

IBM Developer Website: Usability Testing

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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. So far in our investigation into the site and how it can be improved, we have created an interaction map, performed initial surveys to learn about the needs and habits of developers, run a comparative analysis on five of the site's main competitors, conducted surveys to discover opinions on the site from actual users, done a heuristic evaluation to determine specific weak points in the site's structure, and, most recently, created mockups to test certain redesigns we have been recommending for certain features. Our next step has been to carry out user testing to gain more insights into how other people feel when using the site, and what difficulties they may have.

Introduction

IBM Developer is a resource created for developers to help them find information about IBM tools and products and get connected with other developers. It features information about upcoming conferences and events, blog posts and news articles, text and video tutorials, sample code, and a question-and-answers forum. We have been tasked with analyzing the site and coming up with recommendations for how IBM can improve its usability.

At this point, we are at our final step in our investigation into IBM Developer. After performing various analyses on the site and its competitors and conducting indirect investigations to learn about the needs and habits of developers in general and about the opinions of IBM Developer users on the site itself, we have carried out usability tests in order to highlight more specific issues and gain as deep of an understanding as possible.

Methods

Our first step in conducting the usability tests was to determine the tasks that we were going to have our users perform. While our preference test focused on a few specific issues we had found with certain features of IBM Developer, for the usability test, our aim was to get a bigger picture understanding of the site and its strengths and weaknesses, so we created a series of broader tasks that together incorporated more features, each based around or incorporating one or more issues we had found in our previous analyses.

The first task is essentially unchanged from our preference test. Given how much we have discussed the issues involving finding the Answers forums and navigating to and from them, we felt that in-depth testing to hear exactly what users are thinking when using them would be valuable. Starting from the IBM Developer homepage (as all of the tasks do), the user must find the Answers section (the tester simply instructs them to find the 'q-and-a forums', not telling them they are called 'Answers', to test how well new users understand the name), and then navigate back to the homepage without pressing the 'back' button. **The second task is for the user to find information about an event.** The Community section is one of the main features IBM wants to improve, and because in our user surveys we found that the Events category was not heavily utilized, we wanted to see whether that might be related to its usability. **The third task has the user look up sample code and a tutorial on a specific topic** (of their choosing, not specified by the tester). Sample code and tutorials seemed to be one of the central features of the Developer site, and were among the most popular features according to our user surveys, so we wanted to test whether new users could easily find the content. **For the final task, the user is instructed to find the FAQ page and then try to get in contact with customer service.** Our goal with this task was to learn whether users find the current FAQ section adequate and whether they are satisfied with the GitHub feedback repository.

Regarding sampling, we elected to find students and other participants locally, with the main criteria being that they work with code on a regular basis. Our reasoning was that seasoned users of the Developer site would most likely be used to at least a majority of the site, and that we would gain more insightful data by testing with users who were not already familiar with it.

Findings

Users are confused about the naming and placement of major features.

One of our most prominent findings is that users were confused about the labeling of certain features. For example, when we asked our participants to find the Answers forums, some of them initially looked under the 'Community' drop-down menu, as they assumed that forums would be part of that category, and then spent significant amounts of time looking through individual pages under 'Topics'. They would only glance through the footer as a last resort, and would often have to look at it several times, with one of them inspecting each link in it, before clicking on the 'Answers' link. Several of them remarked that they did not expect the link to the forums to be called 'Answers' and that it seemed odd for such an important feature to not be more prominently located on the homepage.

Additionally, some of our participants found it difficult to locate the customer support page. They would look for a 'Contact Us' page, and even when starting out on the 'Site Feedback & FAQ' page, failed to notice the link to the GitHub feedback repository (sometimes needing hints to find it). In addition to finding it strange that a GitHub repository was used for help with using the website in the first place, our users remarked that calling it 'feedback' made it harder to find.

The site search lacks accuracy.

Another one of our key findings is that the search function does not reliably give accurate results. While they were not directly instructed to, several of our participants chose to use the site search when performing certain tasks. The most significant problem with the search feature is that it often only returns specific content pages on the site (such as individual topic or tutorial pages) rather than the homepages for general sub-sections (such as 'Answers' or 'Events').

