

*MeteoCal*  
System Testing Document

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## Part I

# Automated testing

## 1 User Manager

The User Manager class mainly manages the user registration and login.

Unit testing:

- an user that violates no constraints is correctly saved (i.e. EntityManager is called exactly once)
- entity validation blocks inconsistent users (e.g. email is null, name too short, etc.)
- email is not valid, both in structure and because it's already in use

Integration testing:

- check that an user is correctly saved or not with different parameters (similar to unit testing but without mocking the EntityManager)
- database query “findByEmail” works

## 2 Calendar Manager

The Calendar Manager just allows to create a calendar and to check if a forecast is considered bad weather.

Tests:

- a new calendar is correctly saved
- method that checks if a forecast is considered bad weather by the calendar owner works with different combinations of user settings and forecast data

## 3 Event Manager

The Event Manager takes care of all functions regarding events, like create, update and delete.

Tests:

- a new event is correctly saved if no constraints are violated

- entity validation blocks inconsistent events (e.g. date is null, name too short, etc.)
- event elimination correctly works: the event is deleted, all relationships (e.g. Event-Calendar, Event-User) are updated and all related notifications are eliminated
- NotificationManager is correctly called when invitations need to be sent

## 4 Notification Manager

The Notification Manager sends notifications/invitations and manages invitation choice (accept/decline).

Tests:

- a new notifications is correctly sent
- accepting/declining an invitation sets it as read and, if it's accepted and the current user owns a calendar, adds the event to the calendar

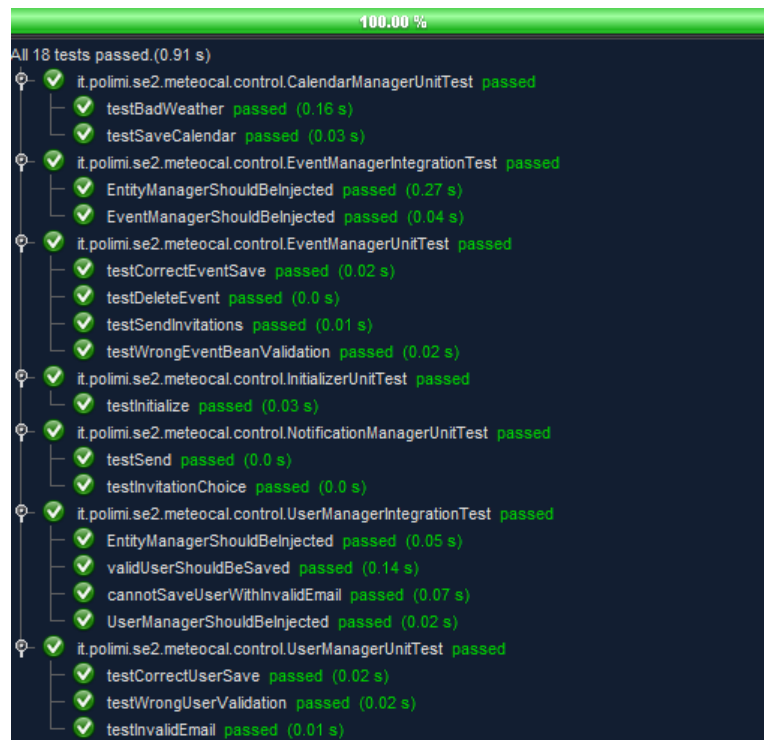
## 5 Initializer

The Initializer checks if there are bad weather alerts to be sent.

Tests:

- alerts are correctly sent given different combinations of events and user settings

## 6 Automated testing results



## Part II

# Manual testing

## 7 Registration and log-in

The screenshot shows the "MeteoCal" registration form. The form has fields for "First Name", "Last Name", "Email", "Password", and "Confirm Password". The "First Name" field contains "X", and the "Email" field contains "invalid". A "Confirm" button is at the bottom of the form. To the right of the form, there are five error messages, each with a red 'X' icon:

- The first name must have at least 3 characters
- You must write your last name
- The last name must have at least 3 characters
- Invalid email
- Password should match with Confirm Password.

Registration: general constraints (length, not empty, etc.) work

**MeteoCal**

**Register**

First Name:

Last Name:

Email:

Password:

Confirm Password:

Email already in use!

Registration: e-mail already in use constraint works

**MeteoCal**

**Login**

E-mail:

Password:

Registration successful!

