

# Intelligent Script Editor: An Interactive Parallel Programming Tool

Susmita Abhang<sup>1</sup> Kajal Shinde<sup>2</sup> Chinmayee Shevade<sup>3</sup> Tejas Rathi<sup>4</sup> Prof. B. A. Jadhwar<sup>5</sup>

<sup>1,2,3,4</sup>B.E Student <sup>5</sup>M-Tech Student & Professor  
<sup>1,2,3,4,5</sup>Department of Computer Science & Engineering  
<sup>1,2,3,4,5</sup>DACOE, Karad

**Abstract**— Intelligent Script Editor (ISE) is an application which provides facilities to programmer for software development such as code completing and fixing, source code editing and management, login facility, responsive etc. ISE is a browser based programming tool for programmer. ISE environment provides editing in multiple languages like C#, C, C++, Python, Pig Script, SQL, Java script, HTML, PHP etc. User can edit, write, save, share and print their code on server. Users need not to spend their time for finding and installing an IDE for different languages. User can use IDE in any device like PC, tablet and mobile devices which has browser with internet connection. Intelligence Script Editor can be used in low configuration systems also. User has to login to access his personal account by filling his unique Email id and password which maintain security. Code can be saved to server and local disk too. This storage can be accessed by anyone.

**Key words:** Integrated Development Environment, Web, Programs

## I. INTRODUCTION

Intelligence Script Editor is web based software. Based on the latest developments in Ajax technologies, development in JavaScript, and HTML5 no of browser based code editors are incrementing rapidly. Desktop based IDE require large amount of space for installation such as visual studio has lengthy setup. In oppose to this ISE provide web based environment which avoid installation and provide no. of facilities. This software is a project management tool i.e. this Provide sharing facility. Number of users can share program to one another and also can update changes in Group. This updates automatically done in all shared member's list. Intelligence script editor is Integrated Development Environment through which user can create his account and login into editor by using email id and password. Programmer can write here code in multiple languages and also can edit, save, print and share their code to other user online. This is easy to use and supports Multiple Language. This editor is a open source tool and Provides features like Auto completion, Error Detection and text highlighting, theme and search and replace.

## II. NEED OF PROJECT

This paper discuss the implementation of web based ISE which overcomes no. of drawbacks of Existing system like security problem, language limitation or single language editor, no. of setup required for separate language, use of much more computer resources specially memory and CPU which may not be available all the time this no. of drawback started getting more and more difficult.

Solution for this problem of programmer is found to be web based ISE. ISE supported more facilities to programmer and also overcome drawbacks mentioned above. Software can use on PC, tablet, mobile devices

having internet connection. This editor provides advanced features like theme changing and color changing according to the languages.

Most of desktop based IDE's require development environment to be set up on their machines. This requires language specific IDE like visual studio to be downloaded and configured within the user's machine. If the user decides to work on other machine the entire kit and IDE has to be installed in the new system which makes the process lengthy and inconvenient. Web based ISE provides a solution to the given problem and gives user easy processing for open her/his project. Only internet connection must require being able to connect to web ISE.

## III. HARDWARE & SOFTWARE REQUIREMENT SPECIFICATION

### A. Software Requirements:

- Internet Information Service
- SQL Server 2008 R2
- Notepad++
- Operating system
- Visual studio 2010

### B. Hardware Requirements:

- 4GB RAM
- Hard Disk: Min 40GB& Max 1Tb
- Core i3 Processor
- One High Configuration Dedicated Server

## IV. BROWSER SUPPORT

- 1) Firefox : version 4 and up
- 2) Chrome : any version
- 3) Safari : version 5.2 and up
- 4) Internet Explorer : version 8 and up
- 5) Opera : version 9 and up
- 6) Android : All versions

## V. RELATED WORK

Many efforts have been made to implement this editor in past 1 year. In this time we discussed development and drawbacks in existing editor and to overcome those drawbacks and to provide easy platform to programmer to write code started to implement this web based ISE.

