



HotelRevolution2014s

Input, Output and Interface
Design

Input design

Our system performs **5 main tasks**:

- Record **new reservations**
- Search for an **existent reservation**
- Search for a **guest** that has been in the hotel
- Manage the checkout's **billing process**
- Calculate and analyse the **revenue** of the hotel over a specified period of time.

All the input required during this tasks will be carefully **validated**, in order to avoid system error and exception that may be not correctly handled by the sistem.

Logical Data Structure

Record new reservations:

- Check-in date
- Check-out date
- Rooms booked
- Guest's data:
 - Name (required)
 - Surname (required)
 - Passport ID (required)
 - Email address (required)
 - Phone number
 - Address
 - Other useful informations

Logical Data Structure

Manage existent reservations:

The system allows the user to find out all the informations about an existent reservation in two ways:

- By inserting the **ID of the reservation**
- By inserting **name and surname** of the guest who made the reservation

The system then allows the user to modify the reservations data: to perform this action it shows all the available data to the user, that can change them and submit again all the informations to the system, that updates the database.

Logical Data Structure

Find out existent reservations:

- ID of the reservation
- OR**
- Name and surname of the guest who made the reservation

Modify existent reservations:

- Resend all the data given in output in the previous stage

Logical Data Structure

Manage guest's data:

The system allows the user to find out all the informations about a guest that has been in the hotel by inserting one of the following informations:

- Guest's **First Name**
- Guest's **Family Name**
- Guest's **Passport No**
- Guest's **Email address**

The system then allows the user to modify the guests data: to perform this action it shows all the available data to the user, that can change them and submit again all the informations.

Logical Data Structure

Find out guest's data:

- Guest's **First Name**, OR
- Guest's **Family Name**, OR
- Guest's **Passport No**, OR
- Guest's **Email address**, OR

Modify guest's data:

- Resend all the data given in output in the previous stage

Logical Data Structure

Manage billing process:

In order to simplify the billing process the system shows to any user that has the required credentials (i.e. a manager) a list of the reservations that expires in the current date. In this case there is **no input required**, because the only input needed is the current date, that can be retrieved autonomously by the system.

Logical Data Structure

Show revenue:

- Start date
- End date

The system will show the revenue only to users with the required credentials (i.e. a manager)

Output design

Our system provides **4 main outputs**:

- The **ID** of any **new reservation** performed
- A list of all the **reservations** that match the user's search
- A list of all the **guests** that match the user's search
- A list of the **checkouts** in the current day
- The **total revenue** over a selected period and it's graph day by day.

There are also a lot of messages that can be classified as **feedback**, more than output, so they will be ignored in the following analysis.

Logical Data structure

New Reservation:

- **Sum-up** of all the input previously inserted:
 - Gues'ts data
 - Rooms booked
 - Check-in and check-out dates
 - Price of the stay
- **ID** of the newly-made reservation

All the output is given **on screen** to the receptionist (the main user of the system), that will then tell the ID to the user **by phone**. If an email address is given, the system will send an **email** to the user, in order to confirm the reservation. Anyway, this output can be considered mainly **external**.

Logical Data structure

Reservations Search:

- **List of all the reservations** that match the search parameter, with some informations:
 - Reservation ID
 - Guest's name and surname
- On click, **all the available data** on the selected reservation:
 - Reservation ID
 - Name and surname of the guest
 - Check-in and Check-out date
 - Rooms booked
 - Price of the stay

All the output is given **on screen**, so it can be considered **internal**.

Logical Data structure

Guests Search:

- **List of all the guests** that match the search parameter, with some informations:
 - Guest's name and surname
 - Email address
- On click, **all the available data** on the selected guest:
 - Name and surname
 - Email address
 - Passport No
 - Phone, address, other useful informations

All the output is given **on screen**, so it can be considered **internal**.

Logical Data structure

Checkouts:

- **List of all the checkouts** that will be performed in the current day:
 - Guest's name and surname
 - Check-in date
 - Length of the stay
 - Room number
 - Reservation ID
 - Due

All the output is given **on screen**, so it can be considered **internal**. This output can be used by the manager to bill the client, but this operation happened outside the system, because it doesn't implement a function to print out a precompiled bill (it can be a future improvement).

Logical Data structure

Revenue:

