Try Codex Yourself!

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Codex

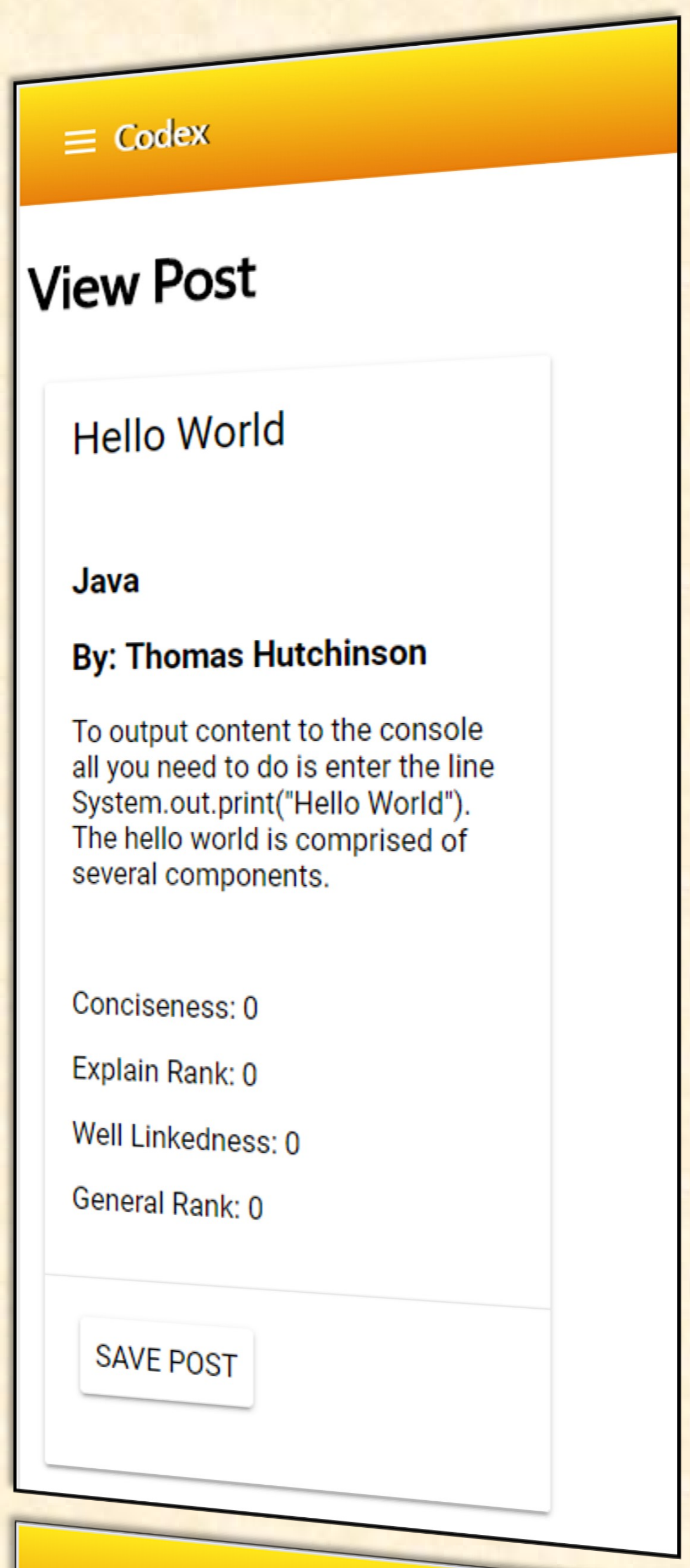
A Syntax and Semantic Learning Tool

Background

Modern developers have a wide range of tools to choose from to help them code in their chosen language. However, many of these tools simply focus on giving examples and while that can be helpful it can also hinder. Examples are useful when solving problems to a specific deadline, but do they really improve the developers programming skills?

Method

To test this hypothesis an application was made following a waterfall development model. The application was developed using a combination of the Google Polymer framework and Google's backend service, Firebase. Each module of the app was constructed one by one and then added to the production build. Then to evaluate the original hypothesis the application was given to users *(Full-Time Students)* to test. From this point a audience survey was carried out and several focus groups. This was all done in effort to gauge how well a site focusing on theory can improve the users development skills



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View Post

Hello World

Java

By: Thomas Hutchinson

To output content to the console all you need to do is enter the line System.out.print("Hello World"). The hello world is comprised of several components.

