IBM Developer Website:

Preference Test

Date: 04/07/2019
Word Count: 2125
Group 3: C2W2
Wei Li
Chen Liang
Cameron McLaughlin
Wei Zhang
URL to Google Doc version of this document:
https://docs.google.com/document/d/1sgo7WYoNG6pl4YNTejd3273cGOVNGoxBr-k6Bfz3byI/edit?usp=sharing

Table of Contents

Executive Summary

The IBM Developer website is an online community for programmers, providing resources, information, and news about events to bring them together and help them support each other.

In this report, we outline the preference test we performed to evaluate the current design and compare it with our proposed redesign. For our redesign, we made changes to the homepage navigation bar, as well as renamed a feature and added another highlight section. The results of our test shows that the proposed changes would all increase user satisfaction and make the site easier for new users to navigate.

Introduction

IBM Developer is a website dedicated to giving developers working with IBM tools products a platform to find information and connect with other developers. Users can find information about upcoming conferences and events, read blog posts and news articles, look up text and video tutorials, and download sample code. There is also a question-and-answer forum, which, according to the user surveys we conducted in recent weeks, is one of the most popular features of the site.

Aside from the aforementioned surveys, we have performed interviews to learn about the needs, goals and habits of the developer community overall; conducted a comparative analysis on IBM Developer and several of its biggest competitors; and done a heuristic evaluation to determine specific strengths and weaknesses of the site's user interface. At each stage, we have been making recommendations for how the site can be improved and refining them with each new piece of information we learn. For this next stage, we decided to create mockups implementing a few of our primary recommendations and to use them in brief preference tests to get a better idea of their potential usefulness.

Methods

First, we needed to determine which recommendations we were going to test. From the beginning of our investigations into the IBM Developer site, we have been recommending that the link to the Answers forums be given greater prominence on the main IBM Developer homepage, so it was a given that that would be one of the things we would include in our redesigned mockup. We placed the link in the upper navigation bar so that it appears at the top of the page, and renamed it to 'Forums' so that its function would be more obvious (we felt that 'Answers' sounded more like a FAQ page than a forums for users to discuss problems with each other). We also decided to add a section further down on the page highlighting recent forum posts to further help bring it to the attention of new users, and to help new questions get more views and hopefully answers.

We decided we wanted to try a second change as well. We feel that the layout of the Answers forum is inconsistent with the rest of the site, particularly with its lack of a direct link back to the IBM Developer homepage. We created an additional mockup that changed the color and format of the navigation bar on the Answers page to be more stylistically similar to that of the main Developer navigation bar, and we swapped out the link at the very top to the main IBM homepage for a link to the IBM Developer homepage (our reasoning being that if other IBM Developer pages don't have a link to the IBM homepage, it doesn't make sense for that to be different on the Answers forums).

We created the mockups using Figma, and also created nonfunctional mockups of the current actual versions of the pages we were testing (all of which can be found in the appendix). We then thought about what would be the best way to test our mockups. Initially we thought it would be best to have test users try them out with one of us physically present to facilitate, but we decided that it could easily be done with an online survey. We created a survey on Qualtrix that had the participants look at the mockups and pretend to perform certain tasks with them (we also gave them the option to go to the actual IBM webpages for tasks involving the current version of the site). The first task was to find a way to the question-and-answer forums from the IBM Developer homepage, and the second task was to navigate back to the homepage from the Answers forum without pressing the 'back' button. We then wrote some short questions (loosely inspired by John Brooke's System Usability Scale (SUS) (1986)) about the participants' experiences performing the tasks. After each task, we then showed the participants our mockups and asked some questions about whether our proposed changes would make their experiences better or worse.

We sent our survey out to the same group of developers at the University of

Michigan who we had sampled for our initial surveys, and after we had received 10 responses, we analyzed the data using the built-in analysis features in Qualtrix. We chose the sampling method that we did because we felt that it was important to test with people who were not frequent users of IBM Developer, as more experienced users would likely already be used to the functions we were testing.

