze. A red arrow points to the bottom-left square. To the left of the grid are four icons: a play button, a yellow square with "Ru", a yellow square with "En", and a circular arrow icon. Below the grid are two text input fields with the following text: "apoi [] și faci iar []" and "apoi mergi [] până se înfundă și atunci o iei []".

On the right side, there are two empty white rectangular boxes and a vertical stack of directional buttons: "drept înainte", "imediat la dreapta", "prima la stânga", "a doua la stânga", and "la dreapta".

At the bottom of the interface, there is a navigation bar with buttons for "Lexic" (Glossary), "Bine de Știut" (Good to Know), "Înapoi" (Back), "Înainte" (Next), "Ajutor" (Help), and "Iesire" (Exit). The EUROMOBIL logo and website URL "euro-mobil.org" are visible in the bottom left corner.

Technical aspects of the implementation of Romanian programme.

- The buttons for validation of answers verify if the user's answers are correct by checking the validation conditions of the activity: for example the written text is correct, the object are placed in the right place, the text from dropdown list are correctly selected, etc)



The screenshot displays a web-based interface for a Romanian language programme. The top navigation bar includes three main sections: **Studii** (Studies), **Servicii** (Services), and **Timp Liber** (Leisure). The current page is titled **Despre mine** (About myself) and is marked as **2/7**. The page is divided into a left sidebar and a main content area.

Left Sidebar:

- Lecție** (Language Course) - Active section
- Despre Mine** (About Myself)
- An Universitar** (Academic Year)
- Facultate** (Faculty)
- Locuință** (House)
- Informații** (Information)

Main Content Area:

Despre mine (About myself) 2/7

Răspundeți la următoarele întrebări.
Answer the following questions.

Cum o cheamă pe studentă?	Dinu Maria	✓
Câți ani are în 2007?	20	✗
Din ce oraș este?	Dinu	✗
La ce facultate?	Chimie	✗
În ce an de studiu este?	1	✓

Below the questions are two buttons: a question mark icon and a refresh icon.

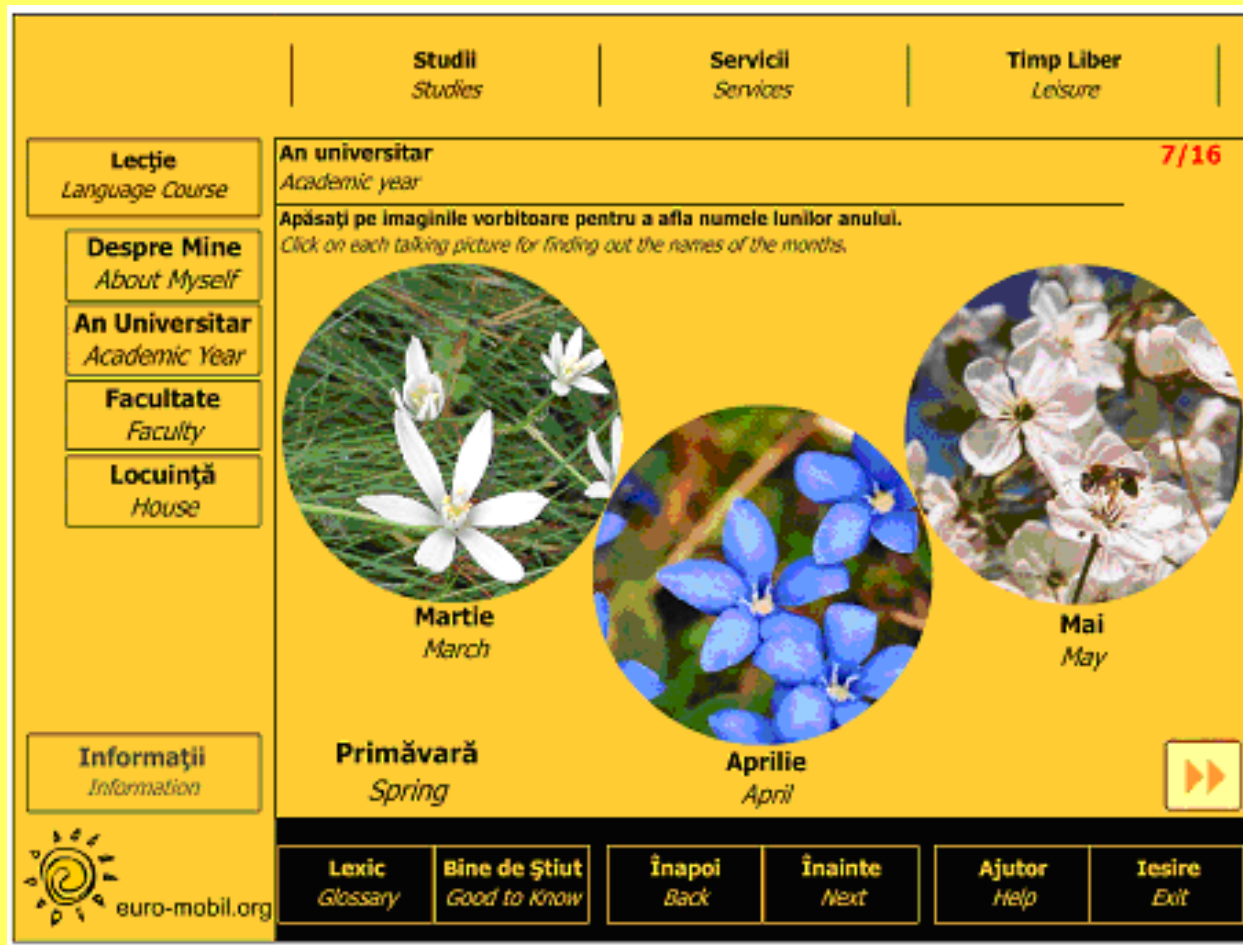
Bottom Navigation Bar:

- Lexic** (Glossary)
- Bine de Știut** (Good to Know)
- Înapoi** (Back)
- Înainte** (Next)
- Ajutor** (Help)
- Iesire** (Exit)

The footer of the interface includes the EUROMOBIL logo and the website address [euro-mobil.org](http://www.euro-mobil.org).

Technical aspects of the implementation of Romanian programme.




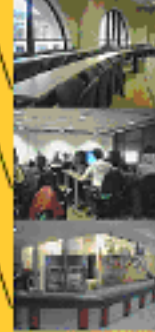
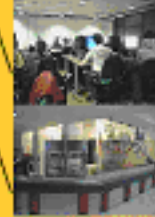
- Talking images are buttons which have in their timeline a suggestive image; they are associated with an action script code which is executed at the press of the image, having as effect the loading of a sound from the library and its rendering



The screenshot displays a software interface for a Romanian language program. At the top, there are three main navigation tabs: "Studii" (Studies), "Servicii" (Services), and "Timp Liber" (Leisure). Below these, a sidebar on the left contains several menu items: "Lecție" (Language Course), "Despre Mine" (About Myself), "An Universitar" (Academic Year), "Facultate" (Faculty), "Locuință" (House), and "Informații" (Information). The main content area is titled "An universitar" (Academic year) and shows a progress indicator "7/16". The lesson content includes the instruction "Apăsați pe imaginile vorbitoare pentru a afla numele lunilor anului." (Click on each talking picture for finding out the names of the months.) and three circular images of flowers: white flowers for "Martie" (March), blue flowers for "Aprilie" (April), and pink flowers for "Mai" (May). Below these images, the text "Primăvară" (Spring) is displayed. At the bottom of the interface, there is a navigation bar with buttons for "Lexic" (Glossary), "Bine de știut" (Good to Know), "Înapoi" (Back), "Înainte" (Next), "Ajutor" (Help), and "Iesire" (Exit). The EUROMOBIL logo and website URL are visible in the bottom left corner.

Technical aspects of the implementation of Romanian programme.

- The check box components used are standard check box components with modified behavior. The modification was done by action script such as if one of the options is chosen, all the others are deselected and if the correct option is chosen, all the others are deactivated (they can no longer be chosen)

	Studii <i>Studies</i>	Servicii <i>Services</i>	Timp Liber <i>Leisure</i>			
<p>Lecție <i>Language Course</i></p> <p>Despre Mine <i>About Myself</i></p> <p>An Universitar <i>Academic Year</i></p> <p>Facultate <i>Faculty</i></p> <p>Locuință <i>House</i></p> <p>Informații <i>Information</i></p>  <p>euro-mobil.org</p>	<p>Facultatea <i>The Faculty</i> 9/12</p> <p>Alegeți poziția corespunzătoare fiecărei încăperi. Unde se află ...? <i>Choose the right position corresponding to each room. Where is the ...?</i></p> <div style="display: flex; justify-content: space-around;">     </div>					
	<p>Laboratorul</p> <p><input checked="" type="checkbox"/> La a doua ușă pe stânga <input type="checkbox"/> La a doua ușă pe dreapta <input type="checkbox"/> La ușa din față</p> <p>Biblioteca</p> <p><input checked="" type="checkbox"/> La capătul culoarului pe stânga <input type="checkbox"/> La prima ușă pe dreapta <input type="checkbox"/> La ușa din față</p> <p>Amfiteatrul</p> <p><input type="checkbox"/> La a doua ușă pe stânga <input checked="" type="checkbox"/> La ultima ușă pe dreapta <input type="checkbox"/> Drept în față</p> <p>Toaleta</p> <p><input checked="" type="checkbox"/> La prima ușă pe dreapta <input type="checkbox"/> În fața bufetului <input type="checkbox"/> La ușa din față</p>	<p>Sala de curs</p> <p><input checked="" type="checkbox"/> La prima ușă pe dreapta <input type="checkbox"/> În fața bufetului <input type="checkbox"/> Pe stânga, lângă bibliotecă</p> <p>Biroul</p> <p><input type="checkbox"/> La prima ușă pe dreapta <input type="checkbox"/> În fața laboratorului <input checked="" type="checkbox"/> La ușa din față</p> <p>Bufetul</p> <p><input type="checkbox"/> Imediat pe dreapta <input type="checkbox"/> A treia ușă pe dreapta <input checked="" type="checkbox"/> Lângă bibliotecă</p>				
	<p>Lexic <i>Glossary</i></p>	<p>Bine de Știut <i>Good to Know</i></p>	<p>Înapoi <i>Back</i></p>	<p>Înainte <i>Next</i></p>	<p>Ajutor <i>Help</i></p>	<p>Iesire <i>Exit</i></p>