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CSI 5122: Software Usability
Professor: Dr. Timothy Lethbridge

Usability Evaluation Report

Evaluation Technique:
Heuristic

Target Software:
TODOFeed

Software Category:
Web Application

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I- Introduction

This document presents a usability evaluation report for the web application named "**TODOFeed**", accessible at the URL "http://www.todofeed.com/". TODOFeed has been chosen based on the concern we had when discovering the site. But the site has not been successful since and have been reported to be hardly usable by users. Thus, we wanted to invest into evaluating usability of the web application with the assumption that it was at the cause of the issues experienced by users. The interest in the web application is that it seems to have a good potential to fulfill the need it targets but need major tweak on some critical areas (like usability).

II- Background & Objective

TODOFeed is a start-up web application allowing people to manage event preparation for small group. TODOFeed is a small group activity application. A allows the user to create a simple group activity, ask for your friends without having to deal with long email chains and endless decentralized comments. TODOFeed solve in more effective way

The main objective of this report is to provide information about the various usability issues detected during heuristic evaluation. This is also done to help the web application improve its usability quality.

III-   Methodology

The methodology chosen to conduct usability evaluation of web application TODOFeed was **heuristic evaluation**[ ]. Heuristic evaluation has been chosen given that it is an easy and discount method that is easy to implement and setup; I does not involve users and is grounded on the use of a set of heuristic to assess software usability. It is an isolated activity that can be conducted alone as a single expert. However, it is a method that usually allow to detect direct or "easy" usability problems (usually minor ones)[ ] and which gives great results as the first evaluation treatment for a system that has never been tested.

We first gathered information about the tasks allowed by the system. Then, we started the heuristic evaluation by making a first pass through the web application, going through basic functionalities while trying to get a feel of the general behaviour of the system. Then, a second pass has been conducted that goes in detail and, through examination of each single web page, assesses the conformance of its UI content against a set of heuristics. The flow by which web pages are visited followed the workflow process of critical tasks of the system selected to support the evaluation.

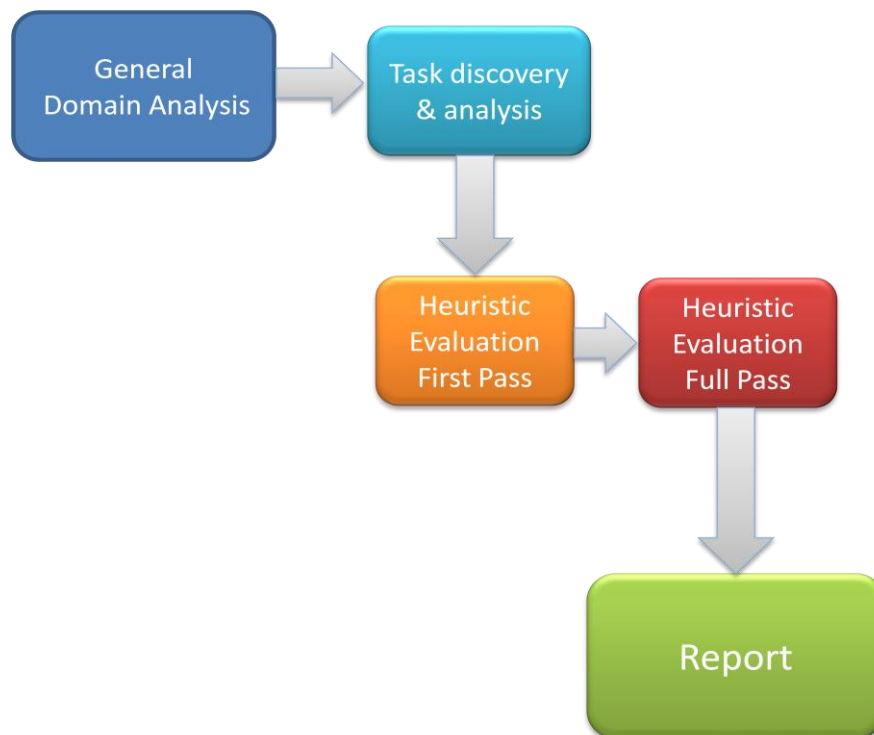The following activity model give a general view of our whole work process:

Figure 1 – Complete work activity pipeline

1. Task List

We have carefully selected a subset of the user available tasks to drive our evaluation. The task list have been provided through web review founded on the internet [ ] and also by familiarising with the web application. Tasks have been summarily analysed prior to performing the heuristic evaluation. Here is the considered task list:

- Signup
- Login
- Add a Planning
- Edit a Planning
- Remove Planning
- Add a task on a planning
- Edit a task
- Add a comment
- Invite friends to help you out
- Keep track of what's going on (view the user dashboard)
- View account info
- Edit account info
- Invite a friend to join you on TODOFeed

2. Set of Heuristics

The set of heuristics used for this work was Nielsen's Heuristics 1990 [ ]:

H1. **Visibility of system status** – The system should always keep users informed about what is going on, through appropriate feedback within reasonable time.

H2. **Match between system and the real world** – The system should speak the users' language, with words, phrases and concepts familiar to the user, rather than system-oriented terms. Follow real-world conventions, making information appear in a natural and logical order.

H3. **User control and freedom** – Users often choose system functions by mistake and will need a clearly marked "emergency exit" to leave the unwanted state without having to go through an extended dialogue. Support undo and redo.

H4. **Consistency and standards** – Users should not have to wonder whether different words, situations, or actions mean the same thing. Follow platform conventions.

H5. **Error prevention** – Even better than good error messages is a careful design which prevents a problem from occurring in the first place. Either eliminate error-prone conditions or check for them and present users with a confirmation option before they commit to the action.

H6. **Recognition rather than recall** – Minimize the user's memory load by making objects, actions, and options visible. The user should not have to remember information from one part of the dialogue to another. Instructions for use of the system should be visible or easily retrievable whenever appropriate.

H7. **Flexibility and efficiency of use** – Accelerators -- unseen by the novice user -- may often speed up the interaction for the expert user such that the system can cater to both inexperienced and experienced users. Allow users to tailor frequent actions.

H8. **Aesthetic and minimalist design** – Dialogues should not contain information which is irrelevant or rarely needed. Every extra unit of information in a dialogue competes with the relevant units of information and diminishes their relative visibility.

H9. **Help users recognize, diagnose, and recover from errors** – Error messages should be expressed in plain language (no codes), precisely indicate the problem, and constructively suggest a solution.

H10. **Help and documentation** – Even though it is better if the system can be used without documentation, it may be necessary to provide help and documentation. Any such information should be easy to search, focused on the user's task, list concrete steps to be carried out, and not be too large.
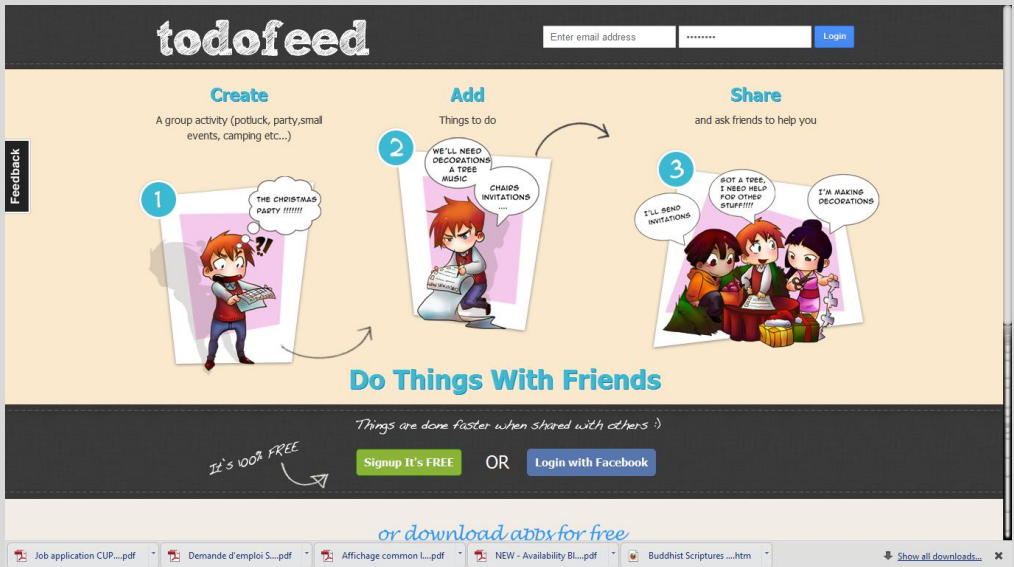
3. Report Format