Additionally, certain individual functions of the site search do not work as expected. Two of our users tried using Boolean search operators such as quotation marks and a minus sign to attempt to narrow search results down while looking for tutorials, and found that they did not seem to have any effect on the results that were returned. When these options failed, our participants tried using the 'Sort By' menu to sort by most relevant (which one of them remarked was odd not to be the default sorting method). This did not improve the search results, and to make matters worse, with the next search they ran, the sorting automatically switched to *least* relevant (we tried replicating this error later on, and found that it happens fairly reliably when starting

out on 'Most Relevant'). And while the content filter allows the user to choose a specific category of results, it does not let the user filter by topics (such as 'Node.js' or 'Blockchain').

Users liked the content but found the overall structure of the site difficult to navigate.

One user who had had significant trouble finding certain features nonetheless remarked that he felt that it was 'decent for a developer site' and that he thought the individual topic pages and tutorials looked very helpful and well-written. Another one of our participants that stood out to us was that while individual content pages (particularly the 'topic' pages featuring links to tutorials, sample code, etc) were very well-organized and easy to understand, the overall structure of the homepage and navigational bars and menus was much less intuitive.

General navigation of the website tended to be the biggest difficulty our users faced. One of the tasks involved navigating back to the main IBM Developer homepage from the Answers forums. Certain users had trouble finding a way back to the Developer site due to the lack of any direct links to it on the Answers homepage, and had to resort to manually changing the URL or performing a Google search (although some of them were able to get back without any trouble by navigating to the main IBM homepage and clicking on the Developer link from there).

There is no obvious way to contact customer support for help with using the site.

Most of our users were unable to find how to get in contact with customer support on their own. In addition to the 'Feedback & FAQ' page not being labeled more intuitively, as discussed earlier, when many users saw the link to the feedback repository on GitHub, they initially ignored it, and spent significant amounts of time searching through the homepage and navigation footer for a more obvious customer service page. When they did click on the GitHub link (which some of them needed to be directly told to do), some of our participants were downright shocked that it was the only way to ask for help with using the site. Additionally, one user said that he would generally not even want to use customer support unless it had the option for a live chat. Overall, we found that the site's customer service lacks both helpful content and intuitive labelling.

Recommendations

Retitle the external “Answers” link and add it on the main navigation bar.

Between the rather unintuitive name and the obscure location, we have demonstrated the Answers forums to be quite difficult for inexperienced users to find. We strongly recommend that a link to the forums be added to the main navigation bar, either under ‘Community’ or as its own category, and that all external links to them be relabeled to something more obvious like ‘Forums’ or ‘Answers Forums’ (although the ‘Answers’ name could be kept within the section itself).

Improve content of the Answers forums.

When looking through the Answers forums with one of our users, he found that there were quite a few blatant spam posts with suspicious links. We recommend that IBM employ better moderation to make sure these posts are quickly deleted, or, is possible, implement some type of spam filter to do so automatically (although it may be difficult to make sure that it does not have any false positives, particularly considering some of the most common words in spam titles such as ‘download’ might be used in actual questions as well).

Additionally, the same user wanted to test how well Answers forum posts would show up in external Google searches. He tried searching for specific topics and was unable to find the posts he had been looking for. Because in much of our previous research we have found that most developers tend to prefer to locate content through using Google rather than by navigating within sites, we believe that improving search engine optimization on the Answers forum such that relevant posts show up earlier in results would make the site more helpful for developers.

Make sure every sub-page has an obvious link back to the Developer homepage.

There is currently no direct link back to the Developer homepage on the Answers forums, only a link to the IBM homepage and links to certain subpages such as feedback and terms of use. While it is possible for users to get back to the Developer site indirectly using these links, navigation could be made cleaner by adding a direct link back to it on the Answers navigation bar.

Additionally, clicking on some links such as ‘IBM Coder Program’ redirects the user to a login page and gets them stuck in a redirect loop if they attempt to go back through conventional means. While we realize this may not be possible or practical to implement, it would be helpful if the login page could be changed so that pressing the

'back' button will not get the user stuck in a loop.

Add more functionality to the site search and filter/sort options.

As discussed earlier, we found that the in-site search function was not very effective in helping users locate the content they were looking for. At the very least, we recommend fixing the sort function so that it does not automatically switch to sorting by 'least relevant' after it has been set to 'most relevant'. Adding the option to filter the results by topics would also help users find the content they are looking for more quickly. Costlier, more in-depth changes we would recommend would be to overhaul the site search so that users can use Boolean search operators and it returns more relevant results, including general pages such as 'Events' and 'Answers'.