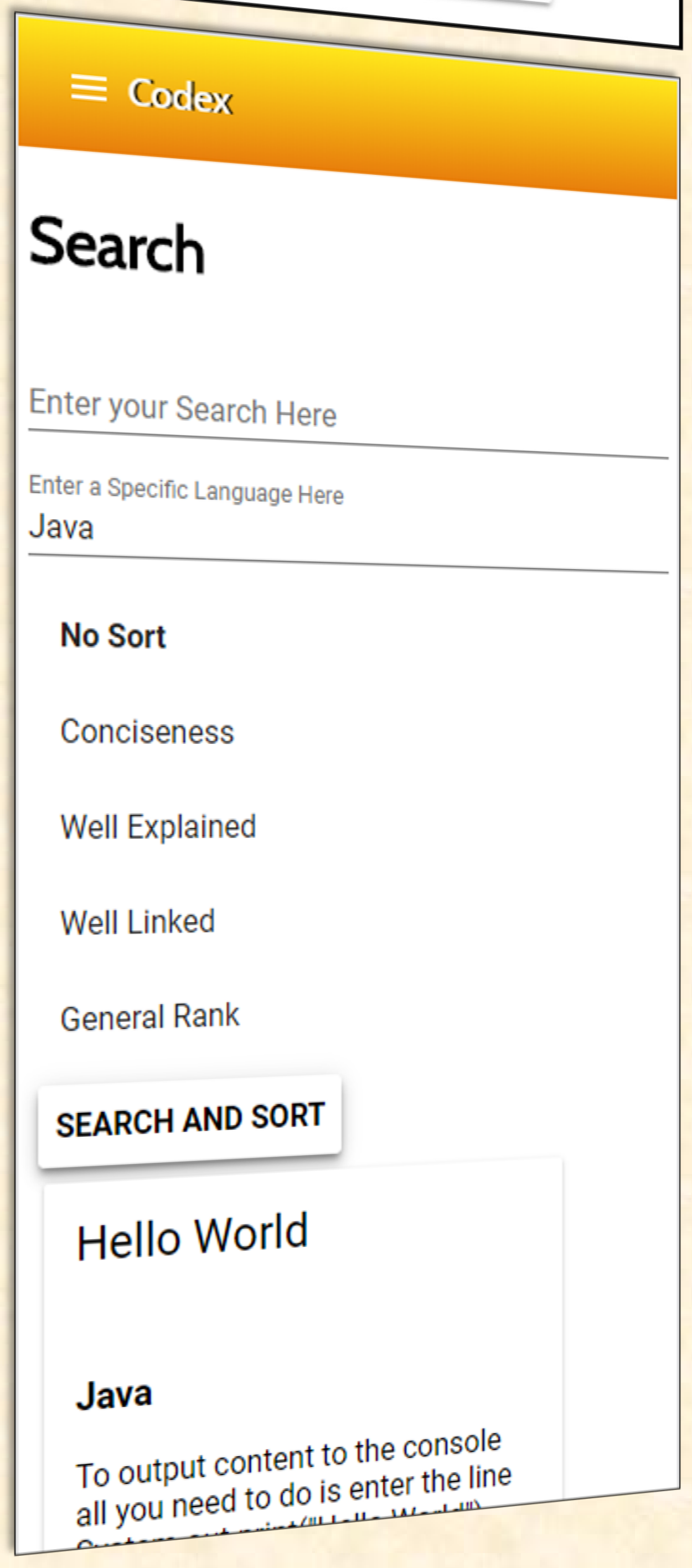
Conciseness: 0

Explain Rank: 0

Well Linkedness: 0

General Rank: 0

SAVE POST



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Search

Enter your Search Here

Enter a Specific Language Here
Java

No Sort

Conciseness

Well Explained

Well Linked

General Rank

SEARCH AND SORT

Hello World

Java

To output content to the console all you need to do is enter the line

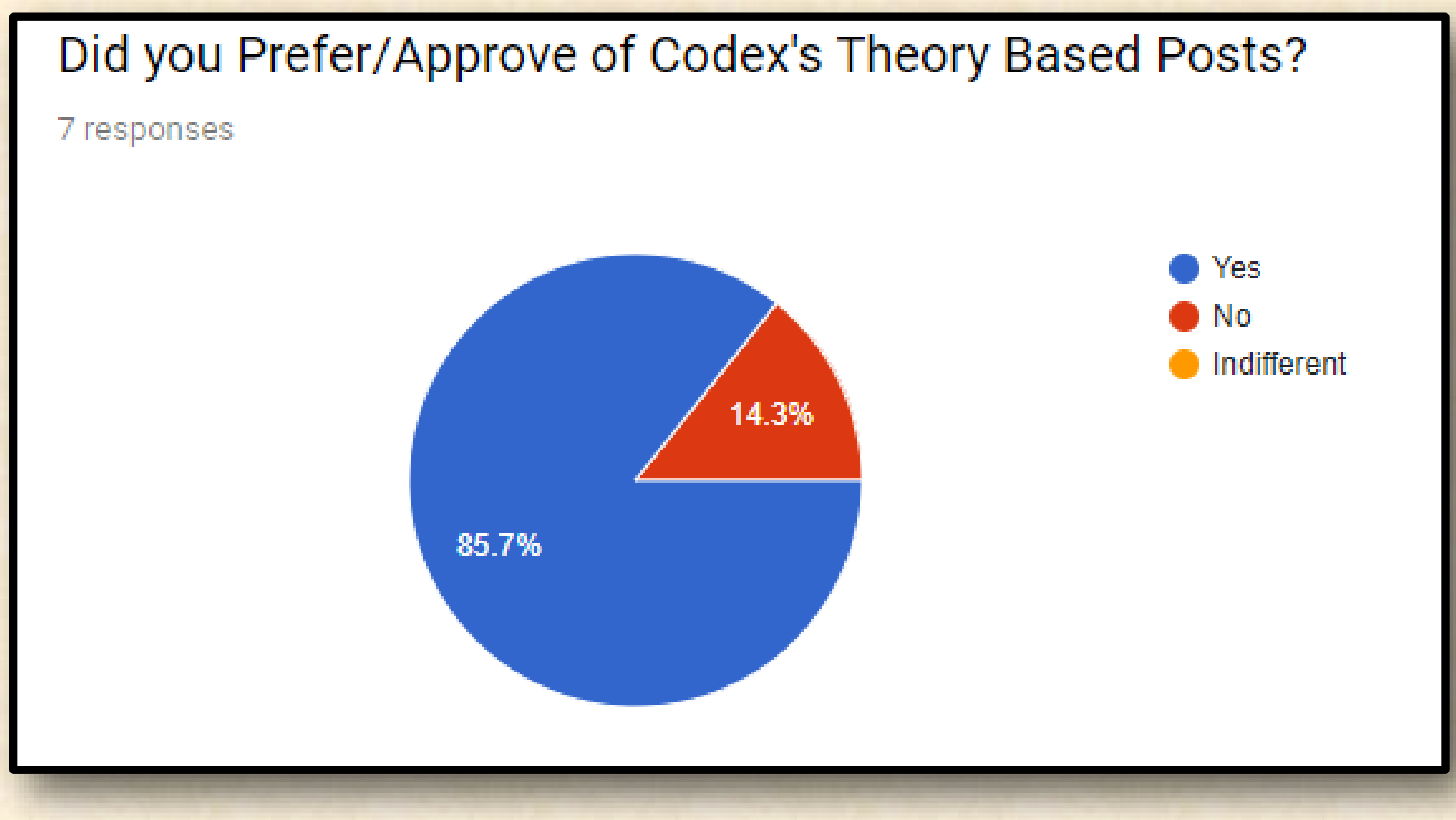
Hypothesis

It is strongly believed that developers who excel in their understanding of the semantics behind a programming or scripting language generally implement more sound solutions. They have a greater understanding of the inner workings of specific syntaxes which allows them to mindfully implement solutions with minimal negative side effects. With that in mind, how could this theory be applied to a real world Syntax and Semantic Learning Tool? Then how much more effective would that tool be at improving the general skills of developers?

