MicroBrowser Pilot Study

# Introduction

Welcome to the MicroBrowser pilot study! Please make yourself as comfortable as possible, by adjusting your chair, etc., before we begin. Remember if you are uncomfortable or if you need anything at any time, I am here to assist you.

Today you will be using 2 online discussion systems (A and B) to perform a series of tasks. We are asking for your thoughts and opinions about each in order to improve both of their designs. During the tasks and then again at the end of the study, we will ask you a few questions about which of the two systems you preferred, and why. Your thoughts and ideas will help us redesign the existing systems to be more usable.

The experimenter will tell you which system you are going to use first, and provide you with tutorial instructions for both. You will read the tutorial instructions for whichever system you are going to use first, and then explore the user interface for a few minutes. After that, the experimenter will ask you to perform some experimental tasks with that system, fill out a questionnaire, and go thru the same steps for the second system.

During the experimental tasks, your interactions with the systems (mouse movements, mouse clicks and key presses) will be recorded. The experimenter will also sit beside you, taking notes on your important activities and recording any comments or issues you have. He may ask you to wait a moment as he makes notes about the user interface for the design team. If you agree explicitly, the experimenter will also take still images or video clips of your experiment session.

Remember, if something is difficult or confusing with either system, it is our problem to fix, and it is in no way a reflection of your abilities! Thanks in advance for your questions and comments.

# Online Discussion System - MicroBrowser

## Tutorial

The system provides a visualization of discussion threads for a computer class on Java. A discussion thread is composed of a question and zero or more answers for the question.

Navigation

* The system displays the discussion threads using two panes. The left pane displays the discussion threads in a two dimensional display while the right pane displays the same discussion threads in a list format. By placing the mouse either on a discussion thread node in the visualization display or an item from the list will locate the same item on the other pane.
* Double clicking on a node, either on the display or list area will open its detailed view.
* Connections between nodes represent relationships (Associations, similarities). For the case of similarities, you can limit the number of visible connections by using the Similarity Strength slider.
* The color of the nodes in the visualization corresponds to the number of visits to the node. This can help you with identifying discussion popularity.
* The size of the nodes in the visualization corresponds to the number of answers received.
* The shape of the nodes in the visualization indicates whether a question has been answered or not.
* Using your mouse, you can right click on the visualization to make all nodes appear within the displayed area. To zoom in, you can use the wheel on the mouse as well.

Search

* To filter discussions by keywords, use the search box on the upper right corner and enter the desired keywords. Only those discussions matching the keywords will be displayed in the visualization and the discussion listing.
* To filter discussions by timeline, select a Begin and End date on the bottom of the visualization to specify the desired time range. Only those discussions modified within the selected date range will be displayed.

Pattern Navigation

Patterns are reusable content that enable users to apply best practices and/or lessons learned to recurring problems. In the case of discussions, we can envision patterns in the approach to answers recurring questions that are similar in structure (but not necessarily content, which is addressed by similarity information). For example, if several users ask for questions about comparing two or more techniques or tools, we can envision a pattern of “Comparison” discussion questions. If we follow this approach, we can use this information to not only find discussions that are asking to compare between two or more concepts, but we can use this information to learn how to answers such type of questions. The MicroBrowser visualization is centered around the notion of patterns. If we look at how discussions are presented in the visualization area, we have a center node called Patterns. From this center node, we have a special type of child node called “No Patterns”. This special node contains all discussions that do not have any pattern associated to them yet. Then, we have other nodes for each different type of pattern currently present in the list of visible discussion threads. For each Pattern, we can see the list of associated discussions as well as any pattern to pattern relationship. You can double click on a pattern node to open its details.

Associate Pattern to Question

* Patterns are reusable techniques that can help users to find solutions to similar reoccurring problems.
* To associate a pattern to a discussion, open the details of the discussion and then click **Change Pattern** below the related discussions list. You can select a pattern from the list of available ones or create a new pattern.
* After selecting the pattern, click **Select**. The pattern will now be associated to the discussion.

Create Question

* To create a new question, from the menu bar select Create > New Question
* From the dialog, enter your question in the Question Title and the details in the Question Details section. Then click Ask Question.

Create Answer

* To create an answer, first open a discussion thread and then click Create Answer below the visualization display.
* From the dialog, enter your text and click Submit

## Experimental Tasks Set – MicroBrowser

**SCENARIO:** Training

**PRACTICE TASK 1:** Can you find a discussion that covers the topic of **unix**. Can you determine if the question has been answered?