Additionally, as we have mentioned in previous reports, the blog section has no option to filter blogs by topic. The only way for users to locate specific blog content is to either browse through the currently 20 pages of posts or to use the general site search. We recommend adding a topic filter in the blog section and adding a 'Blog post' option under the 'Content types' filter. We also recommend adding a similar sorting feature to the Events page. It currently lets users sort by topic and type of event, but there is no way to sort by location, which many of our users felt was the most important criteria. Adding an option for users to choose a location and sort by proximity to it would make it much easier for users to find events and likely increase event attendance.

Rename the 'Feedback' page and add more customer support options.

Finally, in our testing, we had found that users have trouble finding the site feedback repository, and may not always be satisfied with this method of contact. At the very least, we recommend rewording the 'Site Feedback & FAQ' page to something like 'FAQ & Contact Us' and using a different wording on the link to the repository such as 'contact us in our GitHub repository' so that users will understand that it is how they can get help from customer support. However, if possible, we also recommend adding a form within the Developer site for users to submit feedback and questions, a phone number for a support line, and/or a live chat.

Discussion

While it has been immensely helpful to observe people using IBM Developer in real time and ask them specific questions about their experiences, our study did have some limitations, the greatest of which would be our sample size. If we had been able to test with more users, our results would have been more meaningful. The tasks we used in our tests were also not particularly exhaustive of the site, and there were many features that we left untested as we were unsure how to best incorporate them. A more effective study could give users a longer amount of time to perform more complex tasks to make sure that the site is tested to a fuller extent.

Conclusion

For our latest step in analyzing the IBM Developer website, we have performed user testing to observe how users interact with the site, what they find useful, and what difficulties they have. We found that while users are largely satisfied with the content itself, many of them find certain content labels to be confusing and have trouble with overall site navigation. In order to improve the usability of the site, we recommend adding a link to the Answers section to the main navigation bar and renaming it to 'Forums' or something similar, as well as moderating the forums to cut down on the amount of spam posts, improving the site search so that users can find content more efficiently, and making it easier for users to get in contact with customer support.

Appendices

Usability Test Consent Form

Consent & Recording Release Form

I agree to participate in the study conducted and recorded by Team C2W2.

I understand and consent to the use and release of the recording by Team C2W2. I understand that the information and recording for research purposes only and that my name and image will not be used for any other purpose. I relinquish any rights to the recording and understand the recording may be copied and used by Team C2W2 without further permission.

I understand that participation in this usability study is voluntary and I agree to immediately raise any concerns or areas of discomfort during the session with the study administrator.

Please sign below to indicate that you have read and you understand the information on this form and that any questions you might have about the session have been answered.

Date: _____

Please print your name: _____

Please sign your name: _____

Thank you!

We appreciate your participation.

Pre-test and Post-test Questionnaire

Pre-test Questionnaire:

- How frequently do you work with code?
- When you encounter a problem while coding, what are your go-to methods for finding solutions?
- Do you ever visit developer-oriented sites such as Stack Overflow, Microsoft Developer, or the GitHub forums?
 - If so, how frequently do you visit these sites?
- Have you ever used the IBM Developer site before?
 - If so, how much have you used it?

Post-test Questionnaire:

- What is your official job role?
 - How would you describe your typical job duties (or day-to-day academic activities if you are a student)?
- How did you feel about your experience using IBM Developer (Scale from 1 - 5, 1 = bad and 5 = great)?
- What did you like about IBM Developer, or find easy to access or use?
- What did you dislike about IBM Developer, or have difficulty accessing or using?
- Would you want to use IBM Developer in the future? Why or why not?

Task Information

Task 1: Find Q-and-A forums, then navigate back out of them

Script: For the first task, imagine you're working on a programming project that uses an IBM product. You've run into a problem and want to look online to see if other people have had similar issues and how they solved them, so you go to the IBM Developer website. Your task is to find the Q-and-A forums (without searching Google) from the Developer homepage, and click through a few posts once you're in the forums. Then, once you've done that, you have to navigate back to the IBM Developer homepage, but without pressing the 'back' button (pretend you've spent almost an hour reading posts and it's too far back in your browsing history).

Sub-Tasks:

- Starts on IBM Developer homepage
- Click on 'Answers'
- Click on a forum post
- Find a way back to Developer homepage (easiest way would be clicking on one of the links at the bottom that leads to a sub-page of Developer site and then clicking on Developer link from there)

Task Success Criteria:

- Found 'Answers' page from IBM Developer homepage without doing an external Web search
- Clicked into a forum post
- Was able to get back to the IBM Developer homepage without pressing the 'back' button, modifying the URL, or doing a Web search

Task 2: Find event information

Script: You want to join a developer community near you. You decide to try to find an event or information about meetups in a nearby city. You're interested in a specific topic (of your choice), so look for events related to that. Try to look for events in or near a particular city (of your choice) as well. Finally, go back to the IBM Developer homepage (again without pressing 'back' or using Google).