With correct parameters the registration is successful

**MeteoCal**

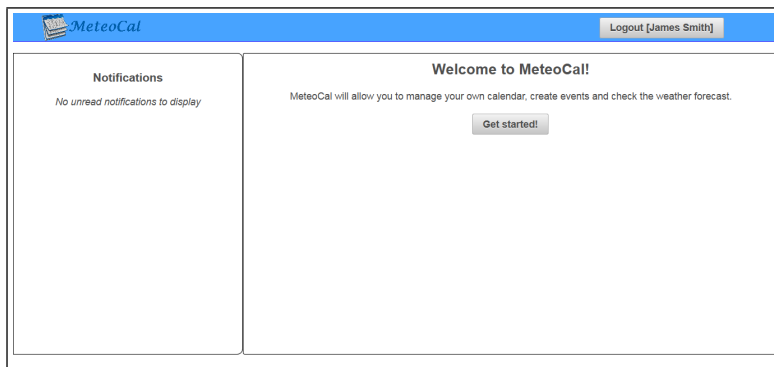
**Login**

E-mail:

Password:

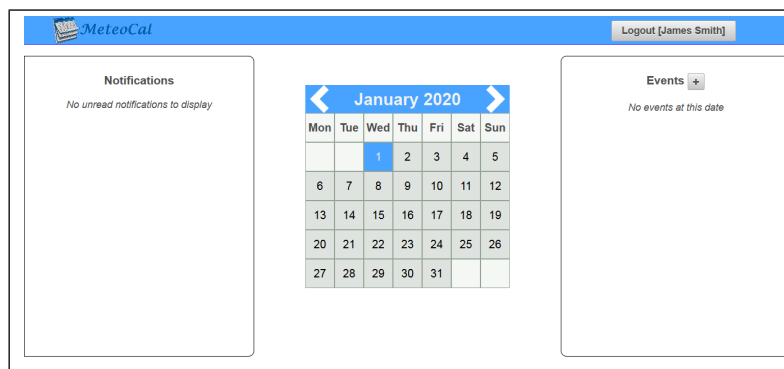
Login failed, try again!

Log-in: wrong user-name and/or password check

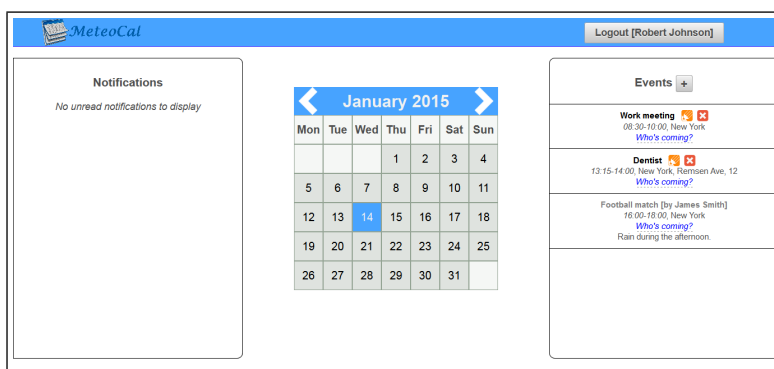


Log-in successful, redirect to the user home

## 8 Calendar browsing



Changing month through the arrows works, new month loaded correctly



Days are selected correctly and the right event list is shown

## 9 Event management

**Create new event**

Name: X

City: Y

Location Details (e.g. street name, building, etc.):

Is this taking place outdoor? ☐

Day:

From:

To:

**Invite other users**

**Users**

- Michael Brown [m.brown@yahoo.it]
- Robert Johnson [robert.johnson@yahoo.com]
- Jennifer Jones [jennifer.jones@yahoo.it]
- Mary Williams [mwilliams@gmail.com]

**To invite**

**Confirm**

**Errors:**

- The name must be at least 3 characters long
- The city must be at least 3 characters long
- You must select the starting time
- You must select the ending time

Event form general constraints (not empty, size, etc.) work

**Create new event**

Name: Football match

City: New York

Location Details (e.g. street name, building, etc.):

Is this taking place outdoor? ☒

Day: 14-01-2015

From: 16:00

To: 13:00

**Invite other users**

**Users**

- Michael Brown [m.brown@yahoo.it]
- Robert Johnson [robert.johnson@yahoo.com]
- Jennifer Jones [jennifer.jones@yahoo.it]
- Mary Williams [mwilliams@gmail.com]

**To invite**

**Confirm**

**Errors:**

- The starting time must be before the ending time!