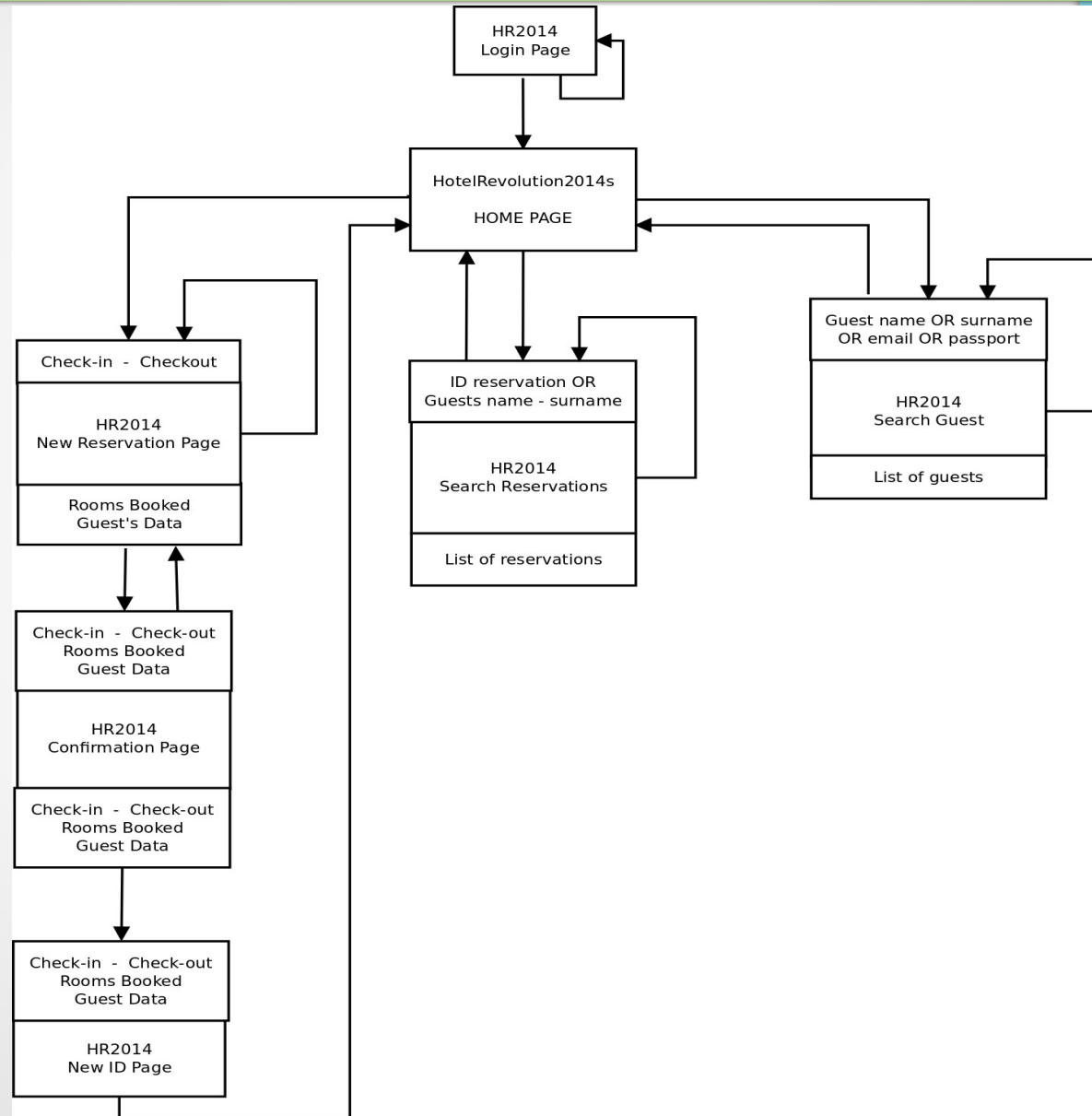
- The **total revenue** on the selected period
- A **graph** showing the total revenue day by day over the selected period.

All the output is given **on screen**, so it can be considered **internal**.