Findings

Nearly 80% of our respondents believed that changing the label of 'Answers' to 'Forums' would make it more easily identifiable and accessible to new users

The IBM Developer website in its current form has the Q&A forums labeled as 'Answers' in the navigational footer. In our heuristic evaluation, we noted that we felt 'Answers' sounded more like an FAQ page than a forum. According to the feedback from the survey, changing the label used for the main link to 'Forums' would be a more meaningful name for 77.8% of respondents, validating our renaming proposal. It is promising that by renaming 'Answers' to 'Forums', new users might have a better experience navigating the site.

87.5% of respondents agreed that placing a link to Answers in the upper navigation bar would make the forums easier to find

The current design of IBM Developer places what on most pages is the only link to the Answers forums in the footer, and at the very end of it (figure 1).
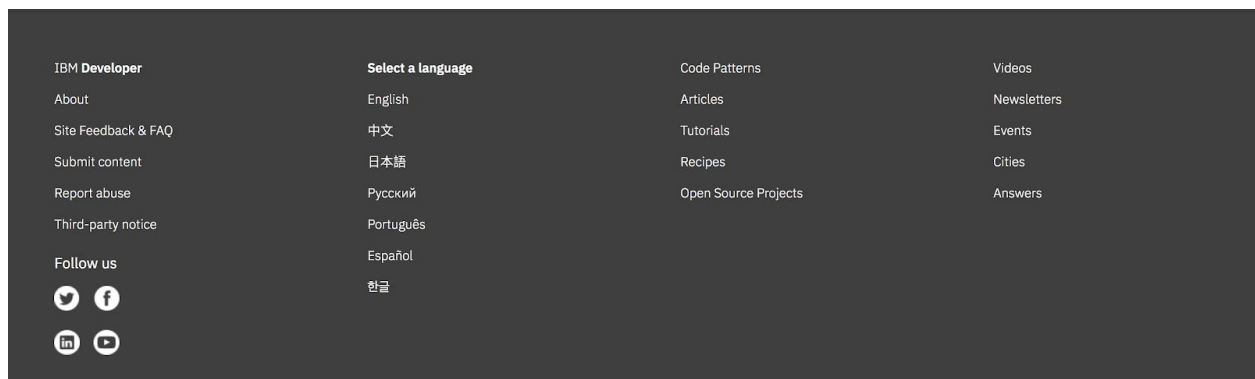

Figure 1

70% of the users we surveyed thought that getting to the forums from the homepage was 'harder or more complicated than it should have been', and approximately 50% described the experience as 'frustrating' and/or 'difficult'. In addition to relabeling the link to 'Forums' in our redesign, we added the link to the upper navigation bar that appears at the top of almost every page on the site (figure 2).
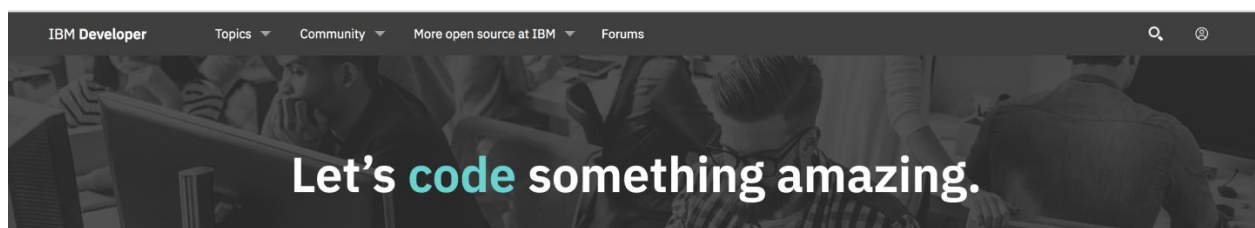

Figure 2

After using the current design, we showed our users the redesign and had them compare the two. 87.5% of participants believed that adding the 'Forums' link to the navigation header would make it easier to locate (one having responded that they had expected it to be under the 'Community' menu). This feedback suggests that adding a link to Answers in the main navigation bar would enhance users' experiences with the site.