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_

**Has it been answered?**  Yes No

**PRACTICE TASK 2**: A pattern not only allows you to find additional information about discussions but it also helps you discover new information such as examples of how a discussion has been answered. Can you locate a discussion that has been associated to a pattern? After you find the discussion, open the details of the pattern and locate another discussion that has been associated to the pattern.

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_

**Discussion associated to the same pattern:**\_\_\_\_\_\_\_\_\_\_\_\_\_

**SCENARIO:** Finding discussion based on topic searches

1. During the last class, the instructor discussed topics on Java testing frameworks, in particular the use of JUnit. Can you find one discussion related to the concept of **JUnit**?

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

1. Assume you are trying to come up with discussion points for your next class which covers the use of XML. Can you find two discussions related to the topic of **XML** that students have viewed the most?

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

1. As part of a homework assignment, the instructor has asked you to provide an answer to a question about the topic **networking**. To learn more about the topic, you decide to read similar questions. To complete this task, first find an unanswered question about the topic **networking** and then find two related questions.

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

**SCENARIO:** Finding time based information

1. Supposed you had a personal emergency that prevented you from attending class during the first week of the year and now you want to know what topics were covered when you were out. Can you find activity that occurred between **Monday September 22nd** and **Friday September 26th, 2014**? (Pick any 2 discussions you identify)

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely are you to have performed this task in a classroom setting?**

Very unlikely Unlikely Neutral Likely Very likely

1. During the month of **July 2014**, the instructor covered Java networking and the use of **sockets** for writing Internet applications. The instructor suggested reviewing discussions about this topic. Can you find some questions related to using **sockets** during the month of July 2014? (Pick any 2 discussions you identify)

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

1. (NOTE: To complete this task you might need to change the dates) Suppose you have been given an assignment to help answering classmates’ questions. To prepare for this assignment, you decide to find the most recent question which does not currently have an **accepted** answer. Can you find it?

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

**SCENARIO:** Using patterns to improve the quality of answers

1. Suppose the instructor asked you to collaborate with your classmates by answering questions posted by each other requesting recommendations or advice. To gain experience for how to complete the assignment, you decide to find some examples where the questions have been answered by providing either advice or recommendations. Can you find two examples?

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

1. Browsing discussions about Regular Expressions (keyword: **regex**), you believe discussion **Using Regex to generate Strings rather than match them** might helpful for students looking for examples of discussions that provide references. Can you find the discussion and improve it so that it can be useful for other students looking for examples on answering questions using external references? (hint: how can you make it easier for other students looking for these type of examples to find them)

**ANSWER (What did you do)**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**Rating**:

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

1. Can you find an unanswered question about creating a “**welcome page** in **struts”** and submit an answer for it: **To create a welcome page, I recommend you to define a Welcome File List and then redirect to the default action**. After submitting the answer, can you think of a way to allow other students to re-use how you presented your answer to the question?

**ANSWER (What did you do)**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

**SCENARIO:** Using Pattern information to perform knowledge discovery

1. Suppose you are trying to reply to a question posted by a student by giving a reference to a tool you are familiar with but you are not sure how best to state your answer. To give you some guidance, can you find two examples of how other students have answered question by referencing other tools as part of their answer.

**ANSWER (What did you do)**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

1. The instructor has given you an assignment to perform a comparison between two components. The instructor suggested referring to question **Differences between Hashmap and Hashtable (keyword: hashmap)** as an example of how you could complete the assignment but recommended you should look at other examples as well. Can you find another sample question which compares between two or more components?

**ANSWER (What did you do)**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

1. Your homework for this week is to answer a question from the list of unanswered ones. However, you are afraid of wording your answer incorrectly. Can you find two examples for recommended ways to structure your answers?

**ANSWER (What did you do)**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

# Online Discussion System – MicroProbe – Question2Answer

## Tutorial

The system presents a web based interface for navigating discussion threads. A discussion thread is composed of a question and zero or more answers for the question.

Navigation

* The web interface is divided into tabs which present different set of questions or elements associated to the questions.
* The interface is organized into Tabs which contain sub information. There are four main tabs: Questions, Unanswered, Tags and Ask a Question.
* The Questions tab shows all questions sorted by most recent. You can also change the sorting order by selecting the other sub tabs such as “Hot!”, “Most votes”, “Most answers”, and “Most views”
* The Unanswered tab defaults to all question that have not received any answers. You can also show questions that do not have an accepted answer.

