Redmine - Defect #34999

The result of Attachment.latest_attach is unstable if attachments have the same timestamp

2021-04-01 21:42 - Pavel Rosický

Status:	Closed		**Start date:**	
Priority:	Normal		**Due date:**	
Assignee:	Go MAEDA		**% Done:**	0%
Category:	Attachments		**Estimated time:**	0.00 hour
Target version:	4.2.1			
Resolution:	Fixed		**Affected version:**	4.2.0

Description

refs #27780

test_latest_attach_should_support_unicode_case_folding

```
Failure:
AttachmentTest#test_latest_attach_should_support_unicode_case_folding [c:/redmine/test/unit/attach
ment_test.rb:488]:
Expected: #<Attachment id: 1990, container_id: nil, container_type: nil, filename: "ā.txt", disk_f
ilename: "210401211700_8b8e5a4d7605340440caaf5211ac5124.TXT", filesize: 32, content_type: "text/pl
ain", digest: "c62e4615bd39e222572f3a1bf7c2132ea1e65b17ec805047bd...", downloads: 0, author_id: 1,
 created_on: "2021-03-31 19:17:00.000000000 +0000", description: nil, disk_directory: "2021/03">
  Actual: #<Attachment id: 1989, container_id: nil, container_type: nil, filename: "Ā.TXT", disk_f
ilename: "210401211700_8b8e5a4d7605340440caaf5211ac5124.TXT", filesize: 32, content_type: "text/pl
ain", digest: "c62e4615bd39e222572f3a1bf7c2132ea1e65b17ec805047bd...", downloads: 0, author_id: 1,
 created_on: "2021-03-31 19:17:00.000000000 +0000", description: nil, disk_directory: "2021/03">
```

on some platforms, sort_by isn't stable
https://bugs.ruby-lang.org/issues/1089
Note that these two attachments have exactly the same timestamp.
https://github.com/redmine/redmine/blob/3e36b5c452210da457cb6c16385551414071693f/app/models/attachment.rb#L373

however, the spec depends on the exact order and it fails if otherwise. Let's make it deterministic. This change doesn't affect the purpose of the test.

Associated revisions

Revision 20923 - 2021-04-07 07:30 - Go MAEDA

The result of Attachment.latest_attach is unstable if attachments have the same timestamp (#34999).

Patch by Pavel Rosický.

Revision 20924 - 2021-04-07 07:51 - Go MAEDA

Merged r20923 from trunk to 4.2-stable (#34999).

History

#1 - 2021-04-01 21:42 - Pavel Rosický

- File fix_attachment_test.diff added

#2 - 2021-04-04 10:05 - Go MAEDA

Thank you for pointing it out.

My understanding is that the root cause is that Attachment.latest_attach is unstable when two or more attachments have the same timestamp.

How about changing the code to sort by id instead of created_on? Even if multiple attachments have the same timestamp, latest_attach will return the expected result.

```
Index: app/models/attachment.rb
===================================================================
--- app/models/attachment.rb    (リビジョン 20904)
```

```
+++ app/models/attachment.rb     (□□□□□)
@@ -370,7 +370,7 @@
   def self.latest_attach(attachments, filename)
     return unless filename.valid_encoding?

-    attachments.sort_by(&:created_on).reverse.detect do |att|
+    attachments.sort_by(&:id).reverse.detect do |att|
       filename.casecmp?(att.filename)
     end
   end
```

#3 - 2021-04-04 14:02 - Pavel Rosický

- File fix_attachment_test2.diff added

I don't think the ID column should be used as a timestamp, but I'm ok with using it as a second option, in case both timestamps are exactly the same.

[fix_attachment_test2.diff](#) is an alternative to the original patch

#4 - 2021-04-05 03:12 - Go MAEDA

- Subject changed from Make case-insensitive matching test more deterministic to The result of Attachment.latest_attach is unstable if attachments have the same timestamp

- Target version set to 4.2.1

Pavel Rosický wrote:

> I don't think the ID column should be used as a timestamp, but I'm ok with using it as a second option, in case both timestamps are exactly the same.

Thank you, I will commit [fix_attachment_test2.diff](#).

Setting the target version to 4.2.1.

#5 - 2021-04-07 07:30 - Go MAEDA

- Status changed from New to Closed

- Assignee set to Go MAEDA

- Resolution set to Fixed

Committed the fix. Thank you.

Files

fix_attachment_test.diff	696 Bytes	2021-04-01		Pavel Rosický
fix_attachment_test2.diff	615 Bytes	2021-04-04		Pavel Rosický

```
+++ app/models/attachment.rb     (□□□□□)
@@ -370,7 +370,7 @@
   def self.latest_attach(attachments, filename)
     return unless filename.valid_encoding?

-    attachments.sort_by(&:created_on).reverse.detect do |att|
+    attachments.sort_by(&:id).reverse.detect do |att|
       filename.casecmp?(att.filename)
     end
   end
```