Physical Output Requirements

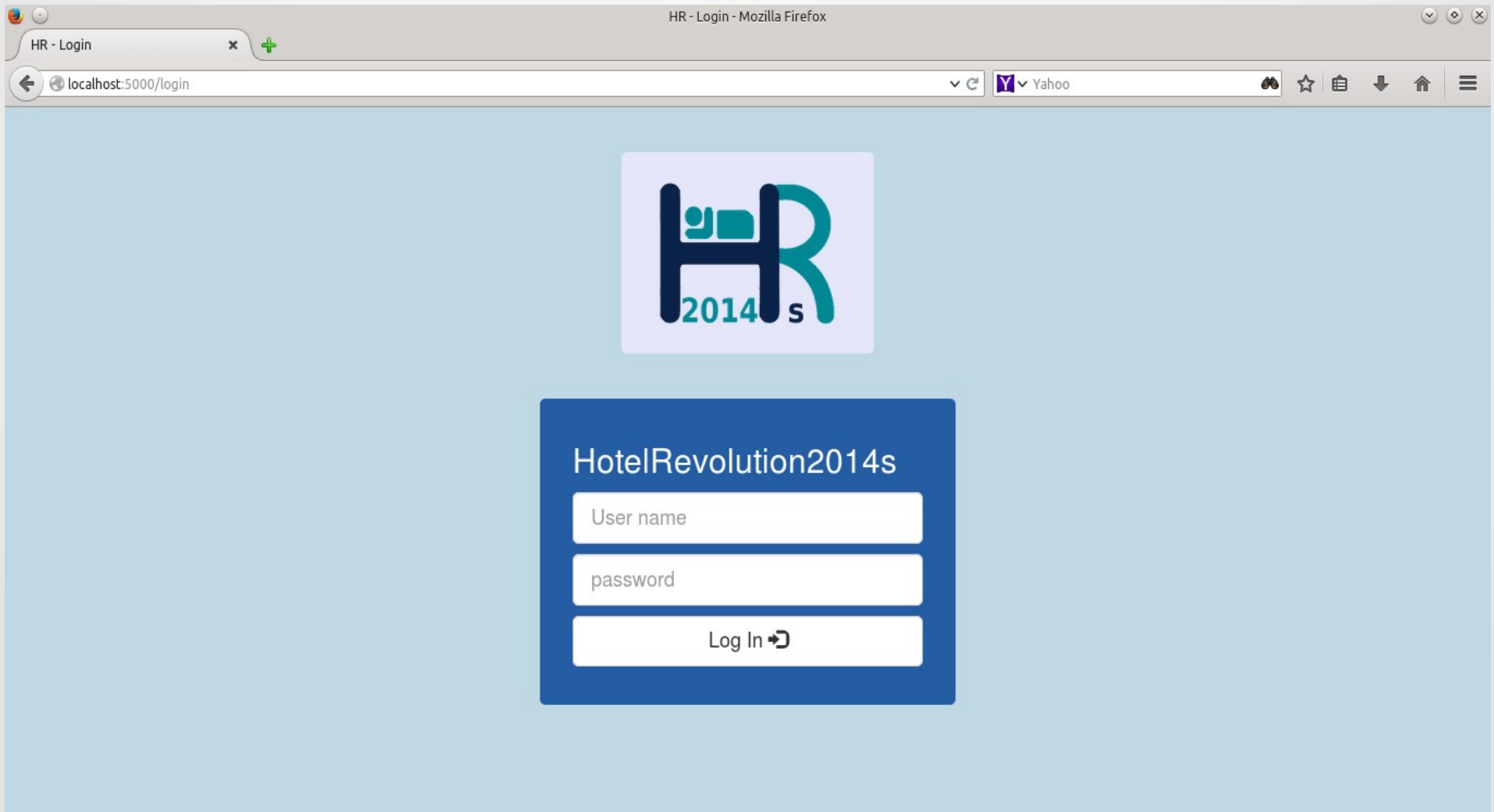
	Distribution	Implementation Method
Confirm Reservation	Receptionist - Guest	Screen - Email - Phone
Revenue Graph	Manager	Screen - Multimedia
CheckOUT List	Manager	Screen
Reservation List	Manager	Screen
Guest List	Receptionist	Screen
Free Room List	Receptionist	Screen

State Transition Diagram



Prototype of the User Interfaces

Login page:



Prototype of the User Interfaces

Home page:

The screenshot shows a web browser window titled "HR - Home - Mozilla Firefox" with the address bar displaying "localhost:5000/main". The page features a dark blue header bar with a "Logout" button, the date "2014 / 11 / 12", and statistics: "Today's Check-In: 1", "Today's Check-Out: 0", "Free Rooms: 13", and "Occupied Rooms: 7". A user icon is in the top right. Below the header, there are three blue panels: "New Booking" with "Check In" and "Check Out" input fields and a "Go" button; "Reservations" with two "Reservation ID" input fields and a "Go" button; and "Guests" with "Guest's First name" and "First Name" input fields and a "Go" button. A footer bar contains a "Credits..." link.

HR - Home - Mozilla Firefox

HR - Home

localhost:5000/main

Yahoo

Logout

2014 / 11 / 12

Today's Check-In: 1
Today's Check-Out: 0

Free Rooms: 13
Occupied Rooms: 7

New Booking

Check In

Check Out

Go

Reservations

Reservation ID

Reservation ID

Go

Guests

Guest's First name

First Name

Go

Credits...

Prototype of the User Interfaces

New Reservation page:

HR - Booking

localhost:5000/free_rooms?checkin=2014%2F11%2F20&checkout=2014%2F11%2F22

2014/11/16 2014/11/19 Search Home

Found 14 free rooms from 2014/11/20 to 2014/11/22 :

#	Beds	Type	Price
301	1	standard	100.0 ¥
302	1	standard	100.0 ¥
303	1	standard	100.0 ¥
403	2	standard	200.0 ¥
501	3	standard	300.0 ¥
502	3	standard	300.0 ¥
503	3	standard	300.0 ¥
504	3	standard	300.0 ¥
601	2	business	400.0 ¥
602	2	business	400.0 ¥
603	1	business	300.0 ¥