System Features

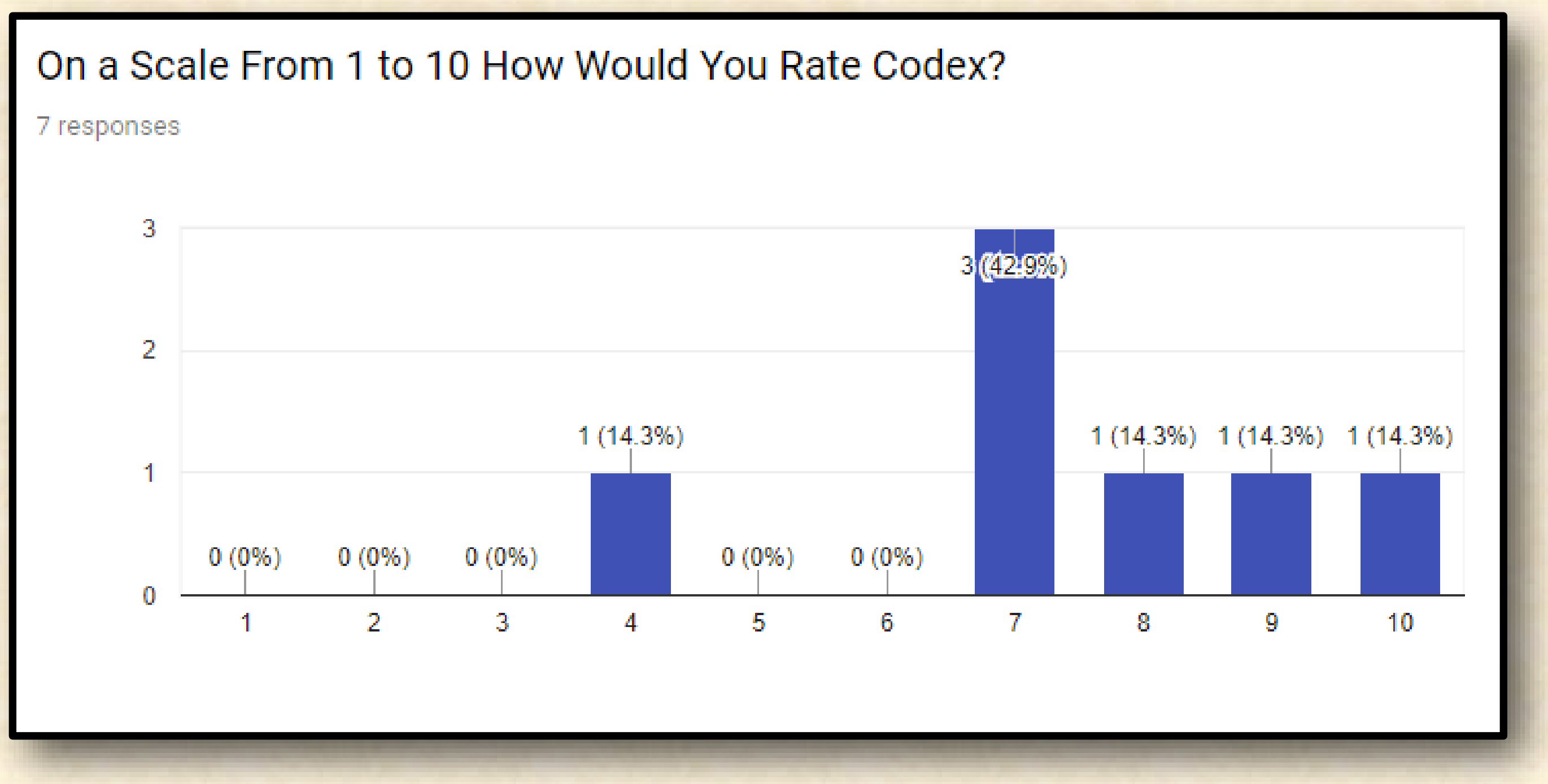
- Google Authentication
- Detailed Post Attribute System
  - Each post is given a series of attributes and users can then vote on how well a post embodies that attribute
- Side-Wide Search Engine
  - Using the aforementioned post attributes users can then sort through results looking for the attribute best enables them to learn
- Post Tagging System
  - Users are able to search for related posts right from the post creation suite and then link posts together to give learners a trail of related information.

The Results and Conclusion


Did you Prefer/Approve of Codex's Theory Based Posts?

7 responses

The pedagogy of programming and scripting languages is incredibly complex much like any other area of teaching. On top of that the inner workings of the various currently available learning tools is extremely complex. For Codex to succeed as a learning tool it has to over come a great deal of hurdles. According to the final user survey and focus groups users would only be interested in the application if it had a healthy user-base of people creating new content.


On a Scale From 1 to 10 How Would You Rate Codex?