Sub-Tasks:

- Starts on IBM Developer homepage
- Search for/or click event in the navigation bar
- Use filter to narrow down the results
- Choose one event you want to attend

- View event website
- Back to the IBM Developer website

Task Success Criteria:

- Navigated to the 'Events' page
- Was able to use filter to narrow down events to a specific topic or interest
- Clicked on an event
- Viewed event details or went to separate event website (if applicable)
- Navigated back to IBM Developer homepage without pressing 'back' or doing a Web search

Task 3: Find a tutorial and/or sample code on a specific topic

Script: You are in the middle of an important project, You get stuck for a while and decide to see if you can find any tutorials or sample code on IBM Developer.

Sub-Tasks:

- Starts on IBM Developer homepage
- Find content related to an interesting topic(either search for or find specific topic)
- Find the sample code
- Navigate back to IBM Developer homepage

Task Success Criteria:

- Found content (best methods will be either using search function or looking under 'Topics' menu)
- Got the right sample code
- Navigated back to the IBM Developer website homepage

Task 4: Look up FAQs and try to get in contact with customer service

Script: You have been using the IBM Developer site for a while but have been unable to find the content you are looking for. You decide to look up the FAQ page to see if it has any sort of site map or anything else to help you locate a specific piece of content. If you can't find it, you decide to get in contact with customer service to ask them about it.

Sub-Tasks:

- Starts out on IBM Developer homepage
- Navigate to 'FAQ and feedback' page
- Find a site map or similar feature
- Find a way to contact IBM Developer customer service

Task Success Criteria:

- Successfully found FAQ/feedback page

- Looked for site map and realized that it does not exist
- Looked for customer service contact info and realized it does not exist

Data logging Form

Decide what to call:

S = Success (finish task)

F = Fail (unfinished task)

E = Error (click wrong button in the process, etc)

C = Comment (comment from participant)

(PC) Positive comment

(NC) Negative comment

FE = Facial Expression (participant's expression during test)

! = Critical Incident (cannot finish task or cannot find something)

? = Question (ask tester question about tasks)

H = Help (Tester help participant, like point out right button, etc)

Pre-test questionnaire:

Questions	Answers	notes
frequency		
Go to methods		
StackOverflow/Microsoft developer		
The frequency of using websites		
Ever used IBM before		
Frequency of IBM		

Post-test questionnaire:

Questions	Answers	notes
Job Role		
Daily Work		
Your experience of using IBM Developer (scale 1-5)		
What did you like about IBM Developer		
What did you dislike about IBM Developer		

Goal 1: Find Q-and-A forums, then navigate back out of them

<p>Task 1: Find Q-and-A forums, then navigate back out of them</p> <p>Success:</p> <ul style="list-style-type: none"> - Found 'Answers' page from IBM Developer homepage without doing an external Web search - Clicked into a forum post - Was able to get back to the IBM Developer homepage without pressing the 'back' button, modifying the URL, or doing a Web search <p>Fail: Cannot finish all tasks.</p> <p>Did the participant success or fail? <input type="checkbox"/> Success <input type="checkbox"/> Fail</p>					
Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage					
Click on 'Answers'					
Find a way back to Developer homepage					
<p>Type annotation</p> <p>* S = Success F = Fail</p> <p>* E = Error FE = Facial Expression</p> <p>* C = Comment (PC) Positive comment (NC) Negative comment</p> <p>* ! = Critical Incident ? = Question H = Help</p>					

Goal 2: Find event information

Task 2: Find event information

Success:

- Navigated to the 'Events' page
- Was able to use the filter to narrow down events to a specific topic or interest
- Clicked on an event
- Viewed event details or went to separate event website (if applicable)
- Navigated back to IBM Developer homepage without pressing 'back' or doing a Web search

Fail: Cannot finish all tasks.

Did the participant success or fail?