The report used to present usability problems found will be the following:

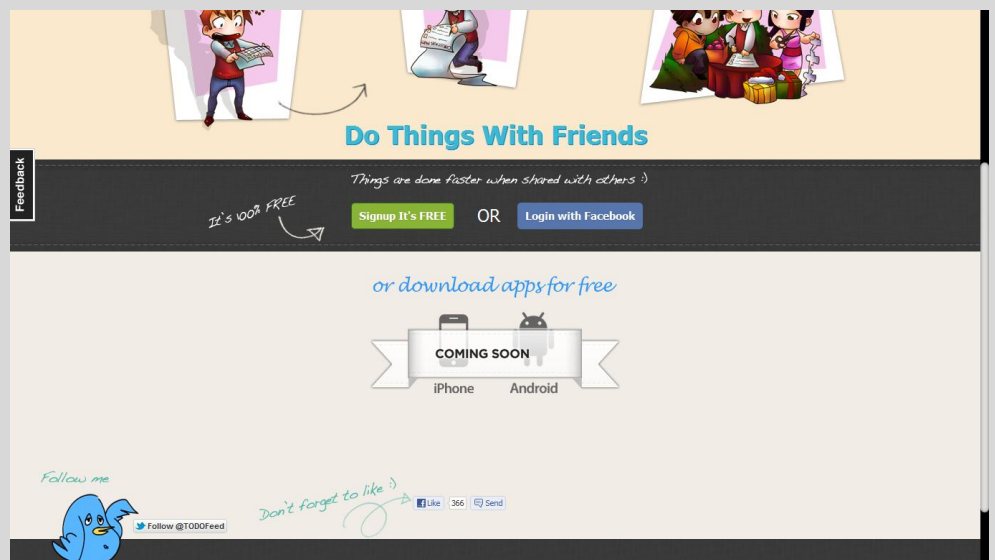| Usability Bug # ID – Usability bug title	
Error Type :	Type of usability error/problem: [Conceptual model, Functional, UI Design, Task Flow Design, Interaction Style]
Description :	General description of the usability problem
Context :	The application context in which the problem can be observed
How to reproduce :	The steps of action required to reproduce the problem
Broken Heuristic :	The list of heuristics not respected by the system which causes the present usability problem
Suggested Fix :	A possible/alternative solution to the problem being reported
Severity :	Cosmetic – Minor – Moderate – Major – Critical
Related :	*List of bugs related to the present one*
Screenshot :	A little screenshot of the page were the problem occurs

IV-   Report

The following presents a report of detected usability "bugs" found through the heuristic evaluation:

Usability Bug # 1 – Word "things" inappropriate, non-specific

Error Type :	Conceptual model
Description :	The use of the word "things" is not informative for the users to understand the goal of the application
Context :	Portal page
How to reproduce :	Go to the portal page and see the sentence
Broken Heuristics :	H2, H4
Suggested Fix :	Maybe use the word "plannings" which is later refer in the web application
Severity :	Major [because of its fundamental impact on user mental model]
Related :	*None*
Screenshot :	

Usability Bug # 2 – Background color layout changed

Error Type :	UI Design
Description :	The background color layout of the sign-up page does not align with the one of the other pages of the system
Context :	Sign-up Page
How to reproduce :	Go to the portal page and click on "sign-up" button.
Broken Heuristics :	H4
Suggested Fix :	Change the background color layout of the sign-up page to be consistent with the other ones
Severity :	Cosmetic
Related :	*None*
Screenshot :	

Usability Bug # 3 – No enough feedback on system status in the user home page

|	
Error Type :	Interaction style
Description :	It is not clear for the user that we are in the home page.
Context :	User Home Page
How to reproduce :	From the portal page, simply login and you will be directed to the user home page
Broken Heuristics :	H1
Suggested Fix :	There should be a clear "Home page" in bigger character than "Recent Activities"
Severity :	Major
Related :	*None*
Screenshot :	
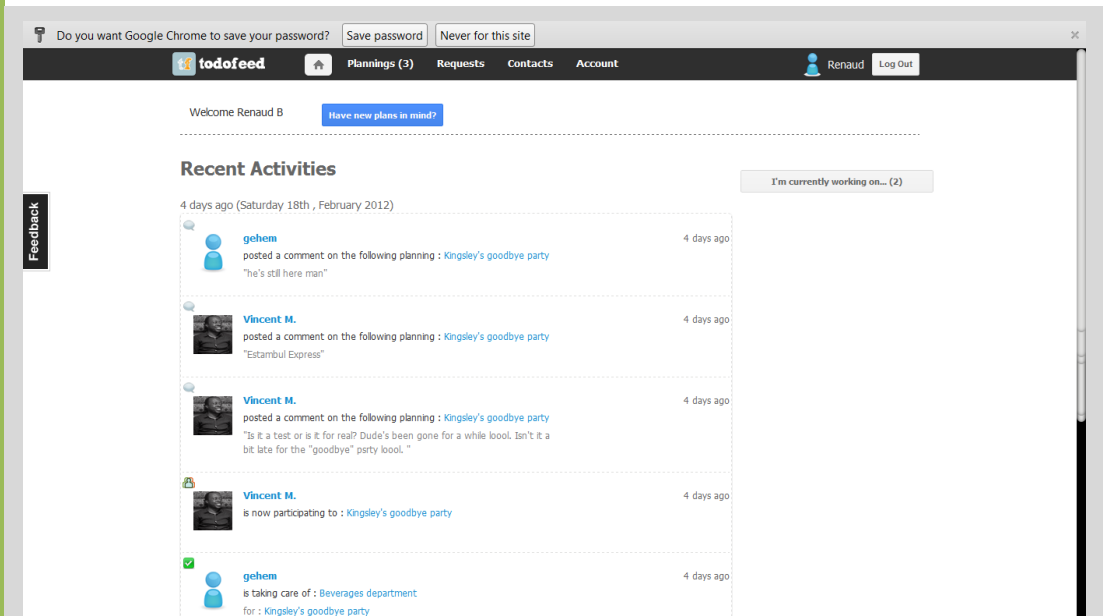
Usability Bug # 4 – Planning page and User Home Page's title layout different

Error Type :	Interaction style
Description :	The user home page and the planning page present two different title layouts
Context :	User Home Page & Planning Page
How to reproduce :	From the user home page. Go to planning page. Compare both title layout
Broken Heuristics :	H4
Suggested Fix :	Be consistent with page title layout
Severity :	Moderate
Related :	*Usability bug #3*
Screenshot :	