60% of respondents felt that adding a section highlighting the forums on the homepage would be helpful

The current design of the IBM Developer homepage has several sections highlighting different areas of the site, but has nothing about the Answers forums. In our interviews and user surveys, we found that the primary goal for a majority of users is to find solutions for problems they encounter in their work. We thought that adding a section highlighting recent forum posts might help users get more answers to their questions, as well as make more users aware of the existence of the forums in general. The survey data shows that 60% of participants thought that this addition to the homepage would be helpful.

80% of respondents thought that adding a link back to the IBM Developer homepage to the Answers section would improve navigation

The current design of the Answers forums has a different navigation bar from the rest of the Developer site, with a different color scheme and links to the Answers front page and the main IBM homepage but not the Developer homepage (figure 3). When we asked our participants to find a way back to the Developer homepage without pressing the 'back' button (which would not be an ideal method of navigating if one has been jumping from page to page in the forums for a while), 70% were not able to complete the task, and 60% found the experience 'frustrating'. 80% of them felt that our redesign, which replaces the IBM homepage link with an IBM Developer link, would make improve navigation (our reasoning for removing the main IBM link being that none of the other main pages on the Developer site have one).
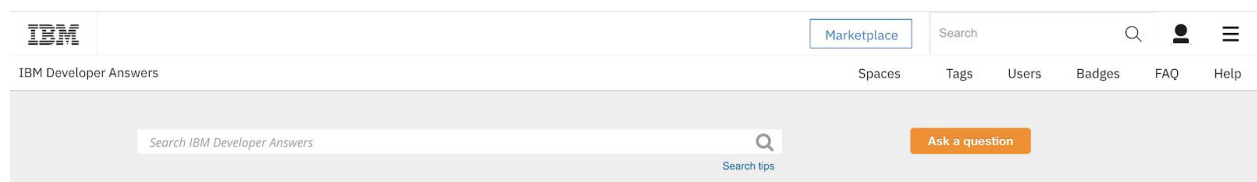

Figure 3

Recommendations

Rename 'Answers' to 'Forums' and add a link to it on the main navigation bar

Currently, the Answers forums are rather hard for new users to find, between the name and the location at the very end of the footer on the IBM Developer homepage. Given that a majority of test users felt that changing the label of the link to 'Forums' (within the forums, the 'Answers' name could be kept) and adding the link to the upper navigation bar (Figure 4)would increase discoverability of one of the site's central features, we recommend making both of these changes.
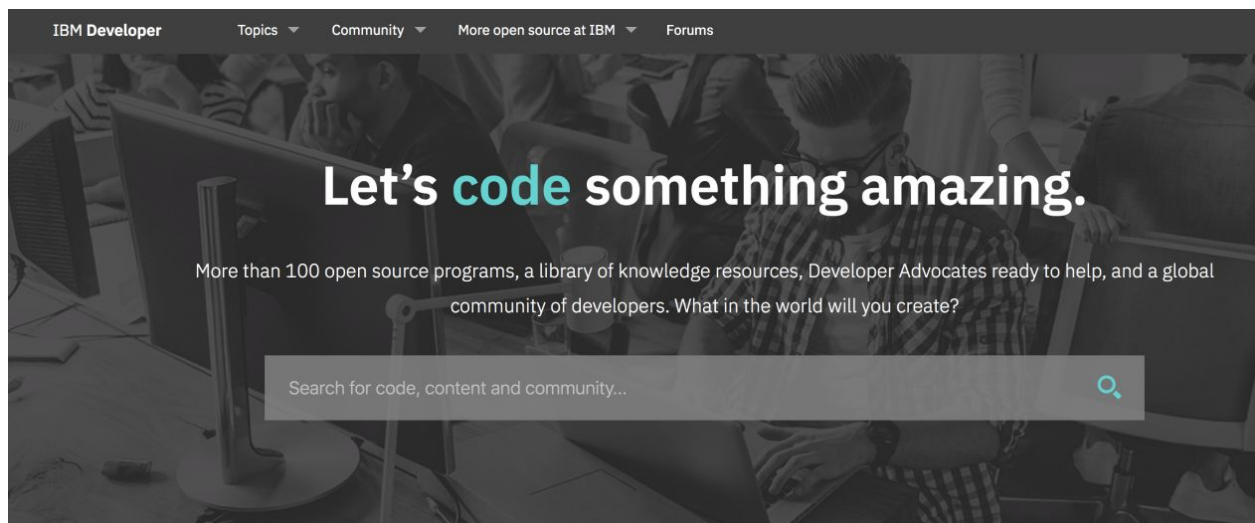
Figure 4

