IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 3, May 2022
Impact Factor: 6.252

Web Services based Source Code Editor Integrate with Community Question Answer

Rashi Agarwal[1], Devanshi Lokhandwala[2], Sakshi Bagde[3], Shubhangi Biradar[4], Prof. Santosh Biradar[5]
Students, Department of Computer Engineering[1, 2,3,4]
Assistant Professor, Department of Computer Engineering[5]
D. Y. Patil College of Engineering, Pune, Maharashtra, India

Abstract: *The report is based on our project on source code editor that helps the developers. The developers regularly often go over the arrangement of questions, programming errors. They often take the help of the web browsers for settling the blunders and take references from the distinctive internet based assets like documentations and books. This prompts switching windows between source code manager and internet browser. Hence, to lessen these advancement time and exertion, to disregard web interruptions and to get the particular outcome to questions we have structured this project.*

Keywords: Source code editor

I. INTRODUCTION

Introducing a source code editor has been considered as an effective method of enhancing the development outcomes and saving time. Source code editor is a programming application that facilitates the process by offering developers graphical widget to code, alter, or decipher. It is equipped with different features. Our project helps the search engine to effectively provide a link of web pages for the user query. Hence, the user does not have to visit every result in order to find the needed information. The user must only know the important keywords to retrieve the related information.

The source code editor has been considered as an effective method of enhancing the development outcomes and saving time. Source code editor is a programming application that facilitates the process by offering developers graphical widget to code, alter, or decipher. It is equipped with different features. Our project helps the search engine to effectively provide a link of web pages for the user query

1.1 Motivation

The motivation for this literature study was to investigate the effect of web based source code editor on developers. The motivation of the project is to build an organizational community that can improve the performance of the developers and thereby save time.

II. DESCRIPTION OF THE PROBLEM

The aim of the project is to investigate the effect of using a source code editor. It aims to provide a better result by integration between source code editor tool and community Q&A platform.

2.1 Objectives

- To identify the weaknesses of the other editors and use it as a strength for the source code editor.
- To use the web engine effectively providing the users with more accurate results.
- To study the preference of the development environment and what needs improvisation.

III. LITERATURE REVIEW

For the paper to be better one of the following, literature is analyzed for existing systems working and critically evaluated on some evaluation method to find shortcomings from them. Some of the highlights are given below:

- Literature Review investigating the effect of using the source code editor.
- Main conclusion is that it has a positive effect on coding, timing and better search
- Main challenge is to find the preference of the development environment and what improvements are needed.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 3, May 2022
Impact Factor: 6.252

In 2019 stack overflow annual developer survey carried out in which nearly 90k developers participated and the key result states in the survey are as following. Around 40 million people visit stack overflow per month and about 18 million people are professional developers or university level students. Nearly 14.7% of student share in the usage of stack overflow. More than 85% of the participants have registered accounts.

Developers use stack overflow to find the answer to questions and pass some knowledge and the most popular development is visual studio code with a 50.7 % share. The stack overflow survey carried out in 2018 results show the different ways of developers to learn on their own. Total 53734 developers -profile contributed to this question.

Atom code editor has the external plugins to intact the view of the community Q and A services. Atom is a desktop application built with web technologies, HTML, JavaScript, CSS, and Node.js integration. Atom is based on Electron (known as Atom Shell) a framework that enables cross-platform desktop applications using Chromium and Node.js. “Stack overflow-help” a package that renders stack overflow answers to inline questions from and within atom.

Notepad++ is a free source code editor and Notepad replacement that supports number of languages. Based on the powerful editing component Scintilla, Notepad++ is written in C++ and uses pure Win32 API and STL that ensures a higher execution speed and smaller program size.

Sublime Text is a commercial source code editor. It natively supports number of programming languages and markup languages. Users can expand its functionality with plugins, typically community-built and maintained under free-software licenses. To facilitate plugins, Sublime Text features a Python API.