Booking Form

First Name *

Family Name *

email address

Passport ID

Address

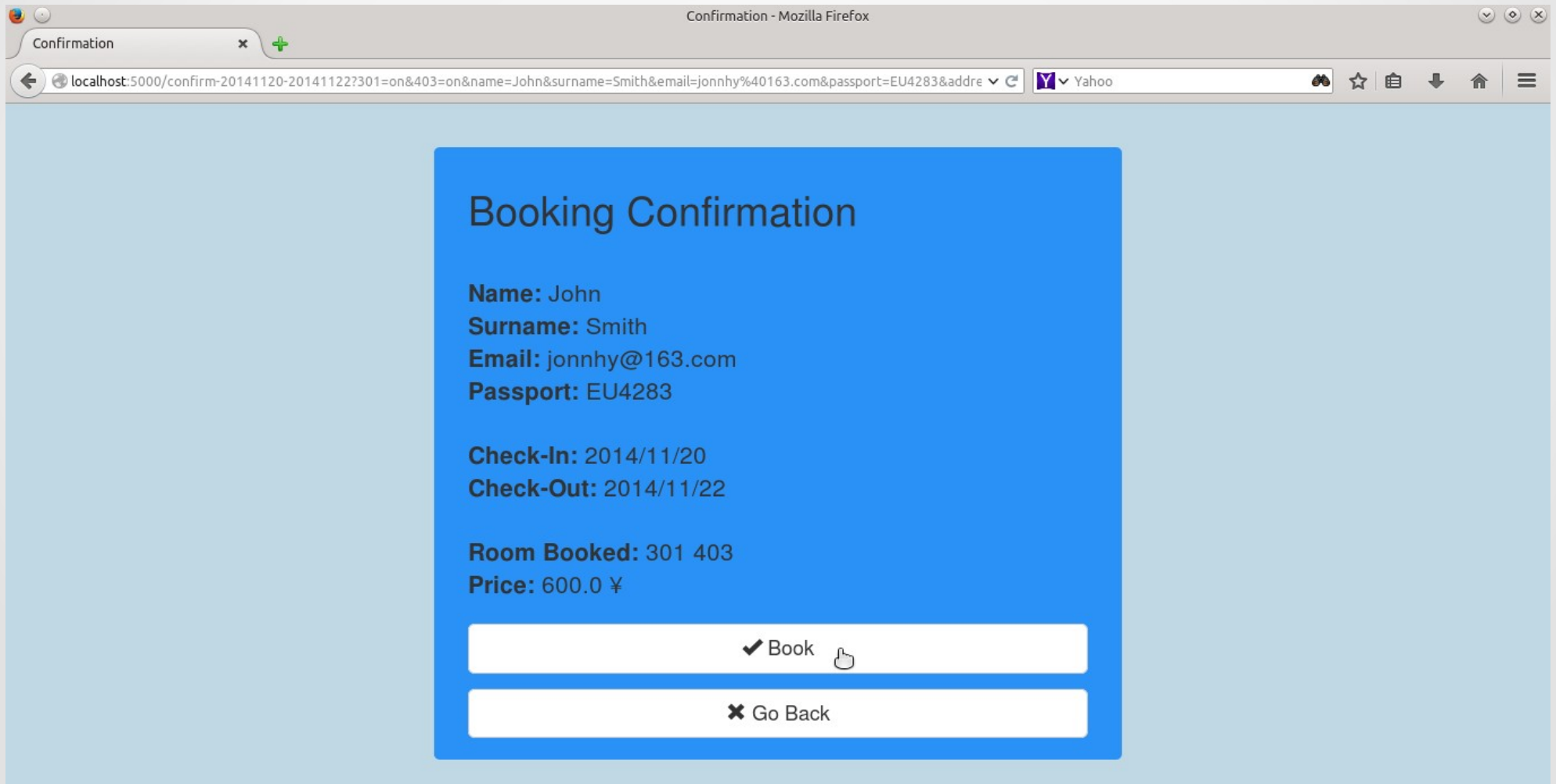
Phone number

other informations...

Continue >

Prototype of the User Interfaces

Confirmation page:



The screenshot shows a Mozilla Firefox browser window with a single tab titled "Confirmation". The address bar displays the URL: `localhost:5000/confirm-20141120-20141122?301=on&403=on&name=John&surname=Smith&email=jonnhhy%40163.com&passport=EU4283&addre`. The page content is a blue rectangular box with the following text:

Booking Confirmation

Name: John
Surname: Smith
Email: jonnhhy@163.com
Passport: EU4283

Check-In: 2014/11/20
Check-Out: 2014/11/22

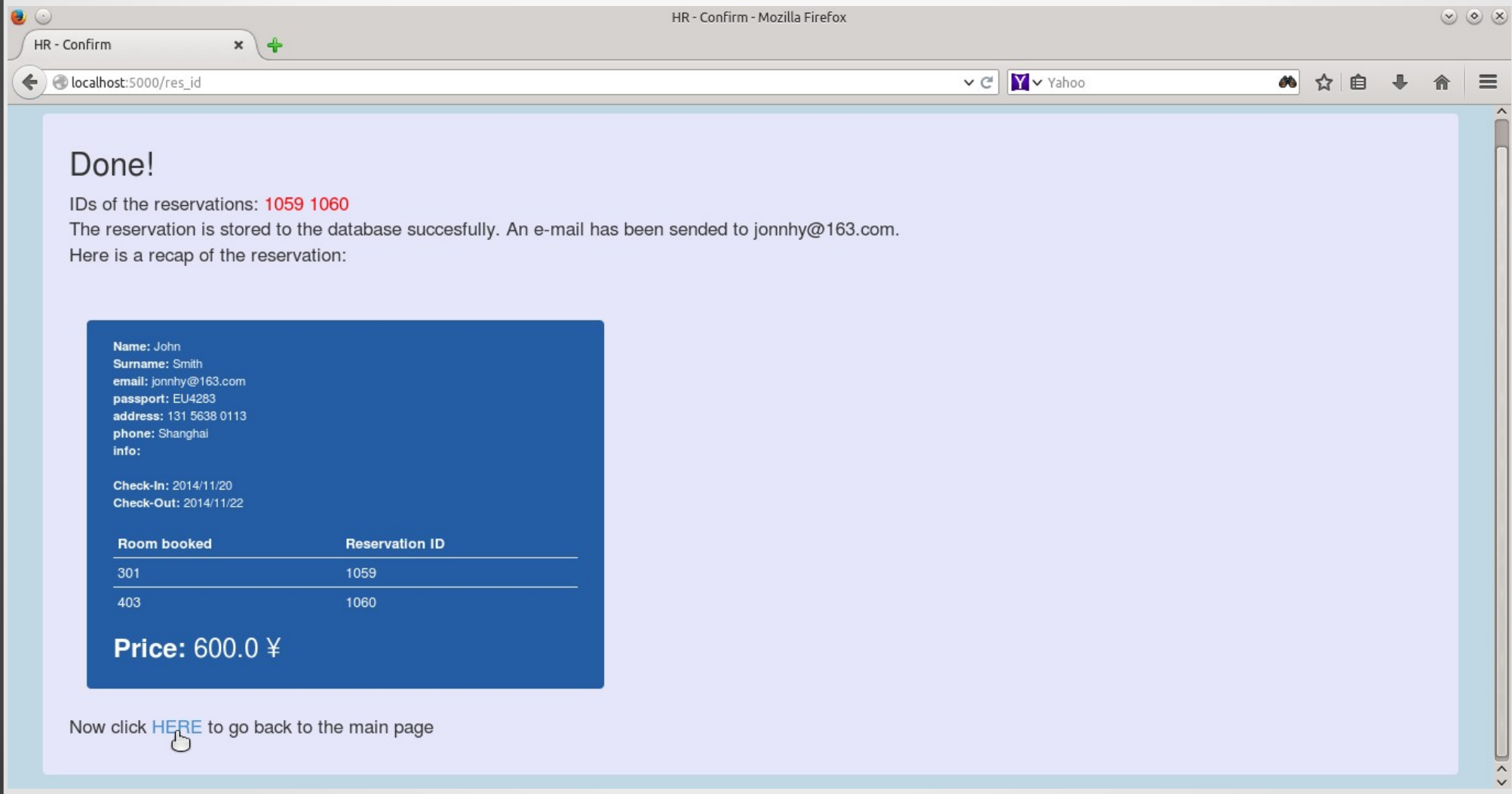
Room Booked: 301 403
Price: 600.0 ¥

At the bottom of the blue box are two white buttons:

- A button with a checkmark icon, the text "Book", and a thumbs-up icon.
- A button with an "X" icon and the text "Go Back".

Prototype of the User Interfaces

ID Reservation page:



Prototype of the User Interfaces

Search Reservation page:

HR - Reservations - Mozilla Firefox

HR - Reservations

localhost:5000/reservations?name=John&surname=Smith

Reservation ID

Reservation ID

Search

Home

First name	Family name	Reservation ID
John	Smith	1059
John	Smith	1060

First Name

John

Family Name

Smith

Check-In

2014/11/19

Check-Out

2014/11/22

Room Number

301

Reservation ID

1059

Price:

300.0 ¥

✕ Delete

✓ Save

Prototype of the User Interfaces

Search Guest page:

HR - Guests

localhost:5000/guests?name=John

First Name Guest's First name Search Home

First name	Family name	email
John	Smith	jonnhy@163.com

First Name
John

Family Name
Smith

Phone Number
131 5638 0113

e-mail address
jonnhy@163.com

Passport ID
EU4283

Home Address
Shanghai

Other informations
other informations...

Save

Prototype of the User Interfaces

Checkouts page:

HR - Manager

localhost:5000/checkout

Good Morning admin! 12 / 11 / 2014 [Home](#)

Today's Check-Out

Name	Arrival	Days	Room	Res ID	Due
Taylor Mary	2014/11/5	7 days, 0:00:00	604	1064	2100.0