Highlight recent forum posts on the homepage

To further improve the discoverability of the Answers forums, we recommend adding another section to the IBM Developer homepage that highlights recent forum posts (figure 5). According to Jakob Nielsen's design heuristics (1994), a good design should not require users to consciously remember many details about how to use it. If a user is scrolling through the homepage unable to recall where the link to the forums is, they would happen upon the highlight section and could get to the forums without having to find the 'main' link. The highlight section would also bring attention to recent posts, and might lead to users' questions getting more answers.
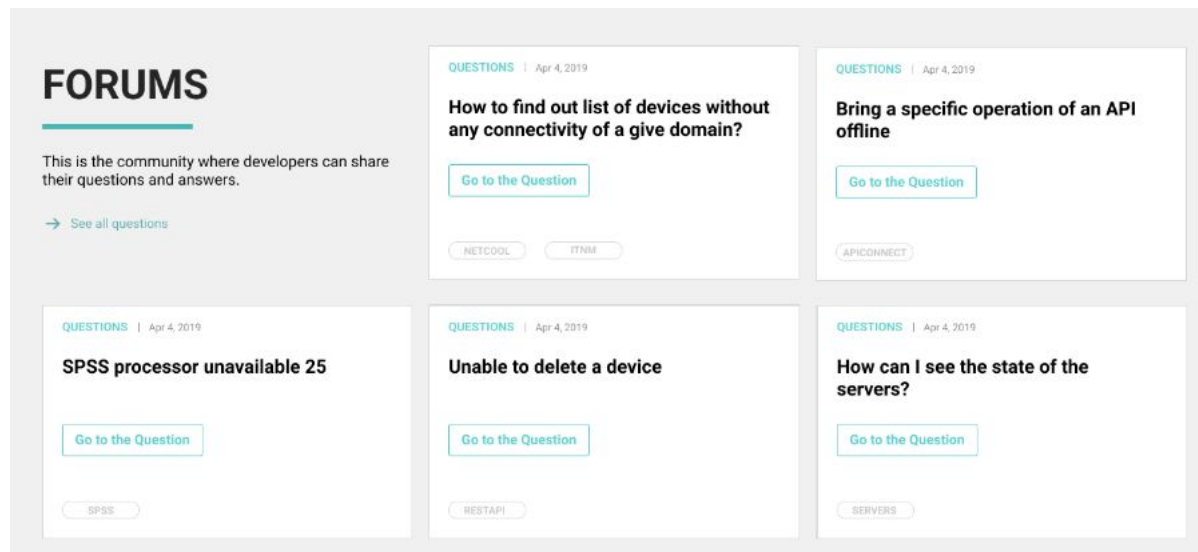
Figure 5