☐ Success ☐ Fail

Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage					
Search for/or click event in the navigation bar					
Use filter to narrow down the results					
Choose one event you					

want to attend					
View event website					
Back to the IBM Developer website					
Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					

Goal 3: Find a tutorial and/or sample code on a specific topic

<p>Task 3: Find a tutorial and/or sample code on a specific topic</p> <p>Success:</p> <ul style="list-style-type: none"> - Found content (best methods will be either using the search function or looking under 'Topics' menu) - Got the right sample code - Navigated back to the IBM Developer website homepage <p>Fail: Cannot finish all tasks.</p> <p>Did the participant successful or fail? <input type="checkbox"/> Success <input type="checkbox"/> Fail</p>					
Tasks	Time	Type	Notes	Screen	Success or Fail

Starts on IBM Developer homepage					
Find content related to an interesting topic(either search for or find specific topic)					
Find the sample code					
Navigate back to IBM Developer homepage					
Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					

Goal 4: Look up FAQs and try to get in contact with customer service

<p>Task 4: Look up FAQs and try to get in contact with customer service</p> <p>Success:</p> <ul style="list-style-type: none"> - Successfully found FAQ/feedback page - Looked for site map and realized that it does not exist - Looked for customer service contact info and realized it does not exist <p>Fail: Cannot finish all tasks.</p>

Did the participant successful or fail? <input type="checkbox"/> Success <input type="checkbox"/> Fail					
Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage					
Navigate to 'FAQ and feedback' page					
Find a site map or similar feature					
Find a way to contact IBM Developer customer service					
Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					

Usability Tests Data
1 participant

Pre-test questions:

Questions	Answers	notes
frequency	Everyday 40hours	immediately
Go to methods	google	
StackOverflow/Microsoft developer	GitHub/ StackOverflow	Think about a little
Frequency of using websites	Solve problems/ everyday	
Ever used IBM before	never	
Frequency of IBM		

Post-test questions:

Questions	Answers	notes
Job Role	Research data science	
Daily Work	Read papers, figure out through python	
Your experience of using IBM Developer (scale 1-5) Bad great	Design is not good 2	
What did you like about IBM Developer	Design style: color, layout	Think about a little bit
What did you dislike about	Not easy to find the forum	Will not use in the future

IBM Developer	Do not know where to find features based on tasks. Functions are not easy to understand.	
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Goal 1: Find Q-and-A forums, then navigate back out of them

Task 1: Find Q-and-A forums, then navigate back out of them Success: <ul style="list-style-type: none"> - Found 'Answers' page from IBM Developer homepage without doing an external Web search - Clicked into a forum post - Was able to get back to the IBM Developer homepage without pressing the 'back' button, modifying the URL, or doing a Web search Fail: Cannot finish all tasks. Did the participant success or fail? [] Success [X] Fail					
Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage	"2	FE	confused	homepage	s
Click on 'Answers'	"60	FE	Find the wrong place first Confused/not find them Search where	footer	f
Find a way back to Developer homepage	"120	FE NC Not good design	Very focus Ask questions about answer	Answer page IBM website ANSWER PAGE	f

			<p>page to figure out what's the content. Ask why he should scroll down to find some interesting answer. It seems that the page Go back to ibm website not the developer website. Click wrong button about answer</p>		
<p>Type annotation</p> <p>* S = Success F = Fail</p> <p>* E = Error FE = Facial Expression</p> <p>* C = Comment (PC) Positive comment (NC) Negative comment</p> <p>* ! = Critical Incident ? = Question H = Help</p>					

Goal 2: Find event information

Task 2: Find event information

Success:

- Navigated to the 'Events' page
- Was able to use filter to narrow down events to a specific topic or interest
- Clicked on an event
- Viewed event details or went to separate event website (if applicable)
- Navigated back to IBM Developer homepage without pressing 'back' or doing a Web search

Fail: Cannot finish all tasks.

Did the participant success or fail? <input type="checkbox"/> Success <input checked="" type="checkbox"/> Fail					
Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage	"2		good	home	s
Search for/or click event in the navigation bar	"60	FE ?	Curious, and try to find some interests event Cannot come back to the homepage when in the logging page Question about no place to remember the content community	To the login in page	f
Use filter to narrow down the results	'30	?	Don't want to use filter	Event	s
Choose one event you want to attend	'10	FE	Look careful each event	Event	s

View event website	10	FE		Event	s
Back to the IBM Developer website	'2		successfull	Home	s
Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					

Goal 3: Find a tutorial and/or sample code on a specific topic

Task 3: Find a tutorial and/or sample code on a specific topic Success: <ul style="list-style-type: none"> - Found content (best methods will be either using the search function or looking under 'Topics' menu) - Got the right sample code - Navigated back to the IBM Developer website homepage Fail: Cannot finish all tasks. Did the participant successful or fail? [] Success [X] Fail					
Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage	"20			Home	s