Usability Bug # 5 – Filter section does not have a title

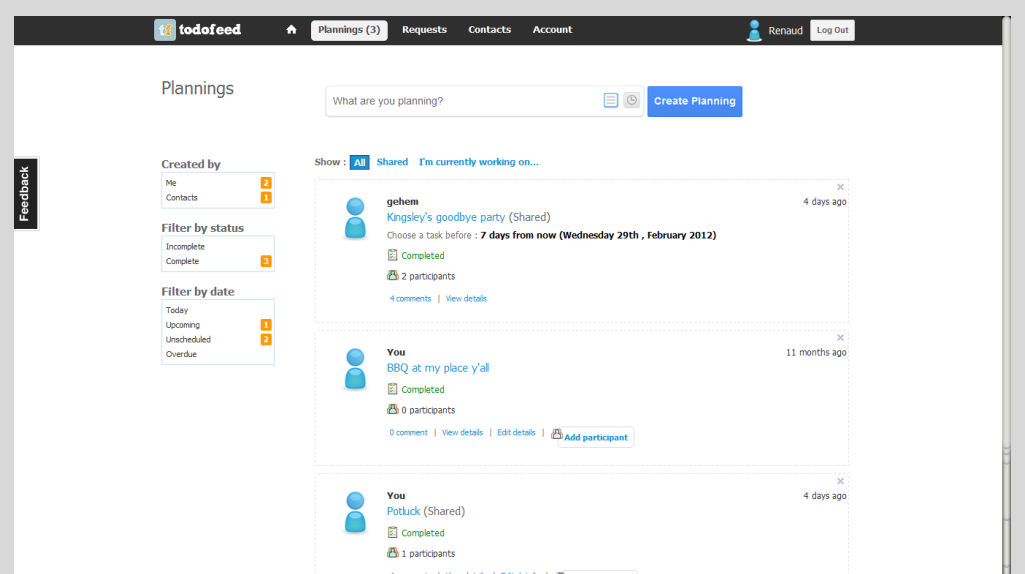|	
Error Type :	UI Design
Description :	The filter section does not have a proper title
Context :	User Planning Page
How to reproduce :	From the user home page. Go to the planning page by clicking the planning button in the upper menu.
Broken Heuristics :	H1
Suggested Fix :	Add a title "Filters" to properly help the user identify that section
Severity :	Major
Related :	*Usability bug #3*
Screenshot :	

Usability Bug # 6 – User Planning List does not have a title

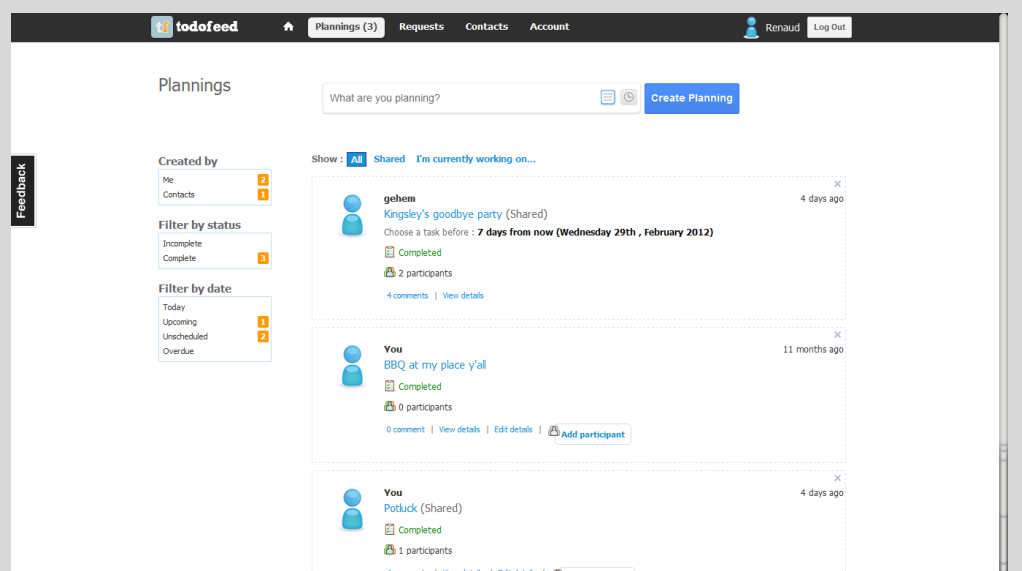|	
Error Type :	UI Design
Description :	The planning list section does not have a proper title
Context :	User Planning Page
How to reproduce :	From the user home page, go to the planning page by clicking the planning button in the upper menu. Look at the planning list section.
Broken Heuristics :	H1
Suggested Fix :	Add a title "Planning list" to properly help the user identify that section
Severity :	Critical
Related :	*Usability bug #5*
Screenshot :	

Usability Bug # 7 – Filters design discrepancies

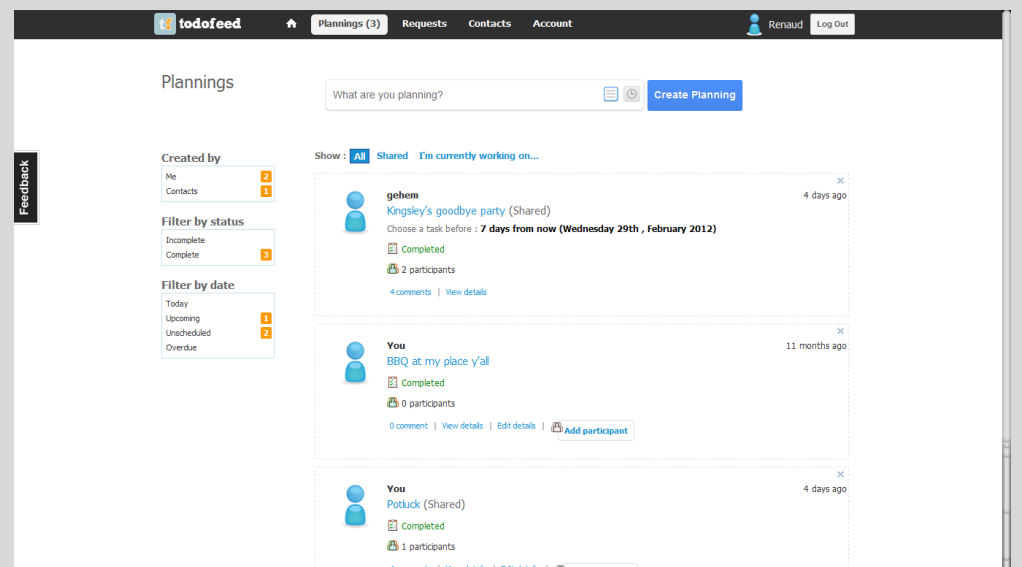|	
Error Type :	UI Design
Description :	The "show: All – Shared – I'm currently working on…" section is a filter, but does not follow the same UI design as the filters by date, status or ownership.
Context :	User Planning Page
How to reproduce :	From the user home page, go to the planning page by clicking the planning button in the upper menu. Look at the planning list section.
Broken Heuristics :	H4
Suggested Fix :	Redesign the "show: All – Shared – I'm currently working on…" filter section accordingly to the other filters.
Severity :	Major
Related :	*None*
Screenshot :	

Usability Bug # 8 – Contacts vs. Friends

Error Type :	Conceptual Model
Description :	The system uses the word "Contact" to denote a user knows another user. But when a new contact is added to the user contact list, the system display an information that uses the word "friends" instead of contact.
Context :	User Home Page
How to reproduce :	Request a contact to be added to your contact list. Once, that contact accept your request, go back to your home page and take a look at the display message!
Broken Heuristics :	H4
Suggested Fix :	Simply use the word "contact" which is used everywhere else when notifying user of recently added connections.
Severity :	Minor
Related :	*None*
Screenshot :	*N/A*

Usability Bug # 9 – No feedback after "Remove a user from contact"