Add a clear link back to IBM Developer homepage to the Answers page

The Answers forum currently has no link back to the IBM Developer homepage on any of its navigation bars or footers. Instead, it has a link to the front page of the forums (which makes sense given how they are essentially a sub-site within the Developer site) and a link to the main IBM homepage. This may confuse and disorient users and make it difficult for them to navigate back to the Developer site. Changing this to a link back to the Developer homepage (figure 6) would make the site feel more consistent and make navigation simpler.
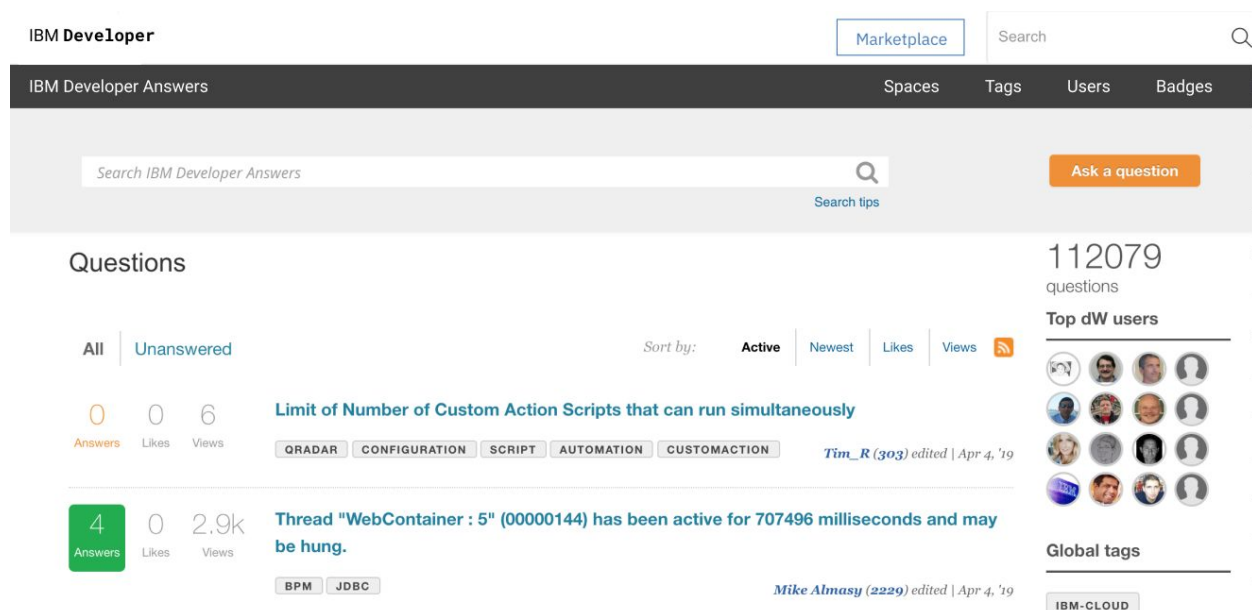
Figure 6

Discussion

For the first step of this assignment, we needed to determine what method would be more helpful in continuing our analysis of the Developer site. We discussed whether to do card sorting or a preference test. We settled on running a preference test because we have been making various concrete recommendations about changing certain parts of the site, and thought that it would be fairly easy to do an initial test of our proposed changes to see if it would be worthwhile to continue pursuing them. Our experiment was largely successful, with our respondents finding that all of our changes would be helpful in improving the usability of the site.

However, our test was not perfect. We only had 10 people take our survey, and in order for the data to be more meaningful, we would need to have a much larger group of people try our new designs. It would also be more effective to test with actual functioning prototypes of the new site rather than static mockups in order to more accurately gauge the usability of the new layouts and features.

Conclusion

We conducted this preference test to validate our recommendations for improving IBM Developer that we had generated from our previous research and investigation. We primarily focused on improving the navigation of the website. Our redesign placed a link to the Answers forums in the upper navigation bar so that it will be one of the first things users see, and changed the label to 'Forums' so that it will be more self-explanatory. We also added a section on the Developer homepage highlighting recent forum posts and changed the link to the main IBM homepage on the Answers forum to a link to the Developer homepage to streamline navigation. The data from our survey shows that these redesigns should all increase user satisfaction. Therefore, we recommend that in order to improve the user experience, the IBM Developer team could consider redesigning the navigation as such.
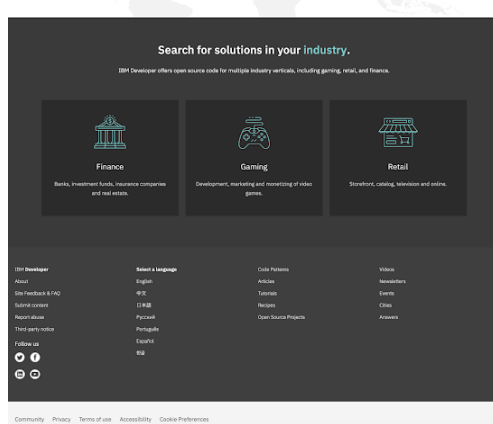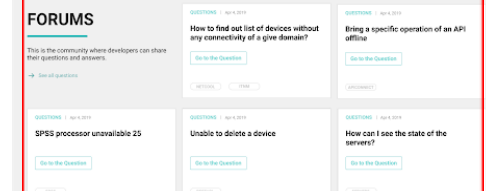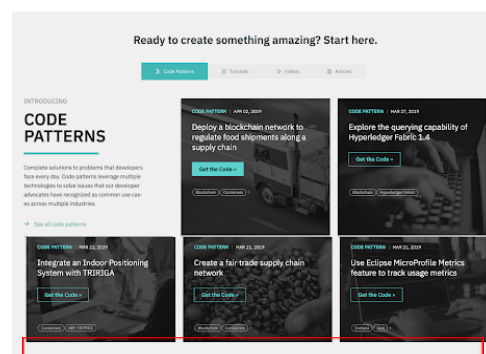
Appendices