Find content related to an interesting topic(either search for or find specific topic)	'30	?	Find interesting article without code, and tutorial	Article page	f
Find the sample code	'15	?	Didn't find desired code	Article page	f
Navigate back to IBM Developer homepage	'3		Think it's useful	Home	s
Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					

Goal 4: Look up FAQs and try to get in contact with customer service

<p>Task 4: Look up FAQs and try to get in contact with customer service</p> <p>Success:</p> <ul style="list-style-type: none"> - Successfully found FAQ/feedback page - Looked for site map and realized that it does not exist - Looked for customer service contact info and realized it does not exist <p>Fail: Cannot finish all tasks.</p> <p>Did the participant successful or fail? [] Success [X] Fail</p>					
Tasks	Time	Type	Notes	Screen	Success or Fail

Starts on IBM Developer homepage	"3			Customer page	s
Navigate to 'FAQ and feedback' page	'6	FE	good	customer	s
Find a site map or similar feature		?	Ask where is the site map, search for the site map.	homepage	f
Find a way to contact IBM Developer customer service		?	Search for customer service, and think it about contact us and tried to find	Costomer page	f
Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					

#2 participant

Pre-test questions:

Questions	Answers	notes
frequency	5 hours per day.30 hours per week	
Go to methods	StackOverflow, GitHub	

StackOverflow/Microsoft developer	StackOverflow, GitHub	
Frequency of using websites	2,3 hours per week	
Ever used IBM before	no	
Frequency of IBM		

Post-test questions:

Questions	Answers	notes
Job Role	Nlp related health	
Daily Work	Create models with data	
Your experience of using IBM Developer (scale 1-5)	1-2	
What did you like about IBM Developer	Interface looks good	
What did you dislike about IBM Developer	Didn't find the right answer, for code. Wish to have more code, not the established article. StackOverflow works for programmers. Functionality is bad.	Will not use in the future, at least not for now

Goal 1: Find Q-and-A forums, then navigate back out of them

Task 1: Find Q-and-A forums, then navigate back out of them

Success:

- Found 'Answers' page from IBM Developer homepage without doing an external Web search
- Clicked into a forum post
- Was able to get back to the IBM Developer homepage without pressing the 'back' button, modifying the URL, or doing a Web search

Fail: Cannot finish all tasks.

Did the participant success or fail? [] Success [X] Fail					
Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage	"2	?	Very confidence Ask question	homepage	s
Click on 'Answers'	'60	?	Click search button Then use navigational bar to find an interesting thing. Look through to find interesting topic, and search for nlp	Article page	f
Find a way back to Developer homepage	'2		Use left slide to go back homepage	homepage	s
Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					

Goal 2: Find event information

Task 2: Find event information Success: <ul style="list-style-type: none"> - Navigated to the 'Events' page - Was able to use filter to narrow down events to a specific topic or interest - Clicked on an event
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- Viewed event details or went to separate event website (if applicable)
- Navigated back to IBM Developer homepage without pressing 'back' or doing a Web search

Fail: Cannot finish all tasks.

Did the participant success or fail?

[X] Success [] Fail

Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage	2'	?	Ask if on the homepage	Home	s
Search for/or click event in the navigation bar	'13	FE	Search for event	Home	s
Use filter to narrow down the results	'40	?	Ask how to filter to ann arbor and ask filter for location.	Event	s
Choose one event you want to attend	'10		Look through events	Event	s
View event website	'5		Find events	Event website	s
Back to the IBM Developer website	'1	FE	Use left slide to go to homepage	home	s

Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					

Goal 3: Find a tutorial and/or sample code on a specific topic

Task 3: Find a tutorial and/or sample code on a specific topic Success: <ul style="list-style-type: none"> - Found content (best methods will be either using the search function or looking under 'Topics' menu) - Got the right sample code - Navigated back to the IBM Developer website homepage Fail: Cannot finish all tasks. Did the participant successful or fail? [X] Success [] Fail					
Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage	'2			Home	s
Find content related to an interesting topic(either search for or find specific topic)	'13	?	Find solutions Search for entity recognition	Code pattern	s

Find the sample code	'15	?	No Not great answer	Article	s
Navigate back to IBM Developer homepage	'3		Use left slide to go to homepage	home	s
Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					