Visual studio code is also a web-based electron framework desktop application. It has several packages available to customize the development environment. It supports different languages (such as C++, C#, Java, Python, PHP, Go). It has the greatest number of the user according to a stack overflow survey. It also has the "stack overflow instant search” plugin which provides stack overflow service inside the code editor itself.

IV. System Design and Flow

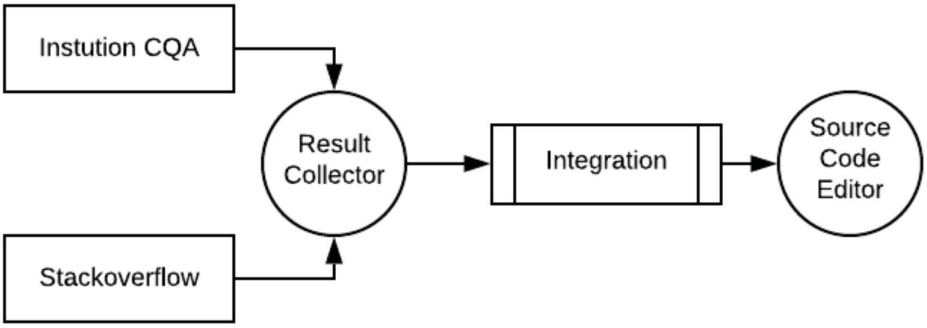

Figure 1: System Architecture

It have two main user-interactive components source code editor and community question answer web services. In this, we used GTK, Python and PyGObjects for the source code editor and Web-technologies, Stack-overflow API for community question-answer services.

- **Intuitional CQA:** It is a community questions and answer platform for an institute to contribute their knowledge and queries on a certain topic.
- **Stack Overflow:** It is a question and answer website for professional and enthusiast programmers. Users of Stack Overflow can earn reputation points and "badges".
- **Result Collector:** It gathers all the possible results referring to the asked questions/problems.
- **Integration Module:** It is used to integrate or to merge the CQA module and the source code editor module.
- **Source Code Editor:** A source code editor program typically has several functions that can manipulate software code to increase development productivity. This paper introduces the client program plug-in which is used to access community question answer web service through the HTTP protocol, web technology.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 3, May 2022
Impact Factor: 6.252