|	
Error Type :	Functional Task
Description :	After clicking on the remove contact. No feedback is pertained. Application sends back to home page.
Context :	User Contacts Page
How to reproduce :	From the user contacts page. Choose a contact and click on "REMOVE FROM CONTACT" button
Broken Heuristics :	H1
Suggested Fix :	Add a feedback message that gets displayed, after the user clicks on the remove button, to inform him of the result of the operation.
Severity :	Critical
Related :	*None*
Screenshot :	
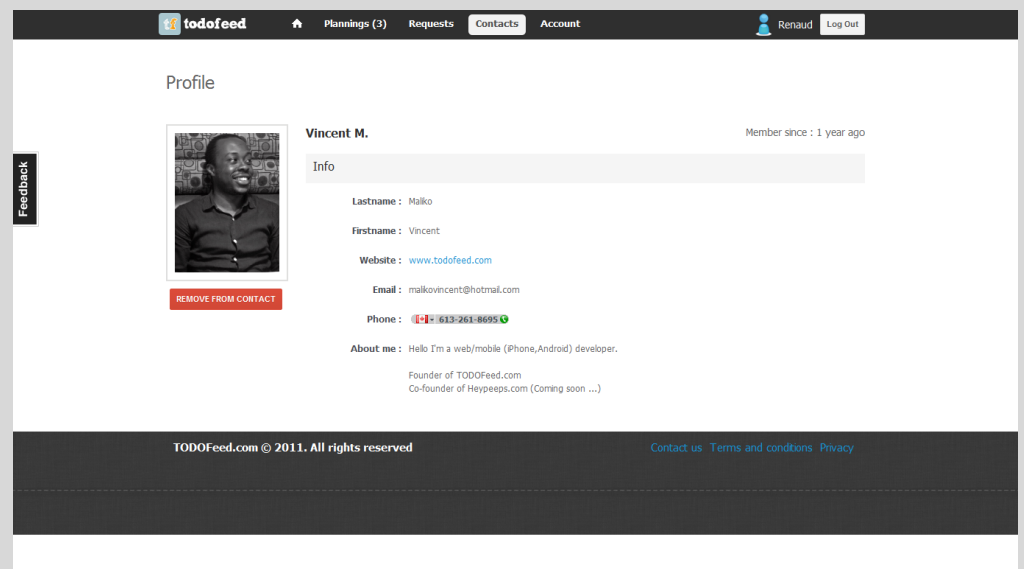
Usability Bug # 10 – An asterisk "*" indicates a planning description is mandatory but the system does not ensure that

Error Type :	Functional
Description :	There is an asterisk to say that the description field of a planning is a mandatory field. But when one leaves the description empty and update the planning. The system does not provide any error as should be expected
Context :	Planning Edit Page
How to reproduce :	From the planning page, select a planning and then click on the edit button to edit it. Leave/make the description field empty and try to update the planning.
Broken Heuristics :	H5
Suggested Fix :	Make the system provide adequate response when this unauthorized action is tried by the user. Or make the description field non-mandatory if applies.
Severity :	Moderate
Related :	*None*
Screenshot :	

Usability Bug # 11 – Affordance of the comments section is not visible

|	
Error Type :	UI Design
Description :	When the user wants to add a comment to a planning, the comments section is not always visible.
Context :	User Planning Page
How to reproduce :	Pick a planning and go to his page. Try to add a comment.
Broken Heuristics :	H7, H8
Suggested Fix :	Should provide an anchor (link) that directs to the comment section. Or design the page to be minimalistic and clearly feature the comments section.
Severity :	Moderate
Related :	*Usability bug # 16*
Screenshot :	
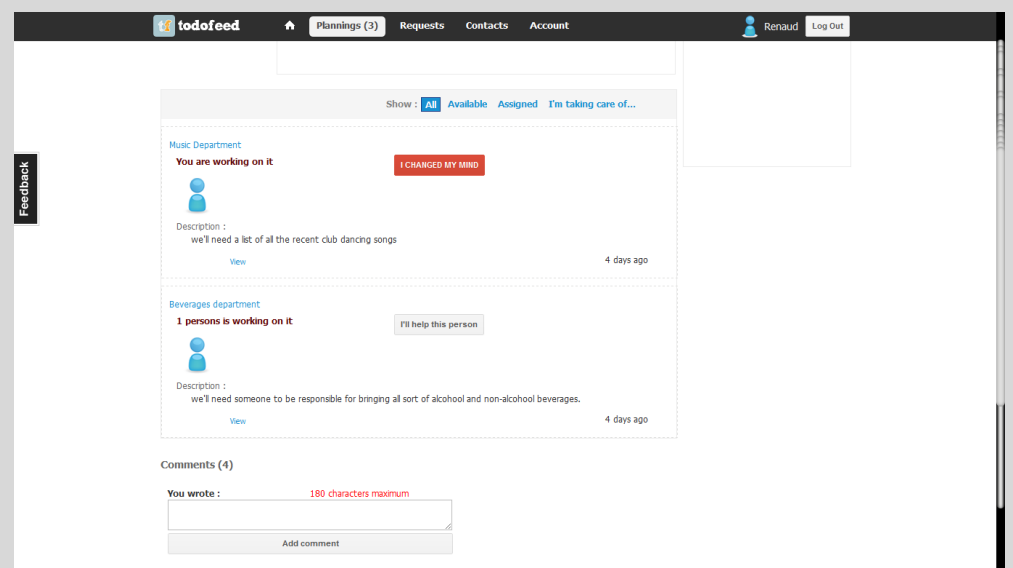
Usability Bug # 12 – Task Name Title not efficiently presented

|	
Error Type :	UI Design
Description :	The task title of a task of a planning is not cleared emphasized as such
Context :	User Task Information Page
How to reproduce :	In the planning page, select to view a task information
Broken Heuristics :	H1
Suggested Fix :	Maybe make the task title in bold, in bigger character, in different style, or simply slightly move it away from the main content of the task info
Severity :	Moderate
Related :	*None*
Screenshot :	
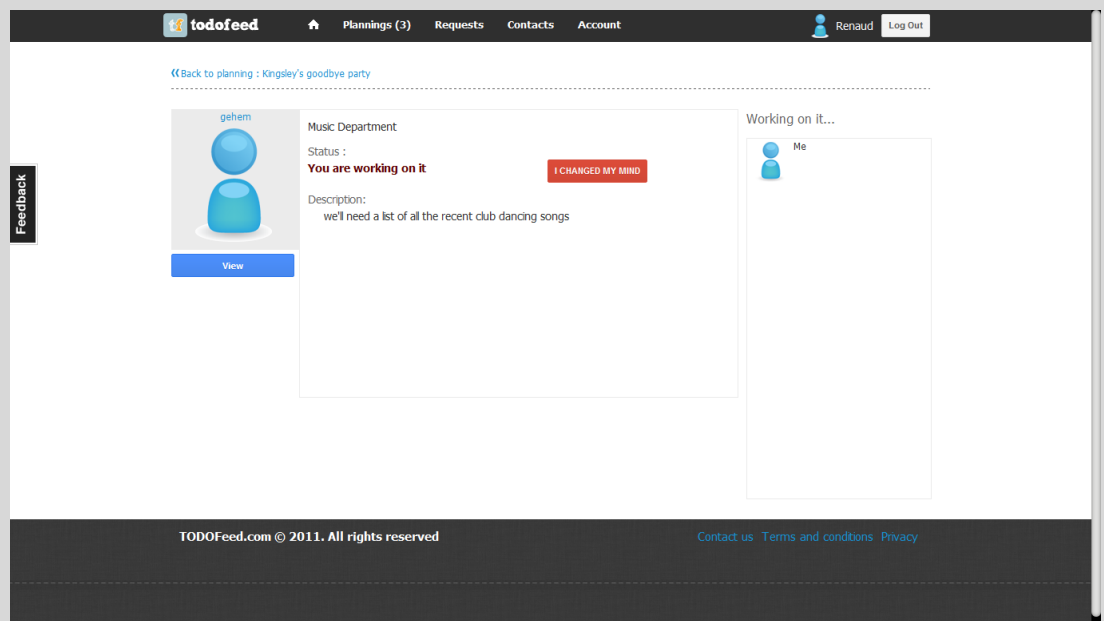
Usability Bug # 13 – View and Edit buttons positioning are misleading

Error Type :	UI Design
Description :	When one see the view and edit buttons in the task information page. It can be misleading that those buttons are there to respectively view or edit the user photo or profile.
Context :	User Task Information Page
How to reproduce :	Select a task in a planning for the planning page. See the view and edit button the sidebar
Broken Heuristics :	H2, H5
Suggested Fix :	Move the buttons to put them more in the context of the task information content
Severity :	Moderate
Related :	*None*