Goal 4: Look up FAQs and try to get in contact with customer service

Task 4: Look up FAQs and try to get in contact with customer service Success: <ul style="list-style-type: none"> - Successfully found FAQ/feedback page - Looked for site map and realized that it does not exist - Looked for customer service contact info and realized it does not exist - Fail: Cannot finish all tasks. Did the participant successful or fail? [] Success [X] Fail					
Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage	'2	FE	laugh	home	s
Navigate to 'FAQ and	60	? NC Hard to find	Use the navigational bar to find	Home Community	f

feedback' page			first. Scroll down to find them. Then search for customer service. Click the wrong link to the community. Ask if logging, it can post questions. Still figuring out where is the customer question.		
Find a site map or similar feature	'40	?	Confused about what is the site map.	Home FAQ	f
Find a way to contact IBM Developer customer service	'35	?	Read the article and try to find the contact, then jump to answers page. Didn't find contact info.	FAQ	f
Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					

#3 participant

Pre-test questions:

Questions	Answers	notes
frequency	All the time	His job
Go to methods	Google, StackOverflow, documentation website	
StackOverflow/Microsoft developer	Many time a day	
Frequency of using websites	Many time	
Ever used IBM before	no	
Frequency of IBM	0	

Post-test questions:

Questions	Answers	notes
Job Role	Software engineer	
Daily Work	Spend time writing code, team management	
Your experience of using IBM Developer (scale 1-5)	2	
What did you like about IBM Developer	A lot of tutorials	
What did you dislike about IBM Developer	Hard to get to the answer section. And the search result is not easy to find. No real answer for some questions.	

Goal 1: Find Q-and-A forums, then navigate back out of them

Task 1: Find Q-and-A forums, then navigate back out of them

Success:

- Found 'Answers' page from IBM Developer homepage without doing an external Web search
- Clicked into a forum post
- Was able to get back to the IBM Developer homepage without pressing the 'back' button, modifying the URL, or doing a Web search

Fail: Cannot finish all tasks.

Did the participant success or fail?

[X] Success [] Fail

Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage	13:41:13	s	Spend time and looking the form	Search bar	s
Click on 'Answers'	13:46:20 completed	c	Gave up and google the site	search result site	s
Find a way back to Developer homepage	13:49:15	s	"Felt easy"		s

Type annotation

* S = Success F = Fail

* E = Error FE = Facial Expression

* C = Comment (PC) Positive comment (NC) Negative comment

* ! = Critical Incident ? = Question H = Help

Goal 2: Find event information

Task 2: Find event information

Success:

- Navigated to the 'Events' page
- Was able to use filter to narrow down events to a specific topic or interest
- Clicked on an event

- Viewed event details or went to separate event website (if applicable)
- Navigated back to IBM Developer homepage without pressing 'back' or doing a Web search

Fail: Cannot finish all tasks.

Did the participant success or fail?

[X] Success [] Fail

Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage	13:50:01	FE	Spend time on the drop down menu of the Navigation bar	HOME PAGE	S
Search for/or click event in the navigation bar				event	S
Use filter to narrow down the results					S
Choose one event you want to attend					S
View event website					S
Back to the IBM Developer website					S

Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					

Goal 3: Find a tutorial and/or sample code on a specific topic

Task 3: Find a tutorial and/or sample code on a specific topic Success: <ul style="list-style-type: none"> - Found content (best methods will be either using the search function or looking under 'Topics' menu) - Got the right sample code - Navigated back to the IBM Developer website homepage Fail: Cannot finish all tasks. Did the participant successful or fail? [X] Success [] Fail					
Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage	13:54:49	s		homepage	s
Find content related to an interesting topic(either search for or find specific topic)	13:55:01	pc		tutorial	s

Find the sample code	13:55:29	pc	Searching a key word	Detail page	s
Navigate back to IBM Developer homepage	13:56:56	pc		Github page	s
Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					

Goal 4: Look up FAQs and try to get in contact with customer service

Task 4: Look up FAQs and try to get in contact with customer service Success: <ul style="list-style-type: none"> - Successfully found FAQ/feedback page - Looked for site map and realized that it does not exist - Looked for customer service contact info and realized it does not exist Fail: Cannot finish all tasks. Did the participant successful or fail? [X] Success [] Fail					
Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage	13:57:09	S		FAQ	S
Navigate to 'FAQ and	13:57:55	s		FAQ	s

feedback' page					
Find a site map or similar feature	13:59:58	nc	Change to another way but still fail	Noojs page	F (need hint)
Find a way to contact IBM Developer customer service	14:02:15	fe	Go to the github		s
Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					