The event beginning time must be before the ending one



**Create new event**

Name:

City:

Location Details (e.g. street name, building, etc.):

Is this taking place outdoor? ☒

Day:

From:

To:

**Invite other users**

Users	To invite
Jennifer Jones [jennifer.jones@yahoo.it]	Michael Brown [m.brown@yahoo.it]
Mary Williams [mwilliams@gmail.com]	Robert Johnson [robert.johnson@yahoo.com]

Users for invitations are correctly displayed and selected

**Notifications**

No unread notifications to display

**January 2015**

Mon	Tue	Wed	Thu	Fri	Sat	Sun
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

**Events**

**Football match** 16:00-18:00, New York  
Who's coming?  
Rain during the afternoon

With correct parameters, the new event is correctly saved

## 10 Notifications and invitations

**Notifications**

**Bad weather tomorrow!**  
13-01-2015, 21:34  
Tomorrow is going to be a bad weather day and the outdoor event "Football match" may be at risk!  
[Got it!](#)

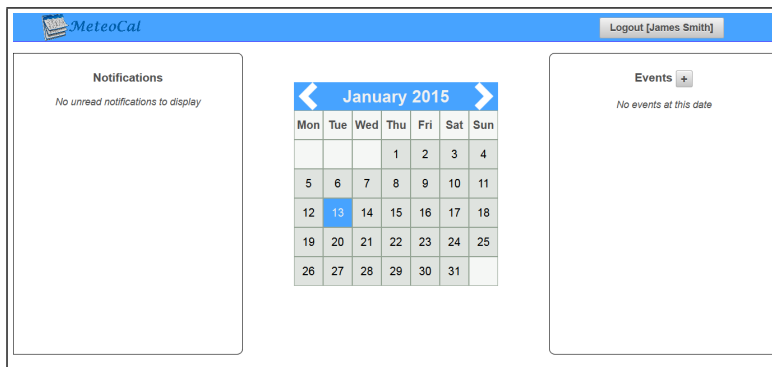
**January 2015**

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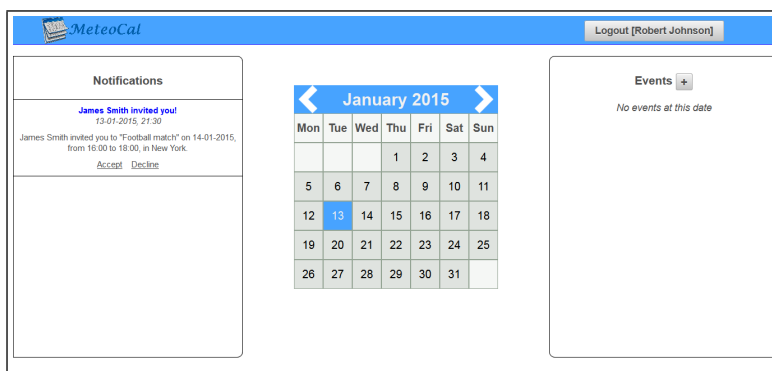
**Events**

No events at this date

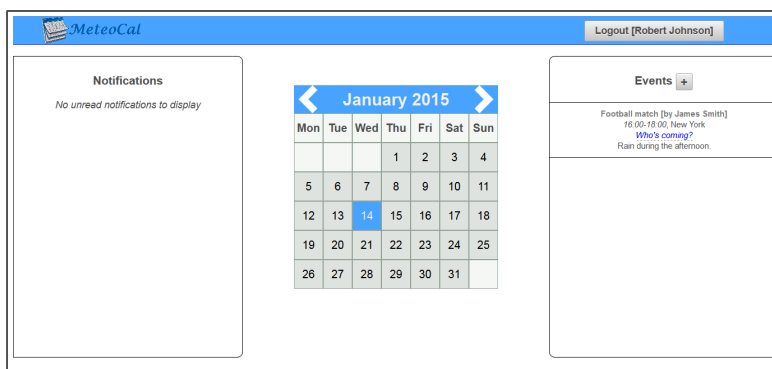
Bad weather alerts are correctly sent and displayed



A notification is correctly set as read when the “Got it” button is clicked



Invitations are correctly sent



Accepting the invitation adds the event to the current user's calendar