V. PROJECT IMPLEMENTATION

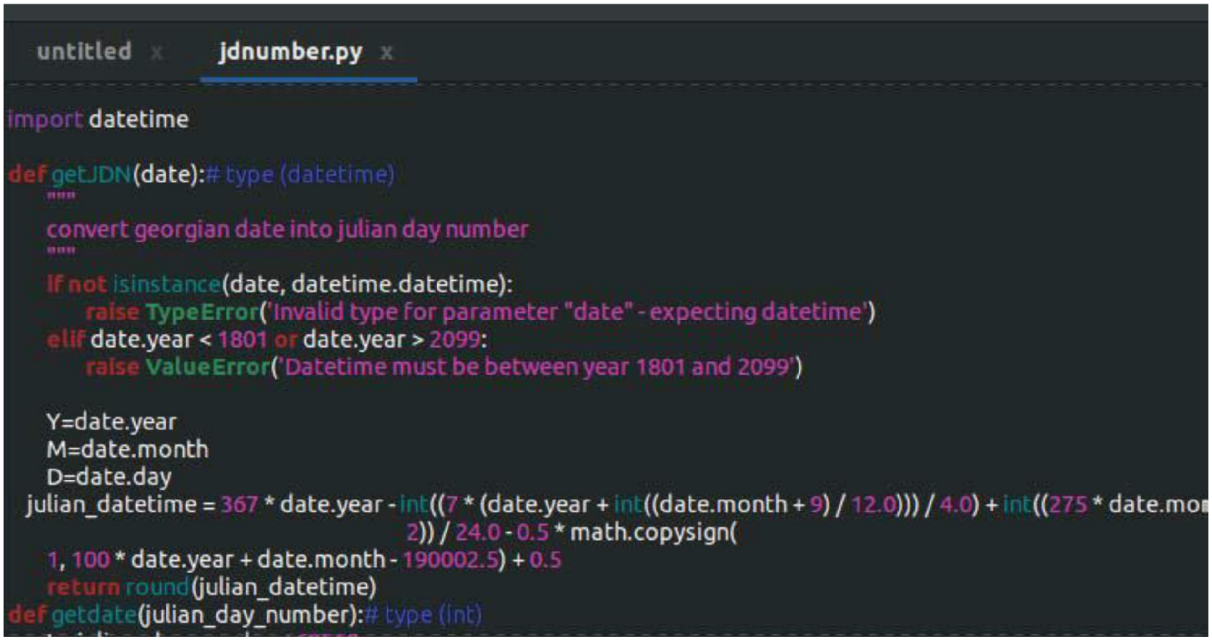

Figure 2: Syntax Highlighting

Syntax highlighting are used for programming or scripting that helps to display text, especially source code, in totally different colours and fonts according to the category of terms. The nest step auto-complete or word completion is used. It works so that when the writer writes the first letter or letters of a word, the program predicts one or more possible words as choices. If the word he intends to write is included in the list he can select it, for example by using the number keys.

Then we have to run the source-code: Compile or interpret by the invoke compiler and interpreter of specific language program files and display the output of the file. The Files and folder operations allows you to copy, move, rename, delete files and folders in computers, also picking different language files.

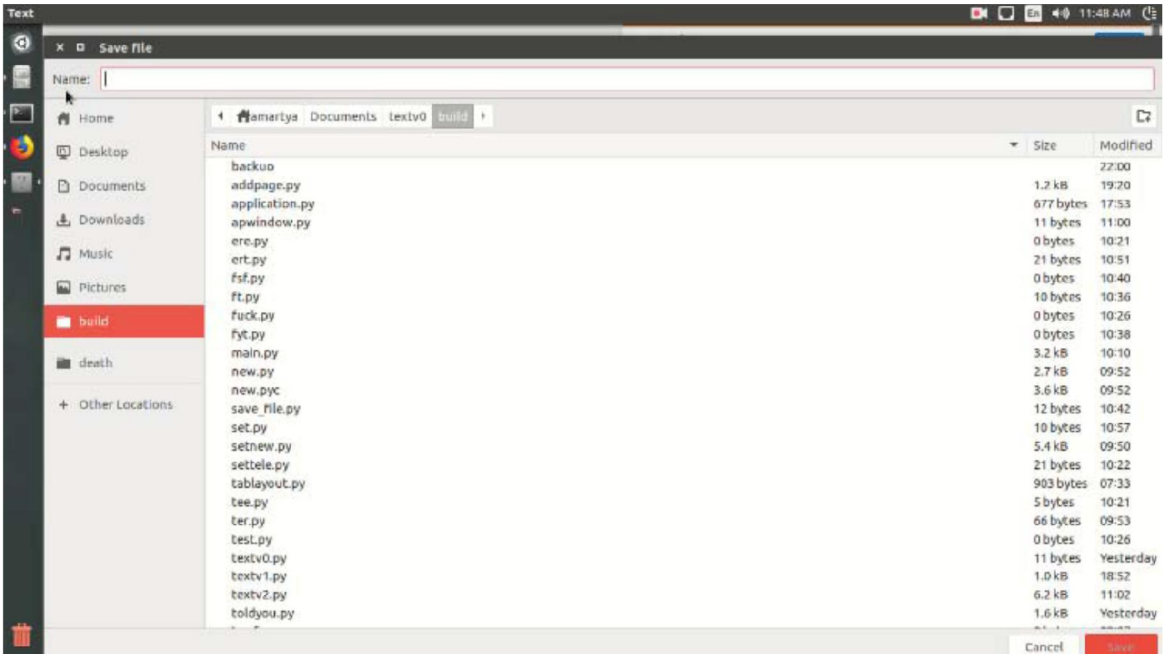

Figure 3: Select the file

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 3, May 2022
Impact Factor: 6.252

The client program plugin which is used to access CQA web services through the HTTP protocol, web technology. Community question answer web services: A web application where developers contribute their knowledge and that attempts to answer questions. Users must create an authenticated account now user can ask or solved the questions. Rewards point will be an offer to users based upon question asking and solving the other people's queries. The knowledge contribution from others leads to even more people to share their knowledge. This paper offers two different CQA web services one is stack overflow and another is institutional CQA service.

