

Wesley Cox - coxw2  
Grant Hughes - gyhughes  
Joe Santino - jsantino

## **Customer Meeting Report**

### **Customer Feedback**

The other group raised many good concerns that we will need to address for our project. One edge case is when the user creates an index for an empty array. In this example, we would raise a warning if the user does not check if this array is nonempty. Another example is when a user reassigns an array, what would happen to the index. Because index types are dynamic, the loop invariant reassigns the type of the index, allowing the index to be used even though the array changes. One feature that the other group was concerned about was our plugin automatically assigning a type to an integer if it is used as an index to an array. In this case, we would raise warnings at array accesses even though the user did not annotate the integer being used in the access. They feared that because of this, the user would have to either change their safe code by adding unneeded checks, or to suppress the warnings wherever they arise. This was a valid concern but we explained that other existing plugins, specifically the nullness checker, worked in this exact same way.

### **Our Feedback**

When we met the other group we raised a couple things we were concerned about and gave a couple suggestions for things they could try. One thing we were interested in was the possibility of false positives, that the first solution could be wrong or just not the best solution available. They said that they could possibly include comparing multiple solutions side by side to compare. Also we raised issues of possibly finding answers in the wrong language. Since the search is based on keywords it's possible someone could ask for a version of an existing algorithm in say java to be implemented in another language. This could cause code written in the other language to be returned for java. We also raised that Bing now returns verified code snippets for some very specific and limited algorithms, and were curious if they could utilize this in their solution to providing code snippets.