7 responses

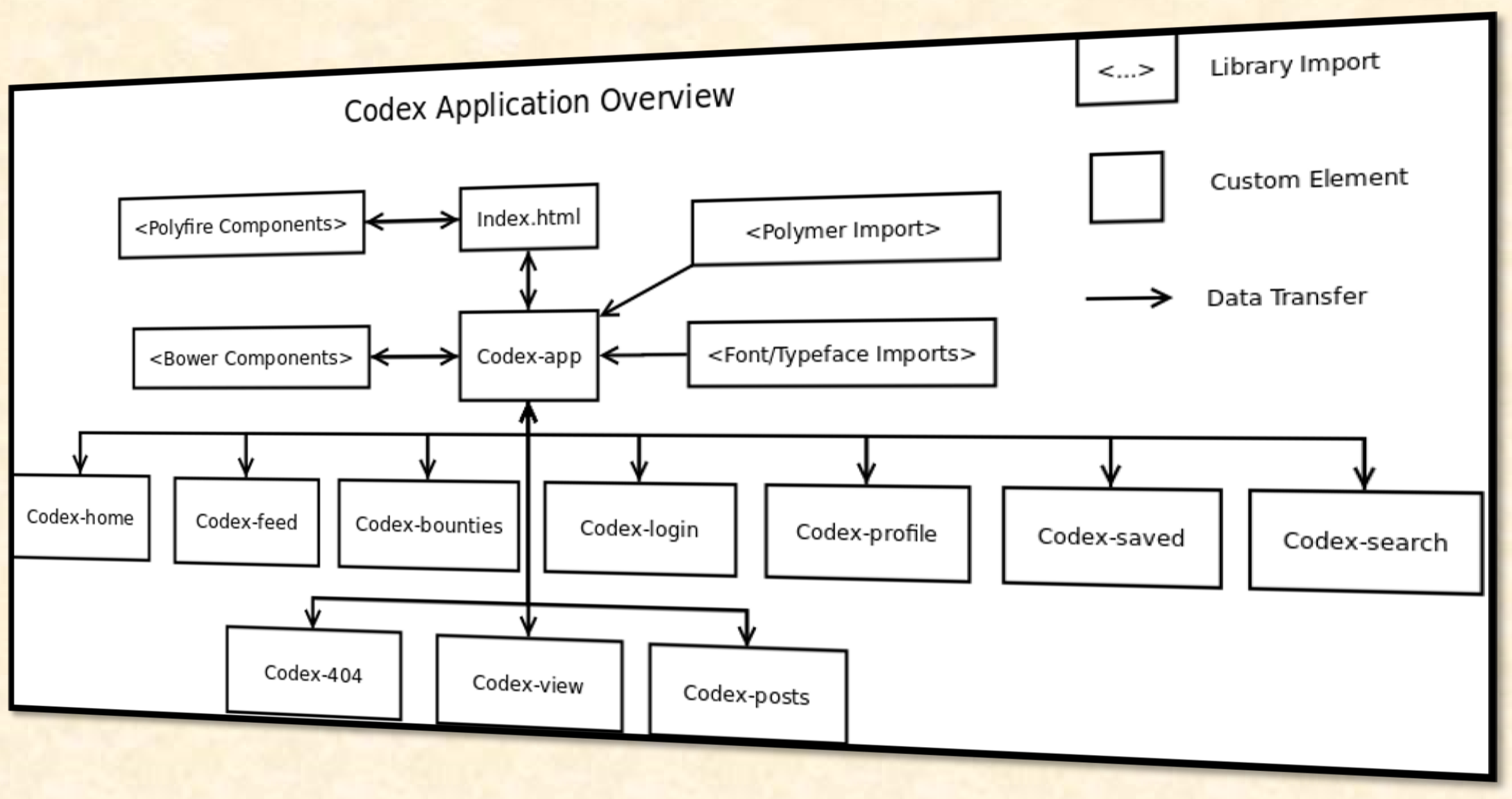
The Future

Codex will be improved by adapting according to the user feedback. The following features are planned:

- Additional Features for Post Creation Suite.
- External Post Linking
- Difficulty Attribute for Posts
- Additional Feed Controls
- Example Posts and Theory Posts Categories.
- Additional Community Features...

That brings the project to an interesting conclusion. Though it would require more testing the theory based approach may not affect the users ability to learn as heavily as first hypothesised. What instead may have a larger affect is having a range of content presented in different manners. Questioned users reported having a wide range of acceptable quality content would be far more useful than having one or two high quality, well explained posts.

Users like the idea of theory based posts. However, whether or not they would actually use the tool completely depends upon the range and type of content available. Making it clear that the most important factor is having a range of content of acceptable quality available


Codex Application Overview