Android development for Smartphones with Java

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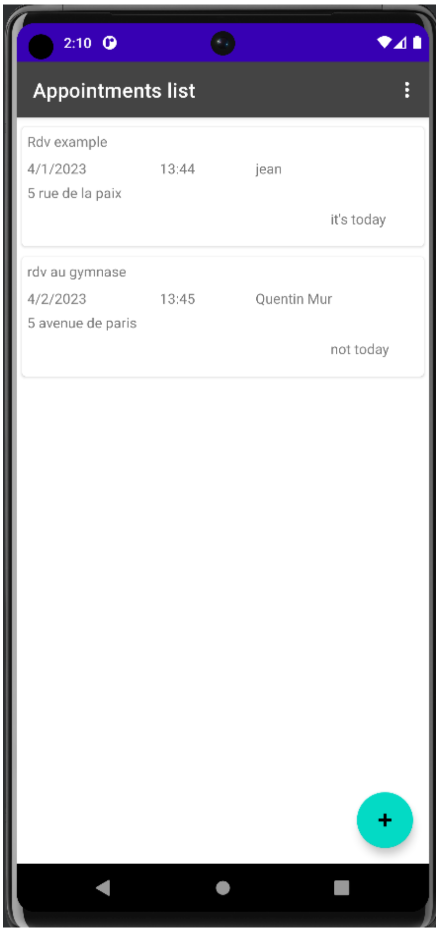
report

ESIEE
PARIS

1. Application features

a) Main-activity

First, after launching the application, we have this interface:



Rdv example
4/1/2023 13:44 jean
5 rue de la paix
it's today

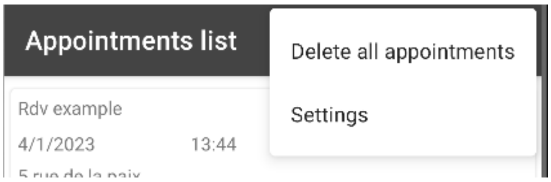
rdv au gymnase
4/2/2023 13:45 Quentin Mur
5 avenue de paris
not today

If this is the user's first time launching the application, there will be no appointments. Here, there are two already filled in and this allows us to click on them to access the details.

Another possibility is to add an appointment. Just click on the "plus" at the bottom right.

And finally, the user can also click on the three small dots at the top right.

This opens a menu with two choices:

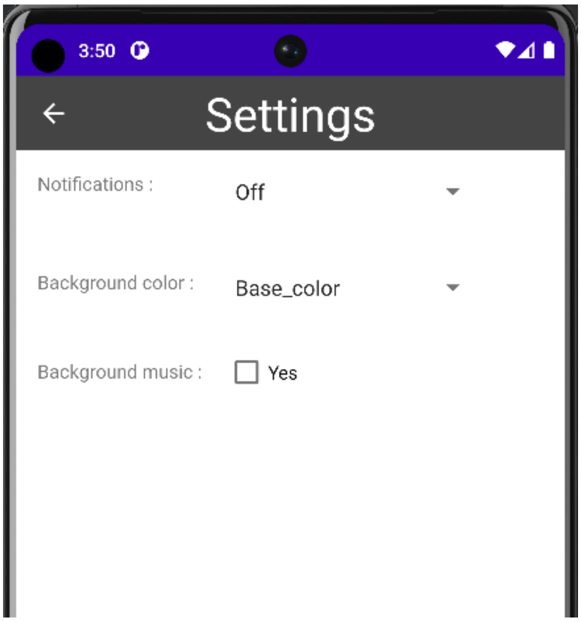


Rdv example
4/1/2023 13:44
5 rue de la paix

- First delete all the appointments.
- Second access to the settings of the app.

b) Settings - activity

Second, after clicking on settings, the user have this interface :



Settings

Notifications : Off

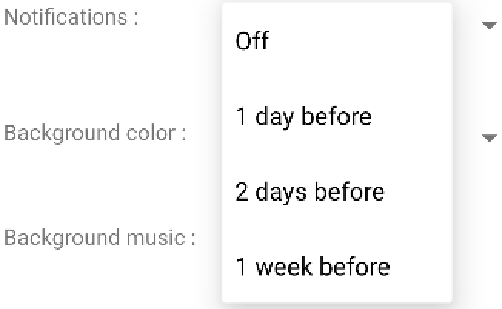
Background color : Base_color

Background music : □ Yes

If this is the first time the user goes to the settings, the notification option will be disabled, the music too and the base color will be dark gray.

Here the user has several choices,

he can activate the notifications by choosing when.



Notifications :

Background color :

Background music :

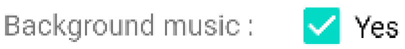
Off

1 day before

2 days before

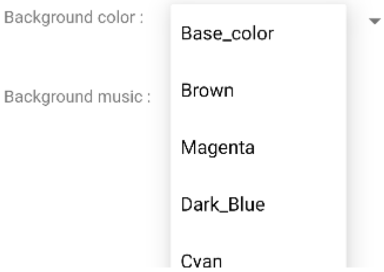
1 week before

He can activate the music.