Citations

Brooke, John. (1986). System usability scale [PDF file]. Retrieved from
    http://www.measuringux.com/sus.pdf

https://developer.ibm.com/

Mack, Robert L. & Nielsen, Jakob. (1994). *Usability inspection methods*. Hoboken, NJ:
    John Wiley & Sons, Inc.

Mockups

1. Renaming 'Answers' to 'Forums', adding a link to it on the main navigation bar, and including highlight section on homepage
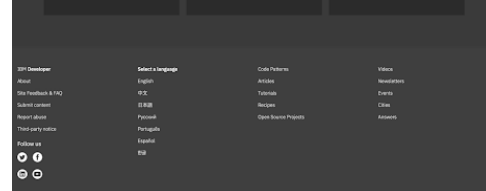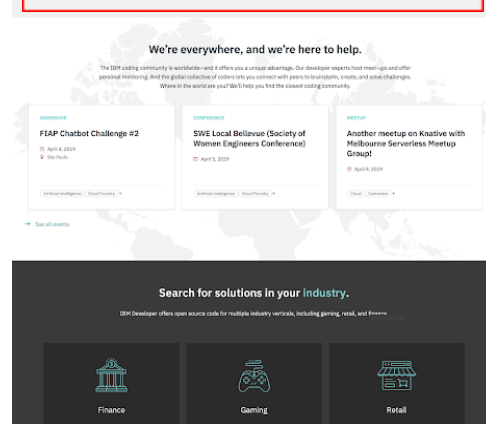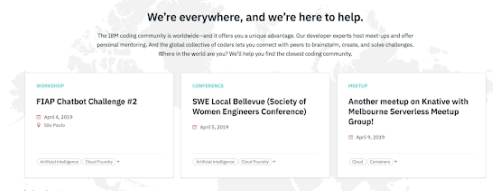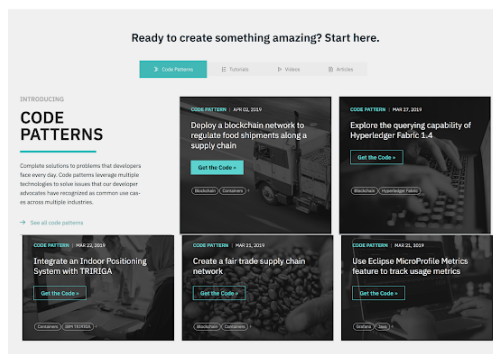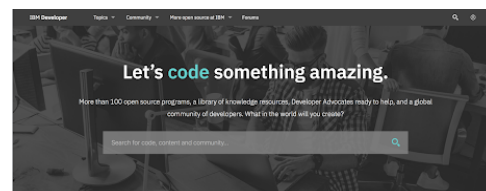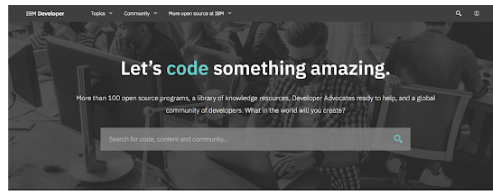
2. Adding link back to Developer homepage on Answers front page

Survey Questions

Main Questions:
For the following tasks, imagine that you are working on a coding project that involves working with software created by IBM. You have encountered a problem, so you go to the IBM Developer website to look up how other users have fixed similar problems. We will be giving you two brief hypothetical tasks.