Usability Bug # 14 – No feedback after task updated

|	
Error Type :	UI Design
Description :	The system does not give enough response when a task is updated
Context :	User Task Information Page
How to reproduce :	On the task information page, click on editing a task. Then, click on the update button. Observe the system response.
Broken Heuristics :	H1
Suggested Fix :	Provide an adequate message about the result of the update operation when it is completed.
Severity :	Critical
Related :	*None*
Screenshot :	
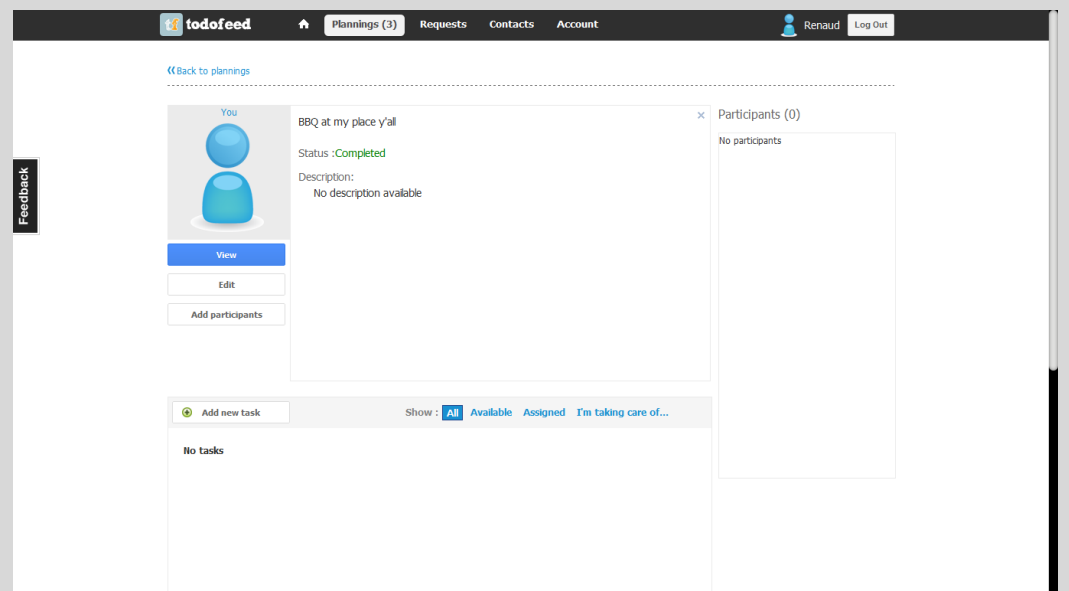
Usability Bug # 15 – Information layout of an item in planning list can be misleading or inefficient

|	
Error Type :	UI Design
Description :	The first information item for a planning in the planning list is the name of the creator of that planning. This does not help the user to search for an item in the planning.
Context :	User Planning Page
How to reproduce :	Go to the planning page, and observe the layout of the planning in the list
Broken Heuristics :	H1
Suggested Fix :	The planning title should be the first piece of information to be displayed for a given planning in the planning list
Severity :	Moderate
Related :	*Usability bug # 6*
Screenshot :	
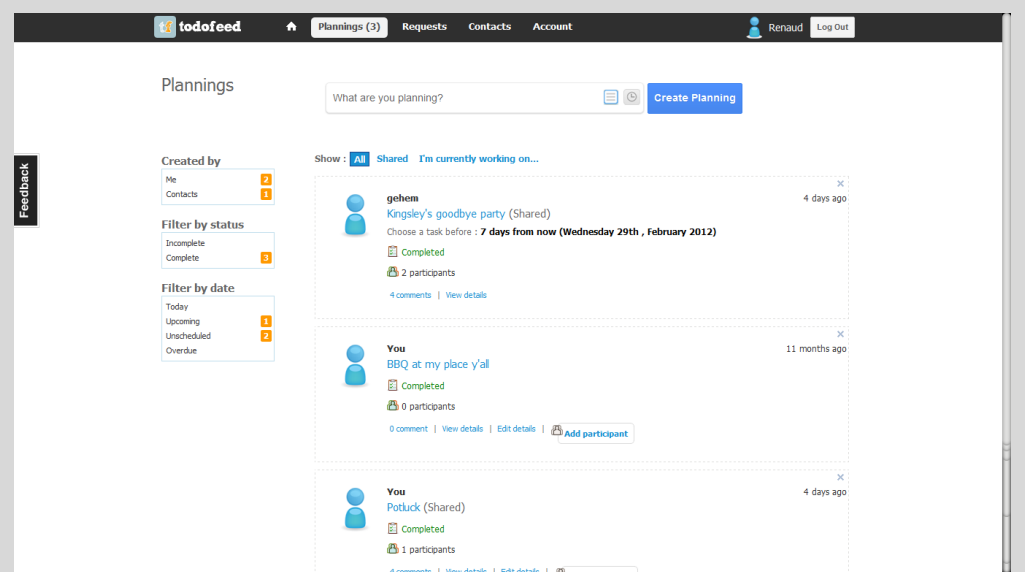
Usability Bug # 16 – The Planning item info page has too much information

|	
Error Type :	UI Design
Description :	The planning information page for a given planning has too much information
Context :	User Planning item info Page
How to reproduce :	View the planning information page for a given planning
Broken Heuristics :	H8, H7
Suggested Fix :	Maybe provide tabs to separate information and focalized the user interest. Hide information not critical for a given moment
Severity :	Major
Related :	*None*
Screenshot :	
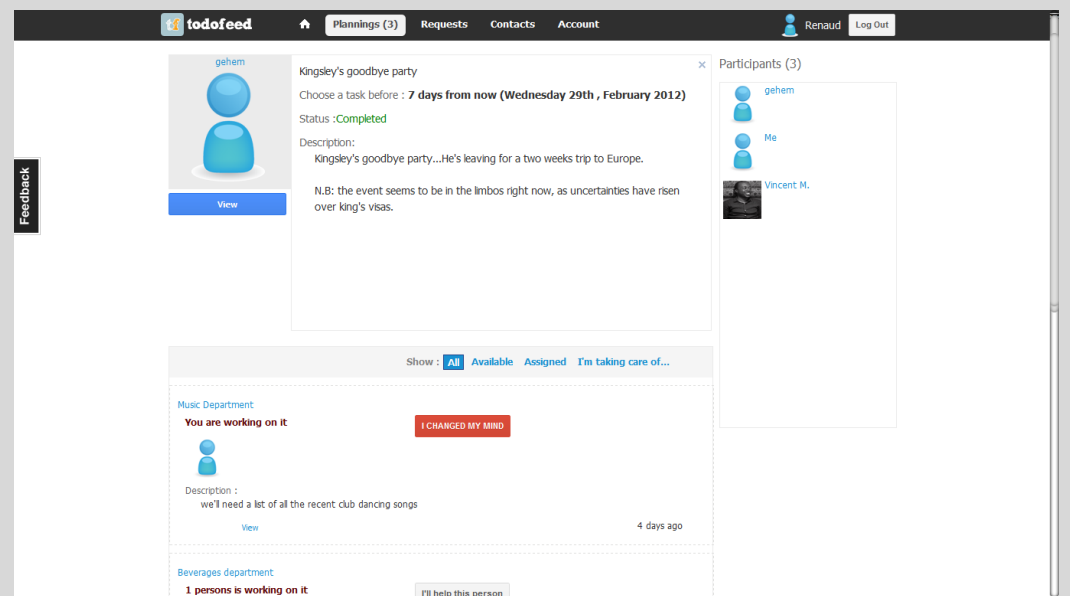
Usability Bug # 17 – Calendar behaviour is inconsistent

Error Type : UI Design

Description : When one click on the calendar during creation of a new planning, the calendar icon, first, disappears, and the date picker box appears at another area, finally the chosen date is added to the planning at an unexpected spot