Background music : ☑ Yes

He can choose the background color from a list.



Background color :

Background music :

Base_color

Brown

Magenta

Dark_Blue

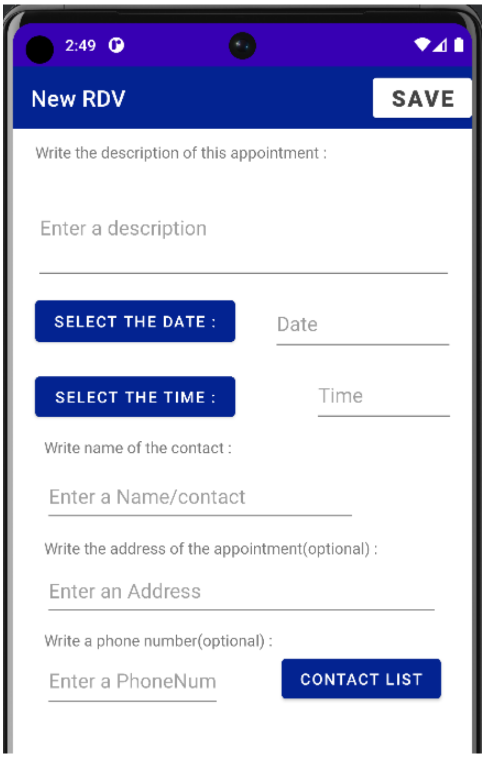
Cyan

To save the changes, just go back with the up arrow.

Back in the home page, the user can now add an appointment if he wishes.

c) AddRdv - activity

Third, after clicking on the "Plus", the user have this interface:



Write the description of this appointment :

Enter a description

Date

Time

Write name of the contact :

Enter a Name/contact

Write the address of the appointment(optional) :

Enter an Address

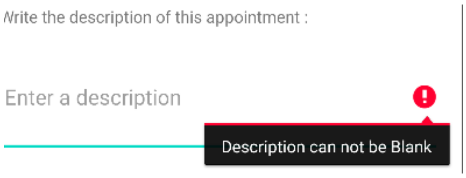
Write a phone number(optional) :

Enter a PhoneNum

Here, the user can enter all the information manually or he can click on contact to choose a contact already present in his phone.

When he selects the date and time, a DatePicker and a TimePicker appear.

Then, when he wants to save the appointment, he must click on the save button. But, he must have completed the information description, date, time, name. If not, this information appears:



Write the description of this appointment :

Enter a description

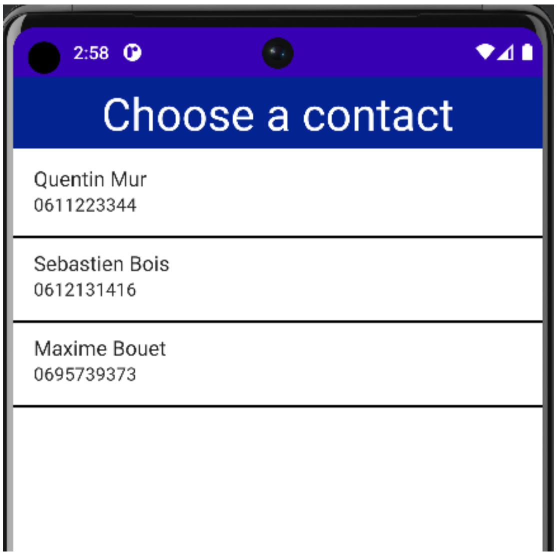
Description can not be Blank

There are two pieces of information that the user is not obliged to give, it is the address and the telephone number.

If we go back to the option to access contacts, when he clicks on the button, the user accesses another page.

d) Contact - activity

Fourth, after clicking the button, the user has this interface if there are contacts on his phone:



Choose a contact

Quentin Mur
0611223344

Sebastien Bois
0612131416

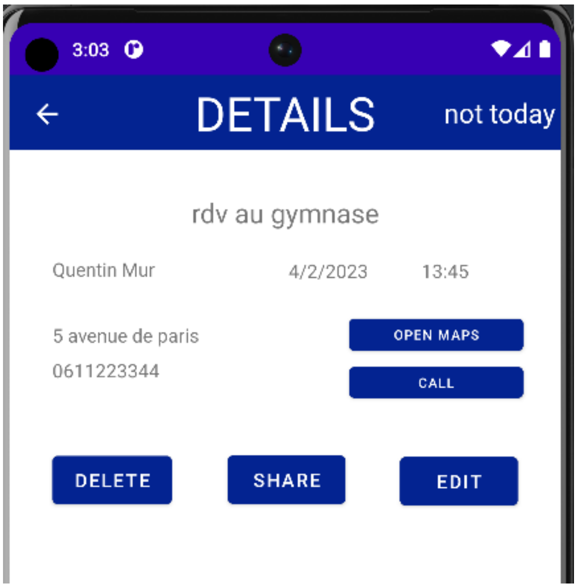
Maxime Bouet
0695739373

Here, he can click on the contact of his choice and he will return to the page for adding an appointment with the name and number already filled in.