User Interface: Below figure shows the user interface of the build where the leftmost part represents the working environment of the editor for programmers. The output is shown in the bottom-right corner of the image. The right-upper corner used as a client plug-in providing the CQA and the stack overflow web services.

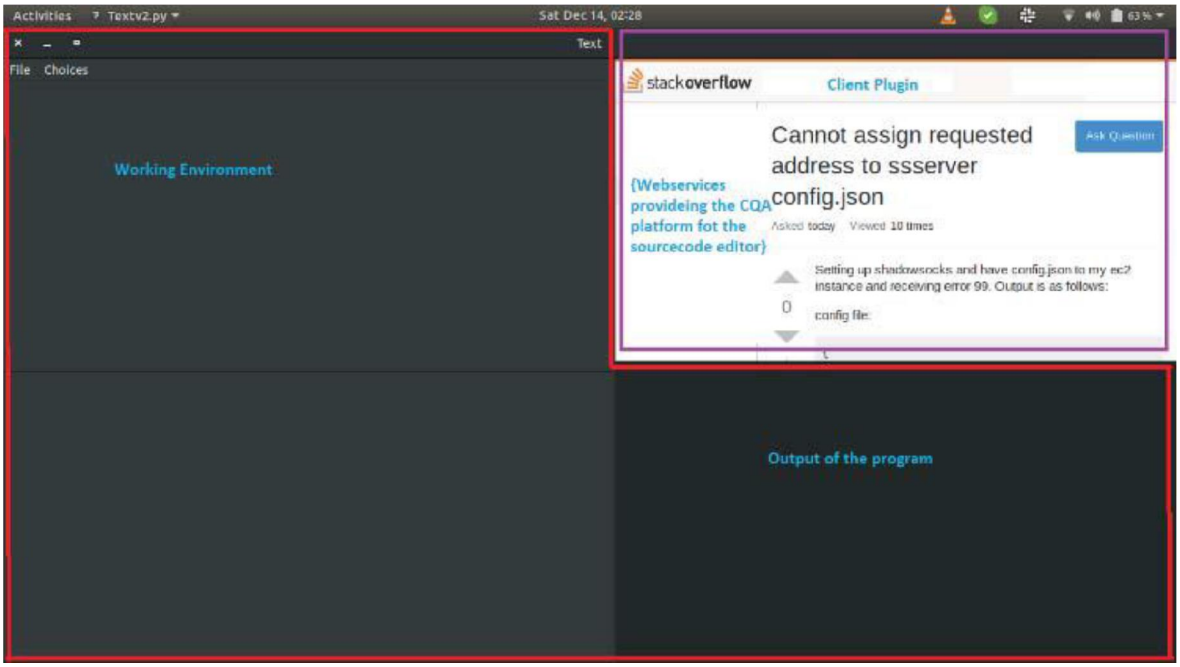

Figure 4: User Interface

VI. ADVANTAGES AND DISADVANTAGES

6.1 Advantages

- Enhanced Usage- The integration between the source code editor and the community supported platforms can enhance the code editor usage.
- Self-advertising- When working on or running open source systems, you can get recognition from the inventor community in a number of ways, similar as creating a great GitHub- profile and sharing in events. You might also get abatements, free admissions to events, and a well- developed structure to run your systems. Not only does working on open source systems save you plutocrat, but also it inspires you to use all the topmost tools available to you in your own systems.
- Sense of value- You can earn a great character, If you or your company laboriously share in the open source community. This way, if you're an individual or tone- employed inventor, it'll be easier for you to find a job as a freelancer or a full- time employee. However, it'll be easier for you to find people willing to work for you, mates willing to cooperate, If you represent a software development company.
- Software quality- Open source Law is frequently advanced quality. A piece of software created by a team of inventors can be of lower quality than that of developed by thousands of inventors from over the world with experience in different technologies, diligence, and systems.
- Data security- You should use open source software for operation development because it's more secure. The community instantly finds and reports security issue which the software proprietor generally fixes right down.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 3, May 2022
Impact Factor: 6.252