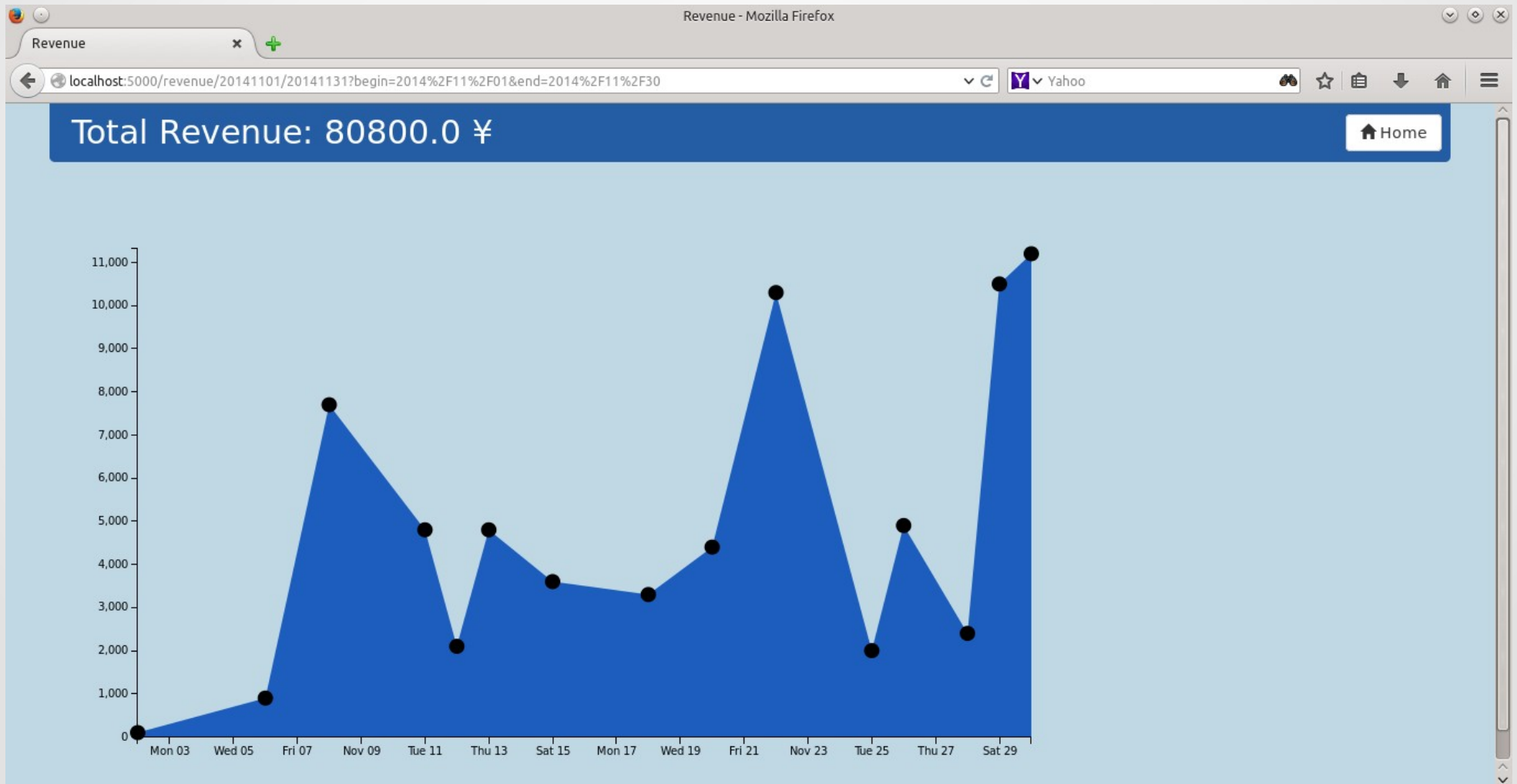
Calculate Revenue

from

to

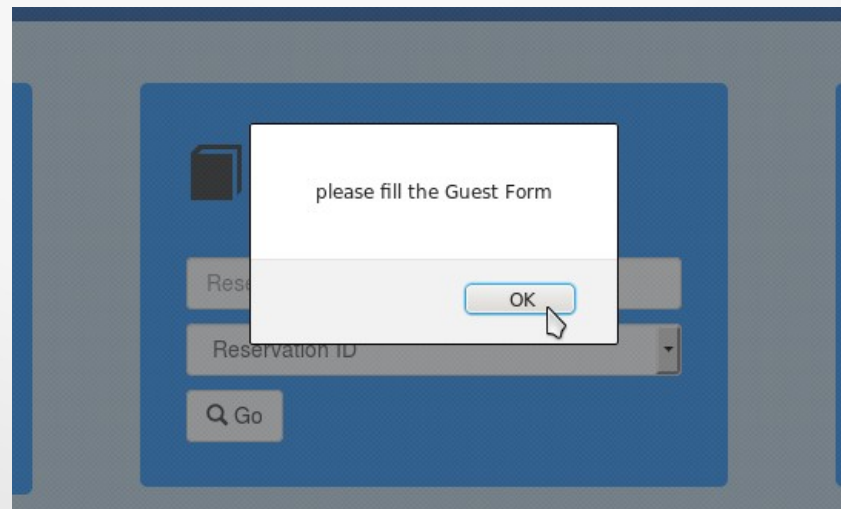
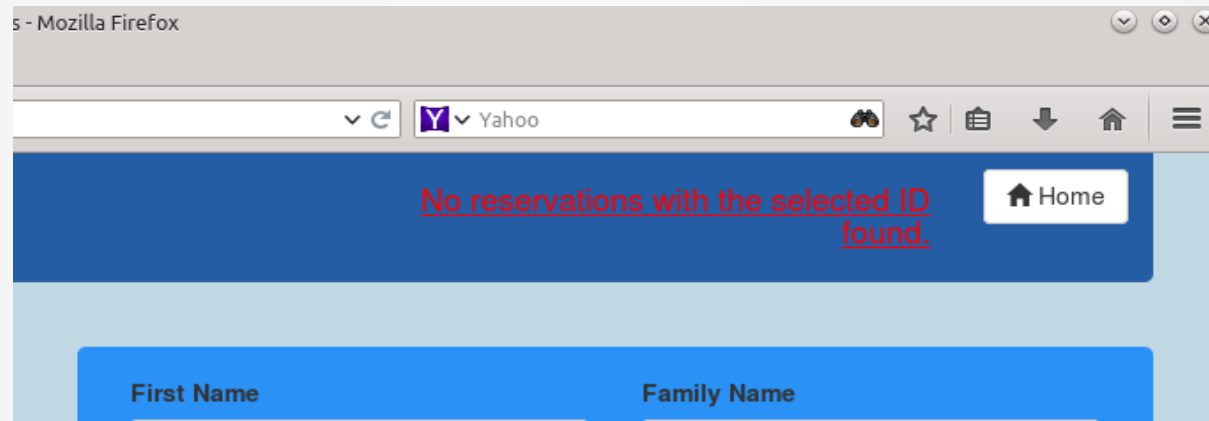
Prototype of the User Interfaces