After that, the user can save his appointment and he will be redirected to the home page where he can click on the appointment of his choice in order to access more information.

e) Details - activity

Five, after clicking on the appointment, the user has this interface:



rdv au gymnase

Quentin Mur 4/2/2023 13:45

5 avenue de paris

0611223344

Here, there is the phone number that appears since it is not available on the home page. On the top right, the user can know if this appointment is today or not.

On this page, the user can do many things. He can first click on the maps button. it will be redirected to the maps application with the address already entered. He can also click on the call button and he will be redirected to the call application where he can call the pre-entered number. Afterwards, he can also share his appointment with a contact of his by message. a message adapted to the selected appointment will be pre-entered.

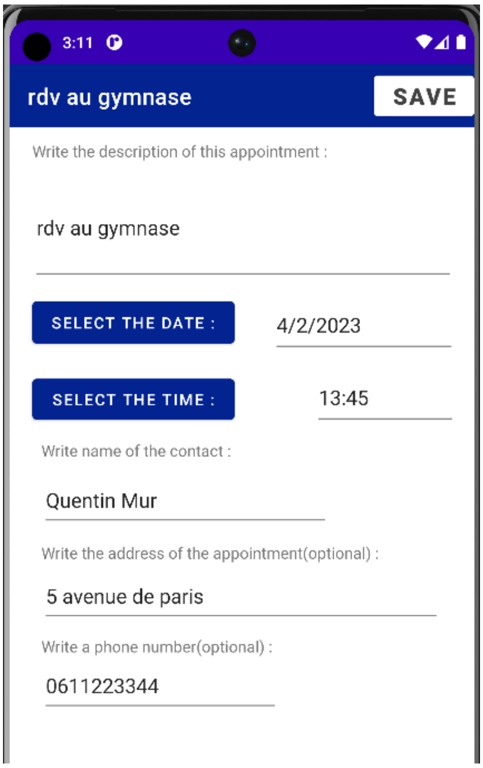
Then, he also has the option of deleting this appointment from the list.

Finally, he can also click on the edit button to modify the content of the appointment.

Now let's look at the content of this last page.

f) Edit - activity

Six, after clicking on the edit button, the user has this interface:



Write the description of this appointment :

rdv au gymnase

SELECT THE DATE : 4/2/2023

SELECT THE TIME : 13:45

Write name of the contact :

Quentin Mur

Write the address of the appointment(optional) :

5 avenue de paris

Write a phone number(optional) :

0611223344

Here, the content is the same as in the add appointment page except that it is already filled in with the appointment information.
The user can modify what he wants and click on the save button. It will be redirected to the home page.

g) Utility not requested

The only option we have added is the ability to delete all appointments at the same time

2. The encountered difficulties

a) Succeed

We encountered a difficulty in the Settings class. Indeed, in this class, the user chooses options that must be saved while moving through the activities. We had the idea of making a second database but the solution we found was to use static public variables to have access to it anywhere (background color change) and to prevent it from reset when you return to the settings after moving.
We have also decided for the sake of simplicity that each time the application is launched, the settings are always the same.

We encountered difficulties when we wanted to make the application possible in French and English. Indeed, it was necessary to put all the visible variables in the Strings file. The problem was for the notification and color spinners. it was necessary to change all the values in the XML files. As well as adding conditions when using the value of the title for example.

b) Didn’t succeed

Here, the biggest difficulty that we failed to overcome was to automate notifications based on the date in the background.
Indeed, our goal was that when the user chooses in notification settings 1 day before, he receives an alert the day before his appointment even if his application is off.
Unfortunately, after many hours spent on it. We just managed to get a notification to appear in the top bar. That's why when the user chooses one to receive notifications, there is one that is received immediately after.

The second is rather similar, it was on the updating of the content of ‘state”; Indeed, this variable tells the user if the appointment has passed, if it is today or not yet passed. Our objective was to make this update automatic even when the application is not on. We did not succeed, the status of the appointment is given at the time of creation or updated when the user modifies an appointment .

The last was not a difficulty in relation to our knowledge but in relation to time. Indeed, we aimed to make the application usable even with the phone in landscape mode. But as you told us after a lesson, in normal times, we take care of it from the start to avoid wasting time having to redo interfaces.
Since we were discovering android studio, we had not foreseen this and this prevented us from dealing with this case.