Context : User Planning Page : "Create Planning" section

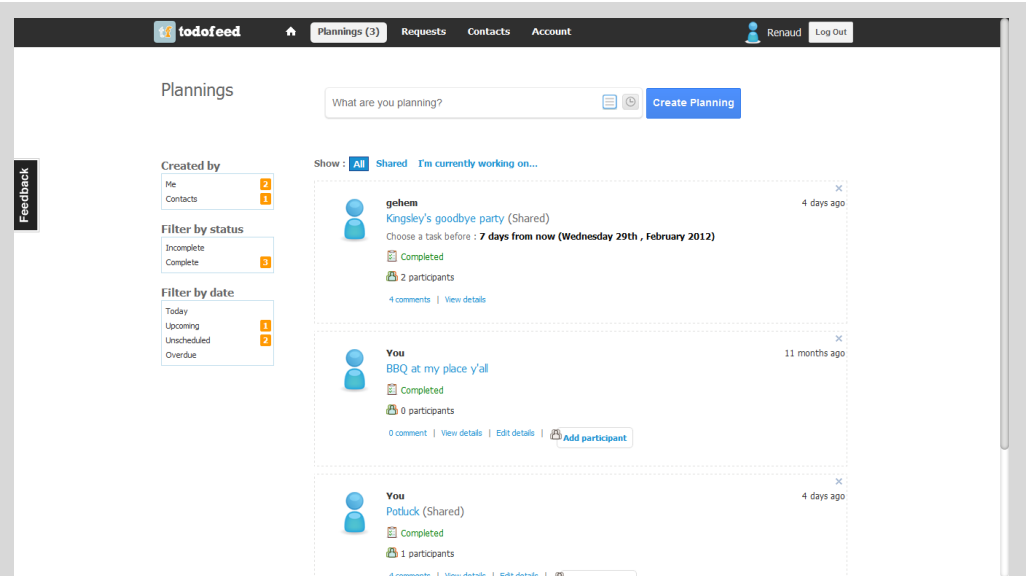**How to reproduce :** Go to the planning page. And try to use the calendar to set the time of a new planning.

Broken Heuristics : H4, H5

Suggested Fix : The calendar icon does not need to disappear. Also change the position the pop-up calendar to appear below the calendar icon

Severity : Minor

Related : *None*

Screenshot :

Usability Bug # 18 – User name shown as a title

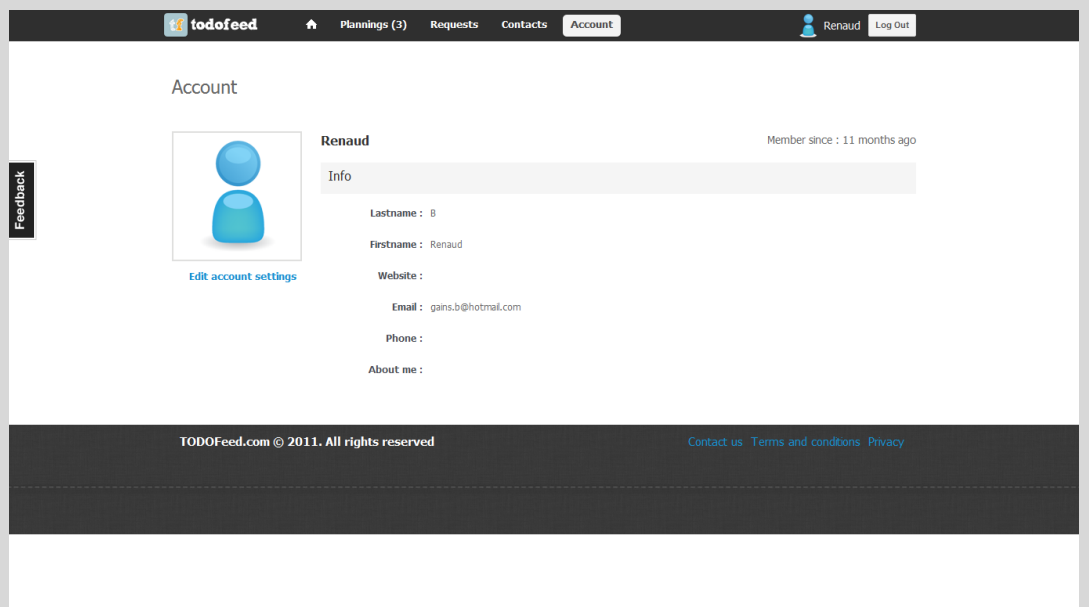|	
Error Type :	UI Design
Description :	The name of the user looks like a title of the page
Context :	Account Page
How to reproduce :	Go to the user account page
Broken Heuristics :	H5, H4
Suggested Fix :	Move the user name either in the info section or above the user photo so that it acts as an identifier of the user photo
Severity :	Cosmetic
Related :	*None*
Screenshot :	

Usability Bug # 19 – Button sizes for "DELETE CURRENT IMAGE" and "update icon" are different

|	
Error Type :	UI Design
Description :	The two buttons does not have the same size.
Context :	Account Page
How to reproduce :	Go to the user account page, and click on the edit button to edit user info. Observe the layout for the "DELETE CURRENT IMAGE" and "update icon buttons.
Broken Heuristics :	H4
Suggested Fix :	Make them have the same size
Severity :	Cosmetic
Related :	*None*
Screenshot :	
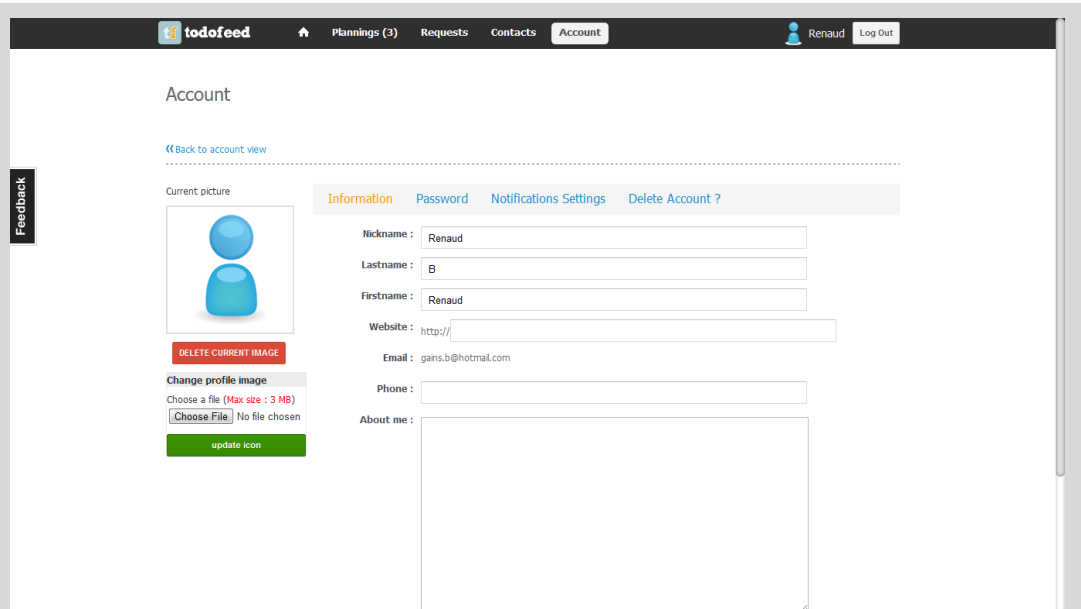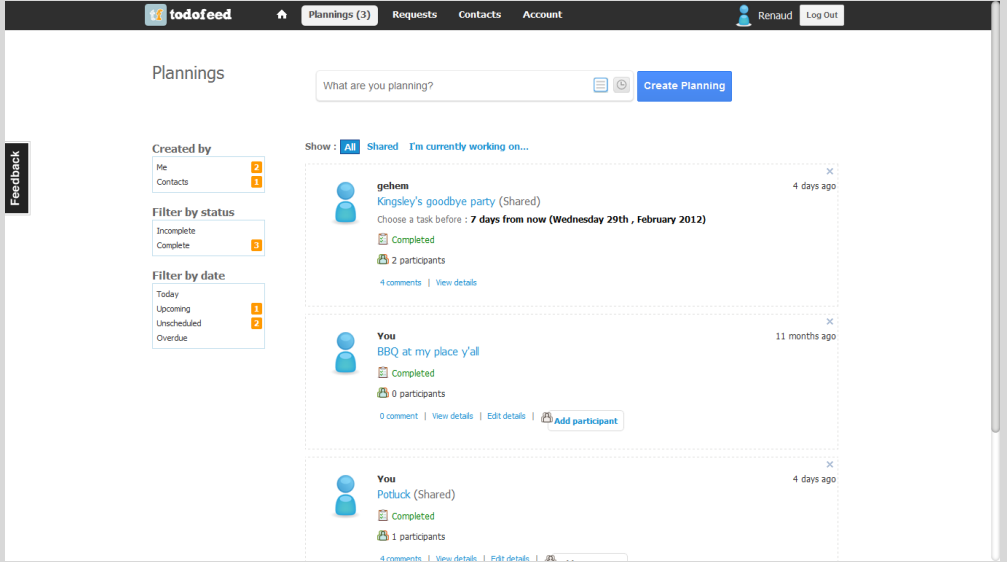
Usability Bug # 20 – Order of planning items in list abruptly changed