4 participant

Pre-test questions:

Questions	Answers	notes
frequency	everyday	
Go to methods	It depends, but mostly stackoverflow	
StackOverflow/Microsoft developer	StackOverflow	
Frequency of using websites	Very often	
Ever used IBM before	no	
Frequency of IBM	no	

Post-test questions:

Questions	Answers	notes
Job Role	Software developer at Amazon	
Daily Work	Making code, solve question	
Your experience of using IBM Developer (scale 1-5)	2	
What did you like about IBM Developer	There are different topic	
What did you dislike about IBM Developer	No intuitive. The navigation bar should bring the information you are in	

Goal 1: Find Q-and-A forums, then navigate back out of them

<p>Task 1: Find Q-and-A forums, then navigate back out of them</p> <p>Success:</p> <ul style="list-style-type: none"> - Found 'Answers' page from IBM Developer homepage without doing an external Web search - Clicked into a forum post - Was able to get back to the IBM Developer homepage without pressing the 'back' button, modifying the URL, or doing a Web search <p>Fail: Cannot finish all tasks.</p> <p>Did the participant success or fail? <input checked="" type="checkbox"/> Success <input type="checkbox"/> Fail</p>					
Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage	14:50:42	E	Using search bar	Search result	S

Click on 'Answers'		E, NC	He thought he can get answer from tutorial section	Tutorial page	S
Find a way back to Developer homepage	14:55:10	S	He mainly focus on the navigation bar and finally notice the footer section	Community page and every sub section	S
Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					

Goal 2: Find event information

Task 2: Find event information Success: <ul style="list-style-type: none"> - Navigated to the 'Events' page - Was able to use filter to narrow down events to a specific topic or interest - Clicked on an event - Viewed event details or went to separate event website (if applicable) - Navigated back to IBM Developer homepage without pressing 'back' or doing a Web search Fail: Cannot finish all tasks. Did the participant success or fail? [X] Success [] Fail					
Tasks	Time	Type	Notes	Screen	Success or Fail

Starts on IBM Developer homepage	14:55:29			homepage	S
Search for/or click event in the navigation bar	14:56:11	S		EVENT	S
Use filter to narrow down the results	14:56:28	S		EVENT TYPE	S
Choose one event you want to attend	14:57:18	S		DETATIL PAGE	S
View event website	14:58:12	S		DETATIL PAGE	S
Back to the IBM Developer website	14:58:20	S	NO location, need a sort (by date?)	HOME PAGE	S
Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					

Goal 3: Find a tutorial and/or sample code on a specific topic

Task 3: Find a tutorial and/or sample code on a specific topic

Success:

- Found content (best methods will be either using the search function or looking under 'Topics' menu)
- Got the right sample code
- Navigated back to the IBM Developer website homepage

Fail: Cannot finish all tasks.

Did the participant successful or fail?

[] Success [X] Fail

Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage	14:58:26	S		HOME PAGE - TUTORIAL SECTION	S
Find content related to an interesting topic(either search for or find specific topic)	14:58:57	S, PC	Unit 7? Suppose to have a unit list?	TUTORIAL PAGE - detail page	S
Find the sample code	14:59:24	S	He always use google to search for the sample code.	Github detail page(need hint to pass the task)	S/F
Navigate back to IBM Developer homepage	15:00:43	s			s
Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment					

* ! = Critical Incident ? = Question H = Help

Goal 4: Look up FAQs and try to get in contact with customer service

Task 4: Look up FAQs and try to get in contact with customer service

Success:

- Successfully found FAQ/feedback page
- Looked for site map and realized that it does not exist
- Looked for customer service contact info and realized it does not exist

Fail: Cannot finish all tasks.

Did the participant successful or fail?

[] Success [X] Fail

Tasks	Time	Type	Notes	Screen	Success or Fail
Starts on IBM Developer homepage	15:03:05	s		homepage	S
Navigate to 'FAQ and feedback' page	15:03:37	E, NC	He expect those info should be included in the about page	FAQ	S
Find a site map or similar feature	15:04:53	E, FE, NC	Spend lots of time on finding the contact page; thought it was at navigation bar	About page	f

Find a way to contact IBM Developer customer service	15:11:10				S
Type annotation * S = Success F = Fail * E = Error FE = Facial Expression * C = Comment (PC) Positive comment (NC) Negative comment * ! = Critical Incident ? = Question H = Help					