Task 1:

[mockup image 1: current Developer homepage]

Thank you for participating in our survey! We are a group of first-year Master's students at the University of Michigan School of Information investigating the usability of the IBM Developer website. Please note that your responses will be kept confidential between us, our class and instructional staff, and our client, and that we will not collect any identifying data. If you have any questions, please feel free to contact us at C2W2.Group@umich.edu.

Imagine that you are working on a coding project that involves working with software created by IBM. You have encountered a problem, so you go to the IBM Developer website to look up how other users have fixed similar problems. We will be giving you two brief hypothetical tasks. You will then be asked a few questions about your experiences.

For your first task, you start on the IBM Developer homepage. Your task is to find the link to navigate to the site's question-and-answer forums (you can visit the actual site here if you prefer, but please refrain from doing a Google search or using ctrl-F: https://developer.ibm.com/).

Were you able to successfully find the link to the 'Answers' forum homepage?
- Yes
- No
- Unsure (please elaborate):

How did your experience performing this task compare to your experiences with using other similar websites (if you have done so)?
- Easier/simpler than average
- Neither easy nor hard
- Harder or more complicated than it should have been

How would you describe your experience with finding the forums (select all that apply)?
- Easy
- Difficult
- Straightforward
- Efficient
- Unnecessarily complex
- Frustrating
- Satisfying
- Awkward
- Other (please elaborate):

[mockup image 2: modified Developer homepage]

Do you think the above redesign, with the inclusion of a link to the forums in the navigation header, would make it easier for a new user to find them?
- Yes
- No
- Unsure (please elaborate):

For a user not already familiar with the Answers forums, do you find the label 'Forums' to be more or less meaningful or appropriate than 'Answers'?
- More meaningful
- Less meaningful
- About the same/unsure

Would you find the addition of a section in the body of the homepage highlighting recent forum posts helpful?
- Yes
- No
- Other/unsure (please elaborate):

Task 2:

[mockup image 3: current Answers homepage]

Now, pretend that you have been browsing the Answers forums for some time and now wish to go back to the IBM Developer homepage. Try to find a way back to the main IBM Developer website (visiting the actual website to perform the task may be helpful, but please refrain from doing a Google search or pressing the 'back' arrow: (https://developer.ibm.com/answers/index.html).

Were you successful in navigating back to the IBM Developer homepage?
- Yes
- No
- Unsure (please elaborate):

How did your experience performing this task compare to your experiences with using other similar websites?
- Easier/simpler than average
- Neither easy nor hard
- Harder or more complicated than it should have been

How would you describe your experience with navigating back to the Developer homepage (select all that apply)?
- Easy
- Difficult
- Straightforward
- Efficient
- Unnecessarily complex
- Frustrating
- Satisfying
- Awkward
- Other (please elaborate):

[mockup image 4: modified Answers homepage]

Would the inclusion of a direct link back to the IBM Developer homepage at the top of the Answers forums improve your experience of navigating the website?
- Yes
- No
- Other/unsure (please elaborate):

Some questions adapted from John Brooke's System Usability Scale (SUS) questionnaire (Digital Equipment Corporation, 1986).

Demographic Questions:

What is your gender?
- Male
- Female
- Prefer to self-identify:
- Prefer not to say

What is your age?
- Under 18
- 18-24
- 25-34
- 35-44
- 45-54
- 55+
- Prefer not to say

What is your highest completed level of education?
- I have not finished high school yet
- High school diploma or GED
- Associate's degree
- Bachelor's degree
- Master's degree
- PhD
- Prefer not to say

Which of the following best describes your primary job role?
- Front-end Developer
- Back-end Developer
- Architect
- Administrator
- Q/A Tester
- Manager
- Teacher
- Student
- Designer
- Other (please specify):

How regularly do you visit developer-oriented websites (Microsoft Developer, Apple Developer, Google Developer, etc) or otherwise look up coding help online (searching Google, Stack Overflow, etc)?
- More than once a day
- About once a day
- A few times a week
- About once a week
- Less than once a week

Again, thank you very much for taking our survey!