- Customization- Developing open source software generally means you're developing a fluently customizable software. Since the source law is open, an inventor can fluently add changes to the functionality of the interface.

6.2 Disadvantages

- Implementing a new system may create a minor disruption and require a period of familiarization by the users.
- The threat to the core business value- You should not open source anything that has a core value to your business. However, you shouldn't open source it so that it doesn't come available for your challengers, If there's a trade secret – an idea or a way of its perpetration that makes your business unique.
- Miscommunication and misunderstandings- There's no guarantee that the community benefactions won't turn out to be of lower quality. This is why there's a high chance that you end up refactoring someone's law and leaving people dissatisfied by not incorporating their changes.

VII. Conclusion & Future Work

Originally, we introduce the problem that the programmers face difficulties like window switching and distraction from source law editor when the question, programming exception/ error come across during programming. Second, by taking reference to different check results we state that the programmer values the CQA Service and ready to contribute to it. Also compare different ways, programmers learn on their own and different law editor software parameters.

Third, define the system and armature for the proposed system. Therefore, combining the source law editor, stack overflow, CQA services would help programmers to stick to their sense of the program and help them to break their errors or their problem via QA forum which will give them a result with affiliated answer in the community. The main motive behind the community Q&A forum is to encourage the users to ask and break queries to gain the optimal result and to partake knowledge among other actors.

Acknowledgements

The completion of our project brings with it a sense of satisfaction, but it is never complete without those people who made it possible and whose constant support has crowned our efforts with success. One cannot even imagine our completion of the project without guidance and neither can we succeed without acknowledging it. It is a great pleasure that we acknowledge the enormous assistance and excellent co-operation to us by the respected personalities.

References

[1]. J. Brandt, P. J. Guo, J. Lewenstein, M. Dontcheva, and S. R.Klemmer. “Two Studies of Opportunistic Programming: Interleaving Web Foraging, Learning, and Writing Code”. In Proc.SIGCHI, pages 1589–1598, 2009.

[2]. Max Goldman and Robert C. Miller. Codetrail: “Connecting Source Code and Web Resources”. J. Vis. Lang. Comput.,23 August 2009.

[3]. Sneha Mondal, Akshay Gugnani, Renuka Sindhgatta, VinayKumar Reddy Kasireddy, "Khan Academy: A Social Networking and Community Question Answering Perspective", IEEE International Conference on Data Mining Workshops (ICDMW),Year: 2018

[4]. Dorine C. Andrews ,"Audience-specific online community design", Communications of the ACM - Supporting community and building social capital CACM Homepage archive

[5]. Q. Booker, S. Farrar, M. McQuaid and A. Lopez, "Advanced question and answering systems for community development," Proceedings of the 35th Annual Hawaii International Conference on System Sciences, Big Island, HI, 2002, pp.91-95.doi:10.1109/HICSS.2002.993864

[6]. A. Bergström, “A Survey on Developers’ Preferences in Integrated Development Environments,” Dissertation,2018.

[7]. L. Ponzanelli, A. Bacchelli, and M. Lanza. Seahawk: “Stack Overflow in the IDE”. In Proc. ICSE, pages 1295–1298, 2013.

[8]. J. Raskin, “The Humane Interface - New Directions for Designing Interactive Systems”. Addison-Wesley, 200

[9]. Sublime Text” https://www.sublimetext.com/ (accessed November10, 2019)