Error Type :	Functional
Description :	The order in which the plannings are listed seem to change unexpectedly
Context :	User Planning Page
How to reproduce :	*Procedure unknown*
Broken Heuristics :	H9
Suggested Fix :	Functional problem to be investigated. The order should not change arbitrarily.
Severity :	Major [seems to change based on access]
Related :	*None*
Screenshot :	

Usability Bug # 21 – No feedback after planning item updated

|	
Error Type :	UI Design
Description :	The system does not give enough response when a planning is updated
Context :	Planning Information Page
How to reproduce :	From the planning information page, click to edit a planning. Then, click on the update button. Observe the system response.
Broken Heuristics :	H1
Suggested Fix :	Provide an adequate message about the result of the update operation when it is completed.
Severity :	Critical
Related :	*Usability bug # 14*
Screenshot :	
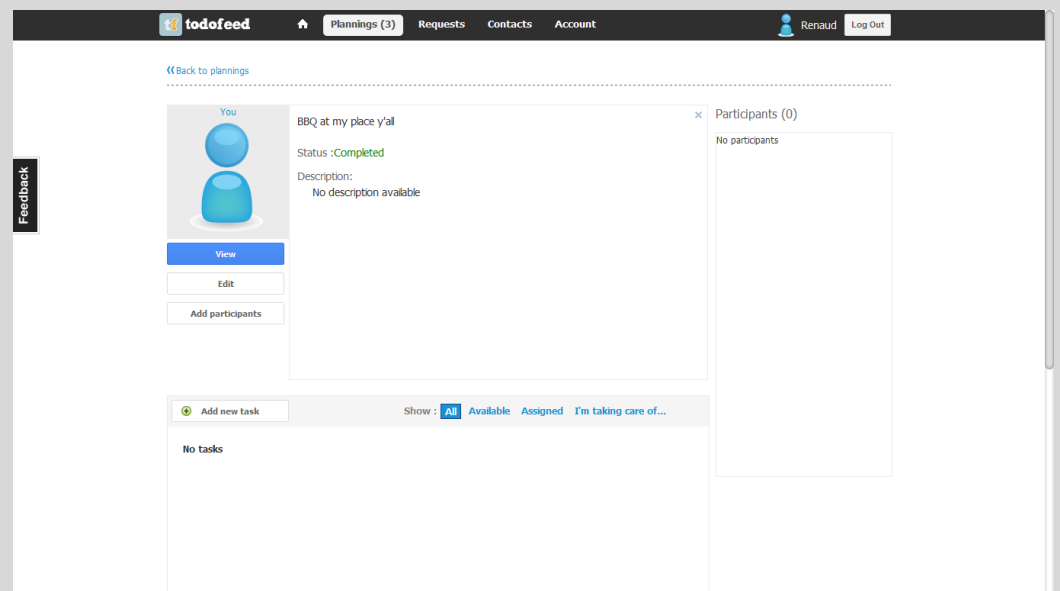
Usability Bug # 22 – Discrepancy of color on "Add participants" between two planning items in the planning list

|	
Error Type :	UI Design
Description :	The colors of the "Add participants" button are different for different planning in the planning list. And for no apparent reasons.
Context :	User Planning Page
How to reproduce :	Go to the planning list. Observe the "add participants" buttons for the planning items.
Broken Heuristics :	H4
Suggested Fix :	All "Add participants" should be aligned to the same format and color scheme.
Severity :	Cosmetic
Related :	*None*
Screenshot :	
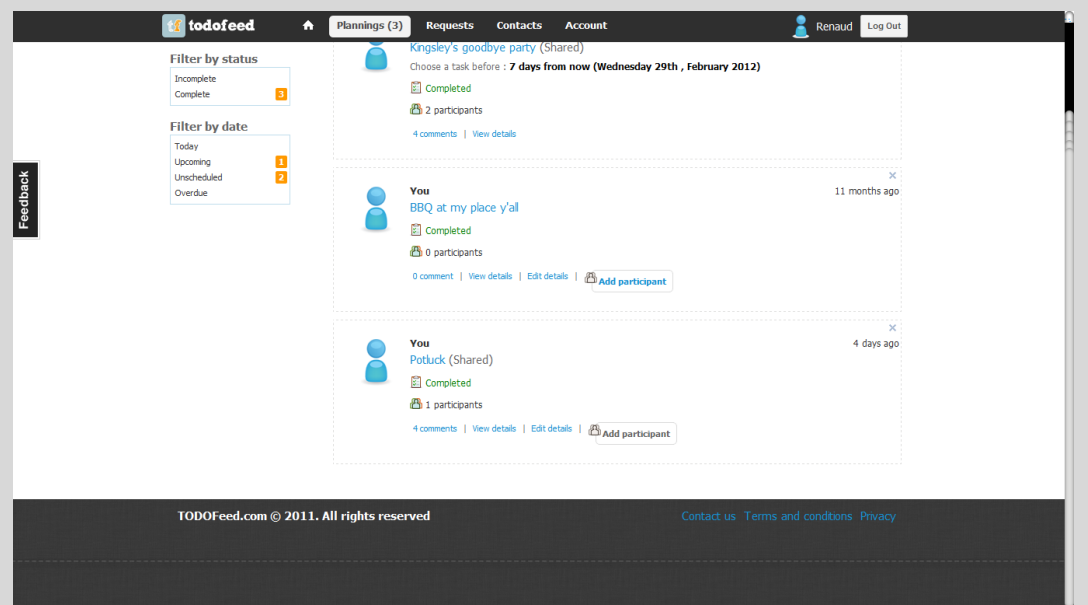
Usability Bug # 23 – Process of sharing planning to contacts is costly in step

|	
Error Type :	UI Task Flow Design
Description :	The process of sharing planning with existing TODOFeed contacts contains unnecessary steps, thus not obvious.
Context :	User Planning item info Page
How to reproduce :	Go to the info page of a planning you own, and try to add a contact to the planning.
Broken Heuristics :	H7, H6, H5
Suggested Fix :	Provide directly the list of TODOFeed contacts as a default behaviour of sharing plannings; the other options being secondary
Severity :	Major
Related :	*None*
Screenshot :	
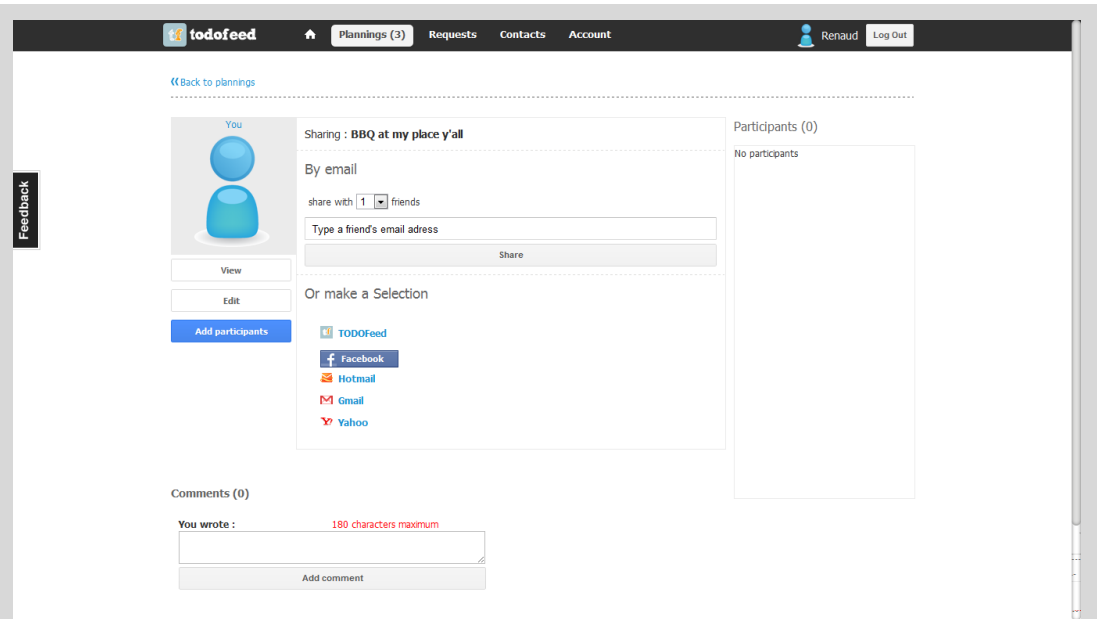
Usability Bug # 24 – Participant number is not directly updated after user shares the planning with a contact