The Intelligent script editor consists of four modules those are:

- 1) Admin Module
- 2) User Management Module
- 3) Editor Module
- 4) Project Management Modules

**A. Admin Module:**

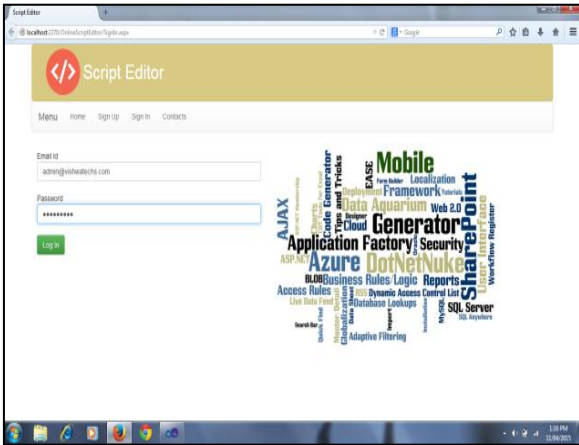


Fig. 1: Admin Login into Editor

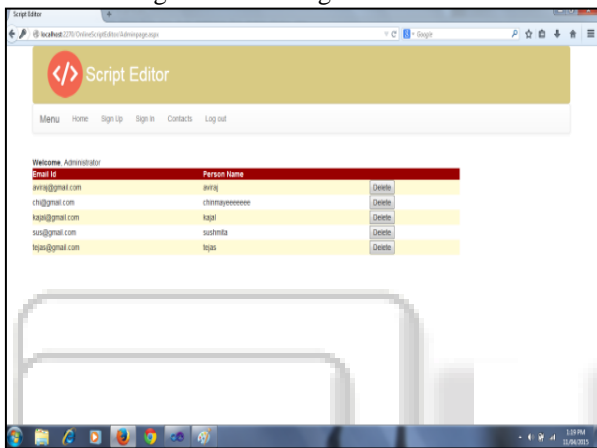


Fig. 2: Admin Access to the Users

In this admin can enter in editor by using emailed and password and can see no of users in software and admin can delete users from database permanently.

**B. User Management Module:**

This module consists of User Creation, User Updating, Login and Logout.

- 1) User Creation: In this module, a new user can create his own account.
- 2) User Updating: In this module, a user can update his account and make changes in his account.
- 3) Login: In this module, a user can login to his account and can select language and can create programs
- 4) Logout: In this module, after completion of work user can logout through his account.

**C. Editor Module:**

This module consists of Text highlighting module, Text binding search module, Auto completion module.

- 1) Text Highlighting Module: In this module, keywords and attributes are highlighted in different colors. Also tags and opening & closing brackets are high lightened.
- 2) Code folding module: In this module, the code created by user can be fold or reduced into short lines.
- 3) Auto completion Module: In this module, automatic completion of keywords and attributes can be done. This module simply highlights

- 4) Search and replace module: in this by pressing control + F word can search into program and can replace it.
- 5) Theme: different themes are applied to the all languages.

**D. Project Management Module:**

Project management mostly done by sharing facility. In this, user can send his edited code or program from inbox by selecting email id checkboxes of other users. If any change is done in shared program by any one of shared members that all changes will be updated in all group members of shared list.

Design of program sharing is as follows:

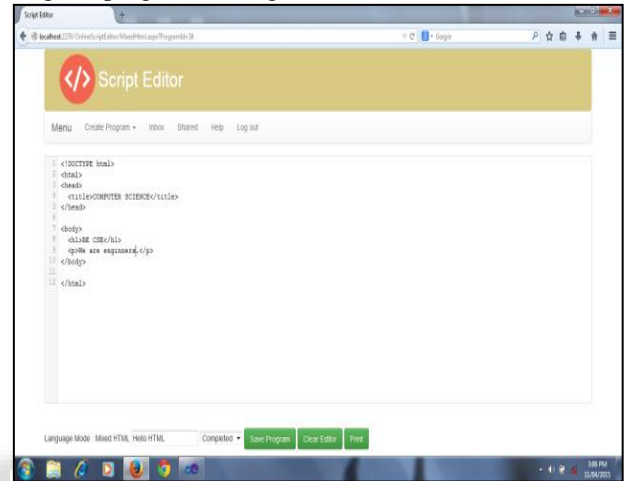


Fig. 3: Program Created By User 1

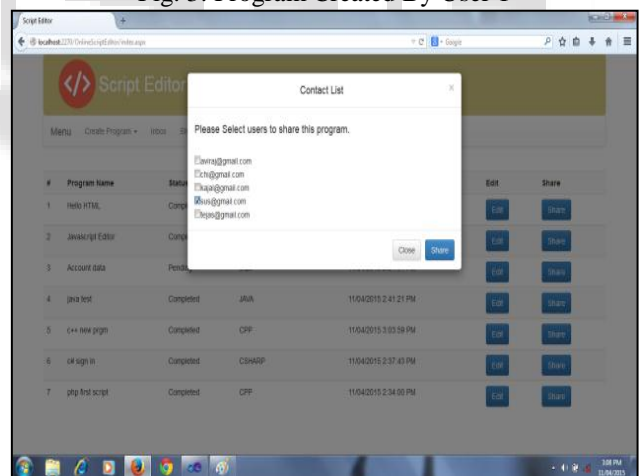


Fig. 4: Sharing of Program to User 2

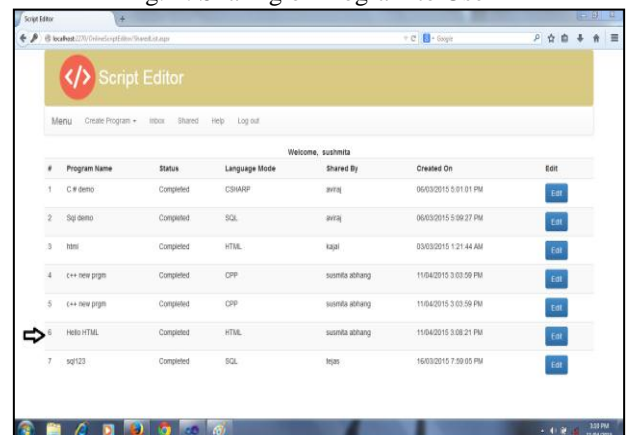


Fig. 5: Program Shared Successfully

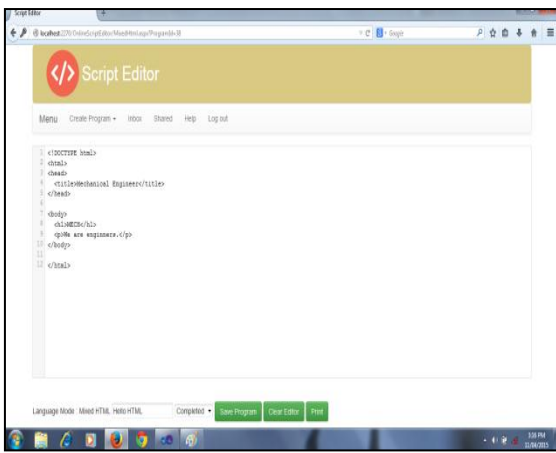


Fig. 6: Updates Done by User 2, Appears in User 1's Editor

## VI. SYSTEM DESIGN

### A. Architecture:

Users are required to register through the web interface. Whenever a new user registered, all the required data will be created in database and a predefined workspace will be assigned for the user. Later, user will be able to login and logout the system anytime.

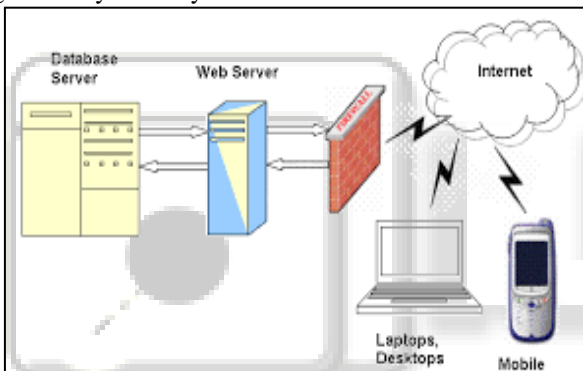


Fig. 7: Architecture of Web Based ISE

Internet connection must be available on device. Access editor on mobile tab or PC create program and store on database through cloud network.