Revenue page:



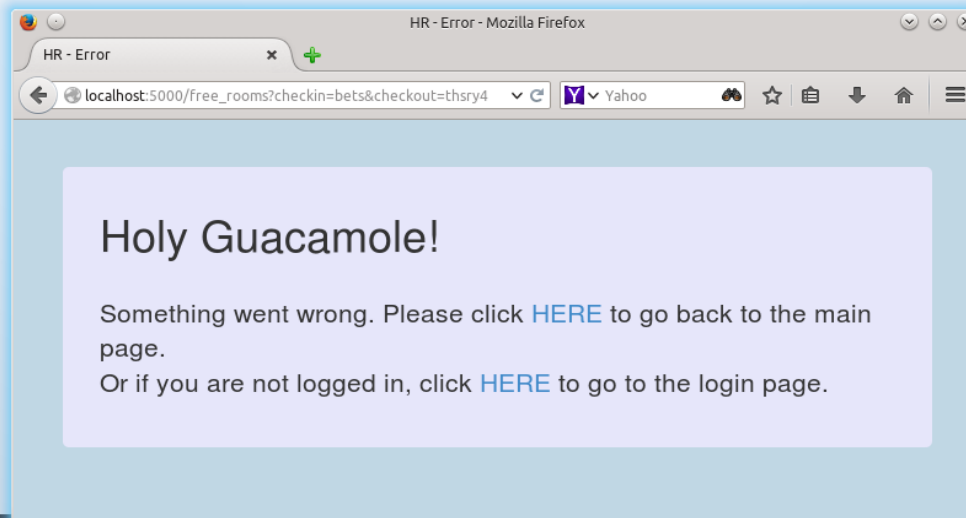
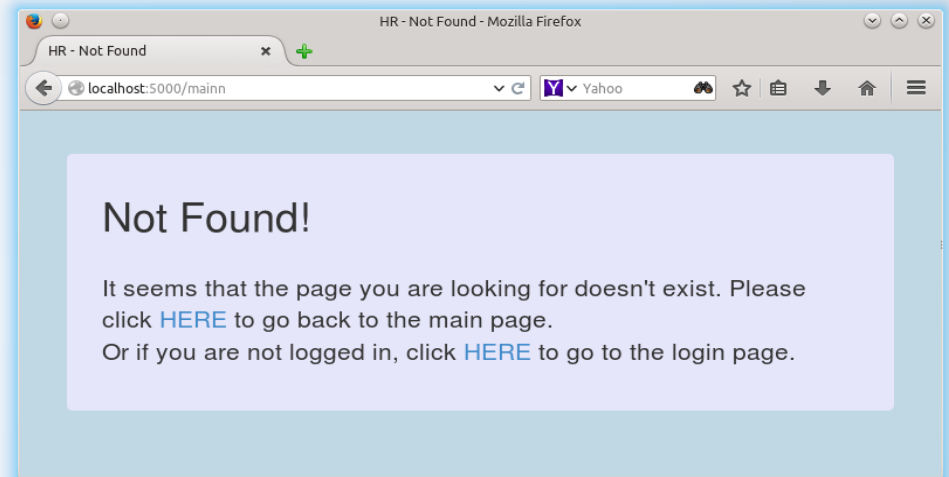
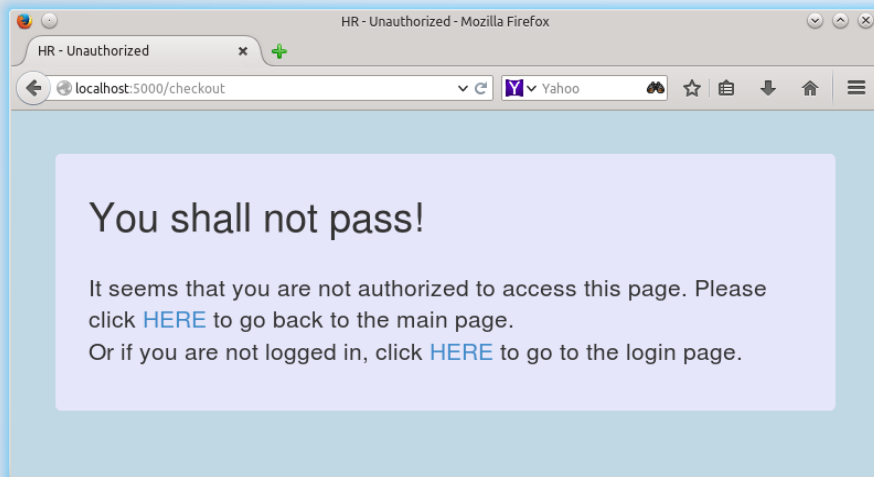
Prototype of the User Interfaces