Error Type :	Functional and Task Design
Description :	After a selected contact is added to the list of participant of a planning, the participant number is not updated.
Context :	User Planning item info Page
How to reproduce :	Go to a planning information page. Add a participant to the planning. Observe the system response.
Broken Heuristics :	H5, H1
Suggested Fix :	
Severity :	Moderate
Related :	*None*
Screenshot :	*N/A*

Usability Bug # 25 – No title on the planning info section

|	
Error Type :	UI Design
Description :	The planning information page does not have a title
Context :	User Planning Information Page
How to reproduce :	In the planning list page, select to view any planning information page. Observe its header
Broken Heuristics :	H1
Suggested Fix :	Add a clear title for the planning information page
Severity :	Minor
Related :	*Usability bug # 12*
Screenshot :	
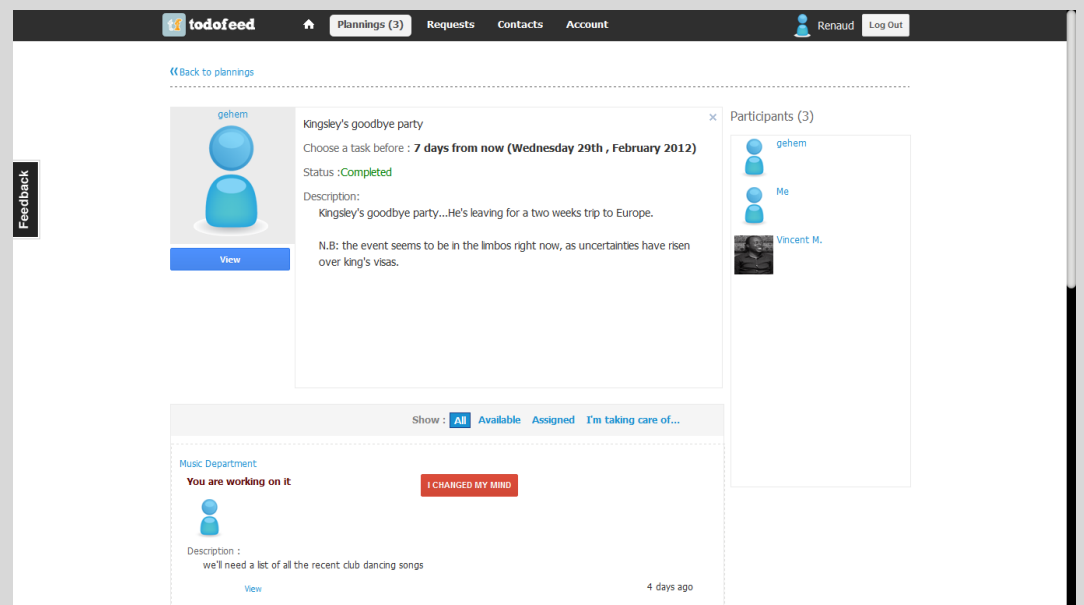
Usability Bug # 26 – The Filter section at the left of the page disappears

|	
Error Type :	UI Functional
Description :	Filter section disappears after clicking on "I'm currently working on"
Context :	User Planning Page
How to reproduce :	Go to the planning list page and click on "I'm currently working on". Look for the filters section, it should have disappeared.
Broken Heuristics :	H5, H9, H1
Suggested Fix :	The filter section should not disappear without any reason. A functional fix should be brought to make sure this behaviour does not occur anymore
Severity :	Minor
Related :	*None*
Screenshot :	
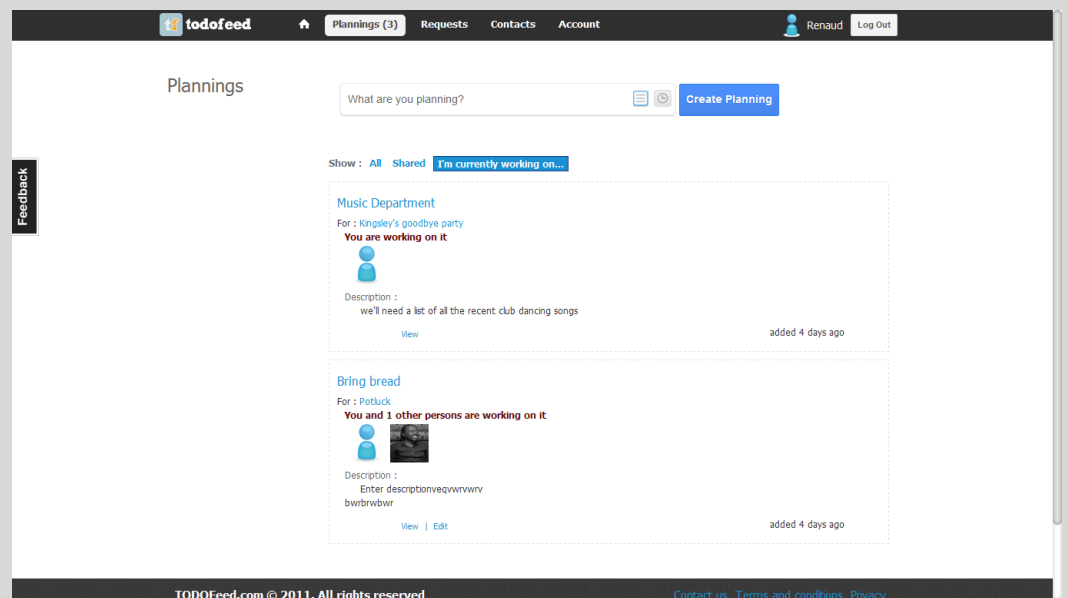
Usability Bug # 27 – No documentation or help available	
Error Type :	UI Functional Design
Description :	The entire web application does not provide any localized documentation or help for user
Context :	User Planning Page
How to reproduce :	Visit the web application and look for a help section
Broken Heuristics :	H5
Suggested Fix :	At least, a basic documentation section should be added to the application
Severity :	Minor
Related :	*None*
Screenshot :	*N/A*

V- Conclusion

In conclusion, the heuristic evaluation conducted against the web application TODOFeed allowed us the uncovered several usability problems. It is an useful and non-expensive process that provides a valuable insight into the usability of the system. The data can be statistically analysed to understand the repartition of usability found problems per heuristic and severity level. This will help notice the common type of usability mistakes existing in the system and help understand what aspects of usability need to be aware concerns for the TODOFeed web application.

VI-   Annexes

Glossary:
- UI – User Interface

Reference Documents & Links:
- [TODOFeed website](#)
- [Jakob Nielsen's Ten Heuristic](#)
- [How to conduct heuristic evaluation, Jakob Nielsen](#)

TODOFeed reviews:
- [TODOFeed addictivetips.com review](#)
- [Maketecheasier review](#)
- [Appstorm review](#)

- [Appappeal review](#)
- [App-blog.net review](#)