Search

* To filter discussions by keywords, use the search box on the upper right corner and enter the desired keywords. Only those discussions matching the keywords will be displayed in the discussion listing.

Create Question

* To create an answer, click on the **Ask a Question** tab, and then enter your question in the title field and any additional information in the more information section.
* To submit your question, click the **Ask a Question** button.

Create Answer

* To create an answer, first find the question you want to answer and click on its title to open its details.
* From the right side below the question details section, click the **answer** linkj
* An editor will appear below the question. Type in your answer and click **Add answer**

## Experimental Tasks Set – MicroProbe

**SCENARIO:** Finding discussion based on topic searches

1. During the last class, the instructor discussed topics on Java scripting frameworks, in particular the use of Groovy. Can you find one discussion related to the concept of **Groovy**?

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

1. Assume you are trying to come up with discussion points for your next class which covers the use of Android programming. Can you find two discussions related to the topic of **Android** that students have viewed the most?

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

1. As part of a homework assignment, the instructor has asked you to provide an answer to a question about the topic **code coverage**. To learn more about the topic, you decide to read similar questions. To complete this task, first find an unanswered question about the topic **code coverage** and then find two related questions.

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

**SCENARIO:** Finding time based information

1. Supposed you had a personal emergency that prevented you from attending class during the first week of the year and now you want to know what topics were covered when you were out. Can you find activity that occurred between **August 20th 2008** and **August 25th 2008**? (Pick any 2 discussions you identify)

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

1. During the month of **August 2008**, the instructor covered the benefits of using a **template** for consistency and speed when writing Java Swing applications. The instructor suggested reviewing discussions about this topic. Can you find some questions related to using templates during the month of August 2008? (Pick any 2 discussions you identify)

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

1. Suppose you have been given an assignment to help answering classmates’ questions. To prepare for this assignment, you decide to find the most recent question which do not currently have an **accepted** answer. Can you find it?

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

**SCENARIO:** Using Pattern information to perform knowledge discovery

1. Suppose the instructor asked you to collaborate with your classmates by answering questions posted by each other requesting recommendations or advice. To gain experience for how to complete the assignment, you decide to find some examples where the questions have been answered by referencing other tools as part of their answer. Can you find two examples?

**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

1. Browsing discussions about Java testing frameworks, you believe discussion **Junit vs TestNG** might helpful for students looking for examples of discussions that provide a comparison between two applications. Can you find the discussion and improve it so that it can be useful for other students looking for examples on answering questions using external references? (hint: how can you make it easier for other students looking for these type of examples to find it)

**ANSWER (What did you do)**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

1. Suppose you have been asked to answer a question from the list of unanswered ones. However, you are afraid of wording your answer incorrectly. Can you find two examples for recommended ways to structure your answers?

**ANSWER (What did you do)**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

**SCENARIO:** Using patterns to improve the quality of answers

1. Suppose the instructor noted you are an expert on writing SQL applications and has asked you to answer questions where users ask for recommendations or advice. To gain experience for how to state your answers, you decide to find some examples, even if not related to SQL, where the questions have been answered by providing recommendations. Can you find two examples?

**ANSWER (What did you do)**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**ANSWER (Discussion ID)**: \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

1. Browsing discussions about Java AOP (keyword: **Java AOP**), you believe discussion **Where can I find a good tutorial about Java AOP that is proxy based?** to be very helpful for other students looking for examples of discussions that provide references. Can you find the discussion and improve it so that it can be useful for other students looking for examples on answering questions using external references? (hint: how can you make it easier for others looking for these type of examples to find it)

**ANSWER (What did you do)**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How difficult was to complete the task using the application?**

Very difficult Difficult Neutral Easy Very easy

**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely

1. Find the discussion **Java File IO Compendium** and submit the following answer for it: **From a previous project I worked on, I found that the following tutorial provides a good example of file manipulation using Java: http://docs.oracle.com/javase/tutorial/essential/io**. Can you think of a way to allow other users to re-use how you presented your answer to the question?

**ANSWER (What did you do)**: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

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**How difficult was to complete the task using the application?**

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**How likely is that an instructor would have asked you to complete a similar task?**

Very unlikely Unlikely Neutral Likely Very likely