Examples of Error Messages:



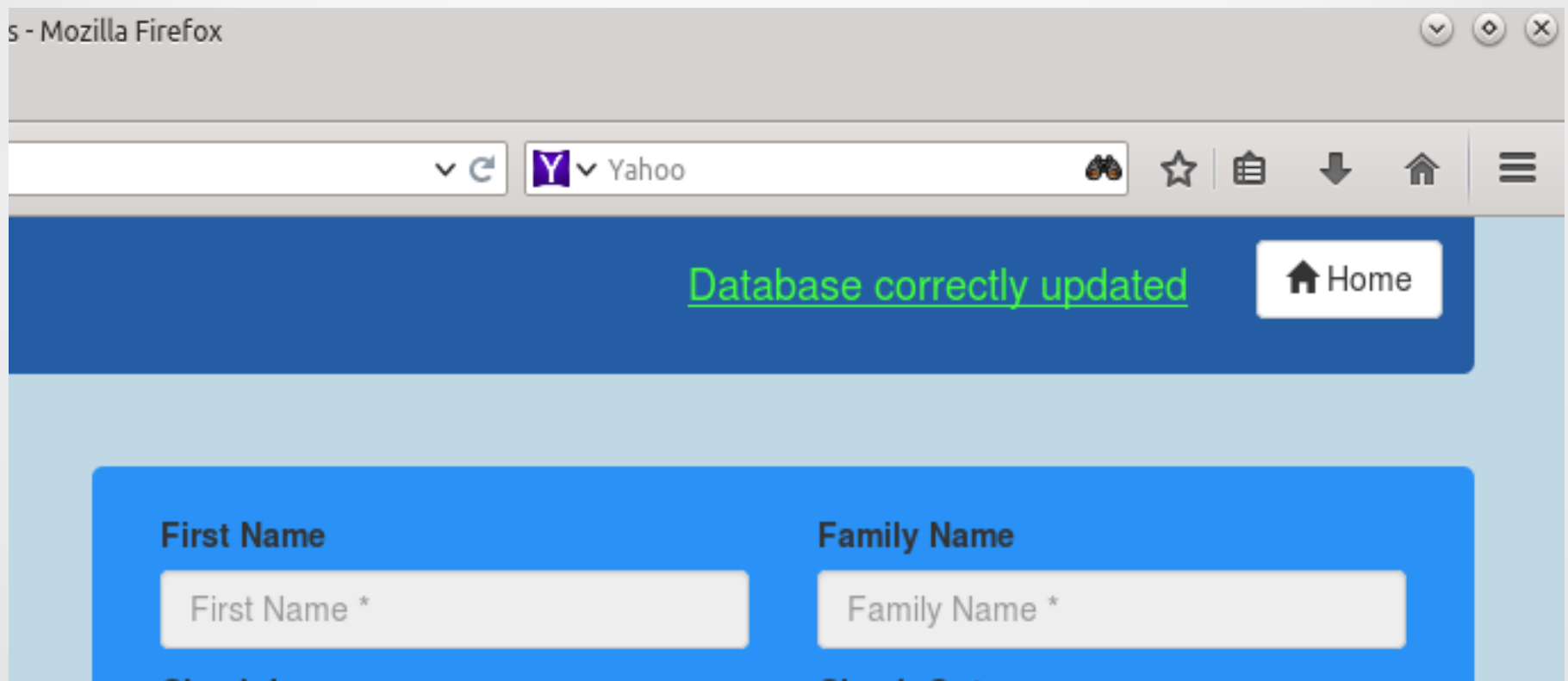
Prototype of the User Interfaces

Examples of Error Pages:



Prototype of the User Interfaces

Examples of Feedback:



The screenshot shows a Mozilla Firefox browser window. The address bar contains the text 'Yahoo'. The page has a dark blue header bar with the text 'Database correctly updated' in green, underlined. To the right of this message is a 'Home' button with a house icon. Below the header is a light blue section containing two input fields. The first field is labeled 'First Name' and contains the text 'First Name *'. The second field is labeled 'Family Name' and contains the text 'Family Name *'. Both fields are white with a light blue border.

s - Mozilla Firefox

Database correctly updated

Home

First Name

First Name *

Family Name

Family Name *