### B. Technology:

Number of technology used in developing AJAX (Asynchronous JAVA script), JSON (Java script object notation), jQuery, CSS Bootstrap, ASP.NET and HTML 5.

- 1) **AJAX:** ASP.NET AJAX contains the components that allow the developer to update data on a website without a complete reload of the page.
- 2) **CSS BOOSTRAP:** Bootstrap's responsive CSS adjusts to Desktops, Tablets and Mobiles. It provides a clean and uniform solution for building an interface for developers. It contains beautiful and functional built-in components which are easy to customize. It also provides web based customization. And best of all it is an open source.
- 3) **JQUERY:** jQueryUI is a powerful JavaScript library built on top of jQuery JavaScript library. UI stands for User Interface. It is a set of plug-ins for jQuery that add new functionalities to the jQuery core library. The set of plug-ins in JQueryUI includes interface interactions, effects, animations, widgets, and themes built on top of jQuery

JavaScript Library. The jQuery library contains the following features:

- 1) HTML/DOM manipulation
  - 2) CSS manipulation
  - 3) HTML event methods
  - 4) Effects and animations
  - 5) AJAX
  - 6) Utilities
- 4) **BENEFITS OF JQUERY UI:**
    - 1) Cohesive and consistent APIs.
    - 2) Comprehensive browser support
    - 3) Open source and free to Use
    - 4) Good documentation.
    - 5) Powerful theme mechanism.
    - 6) Stable and maintenance friendly.
  - 5) **ASP.NET:** ASP.NET is a web development platform, which provides a programming model, a comprehensive software infrastructure and various services required to build up robust web applications for PC, as well as mobile devices. ASP.NET works on top of the HTTP protocol, and uses the HTTP commands and policies to set a browser-to-server bilateral communication and cooperation. ASP.NET is a part of Microsoft .Net platform. ASP.NET applications are compiled codes, written using the extensible and reusable components or objects present in .Net framework. These codes can use the entire hierarchy of classes in .Net framework.
  - 6) **Visual studio 2010:** Microsoft Visual Studio is an integrated development environment (IDE) from Microsoft. It is used to develop console and graphical user interface applications along with Windows Forms or WPF applications, web sites, web applications, and web services in both native code together with managed code for all platforms supported by Microsoft Windows, Windows Mobile, Windows CE, .NET Framework, .NET Compact Framework and Microsoft Silver light
  - 7) **MS SQL Server:** Microsoft SQL Server is a relational database management system developed by Microsoft Inc. As a database, it is a software product whose primary function is to store and retrieve data as requested by other software applications, be it those on the same computer or those running on another computer across a network
  - 8) **JavaScript:** JavaScript is a technique for manipulating HTML documents in the browser. This is often called client-side scripting. It allows the page author to incorporate facilities such as buttons that change in appearance when you move the mouse over them and menus that expand.

### C. Implementation:

We have implemented web based ISE by using C# as front end and SQL Server as backend. User first creates his account then login into editor by using unique id and password. User can create program in different languages by selecting language And save it on server side storage and also on local storage. Programs from inbox can share to other users.

1) Design of Web Based ISE:



Fig. 8: Home Page

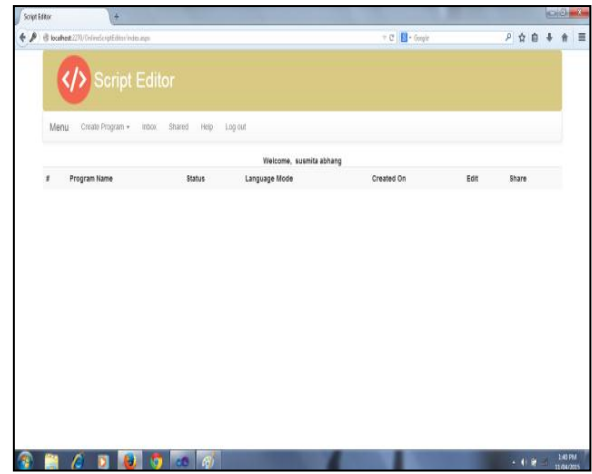


Fig. 12: Sign In Successfully

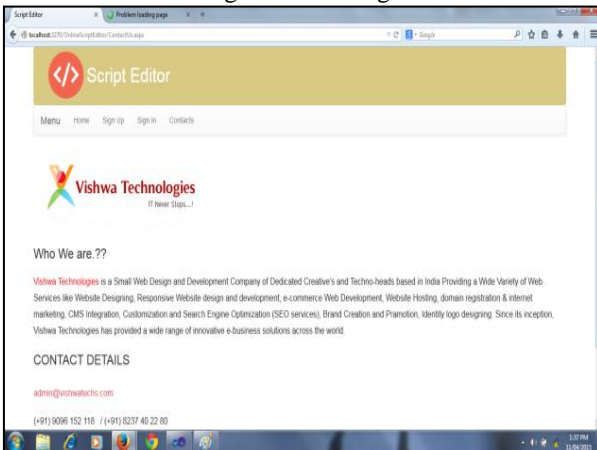


Fig. 9: Contact Page

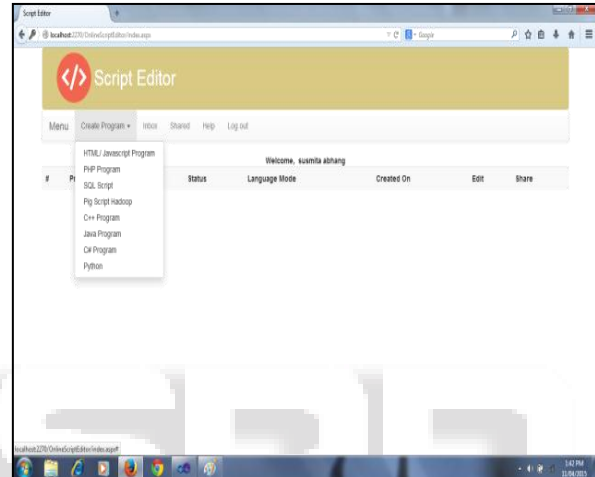


Fig. 13: Language Selection In Editor

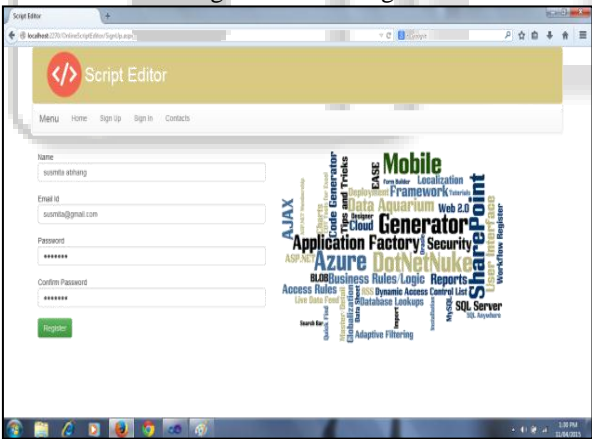


Fig. 10: Sign Up Page

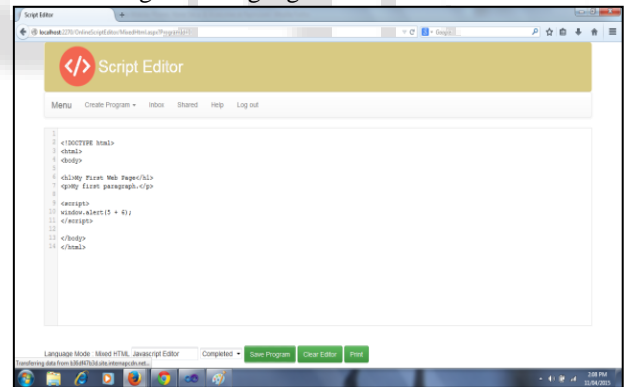


Fig. 14: Web Based Editor for Editing Code

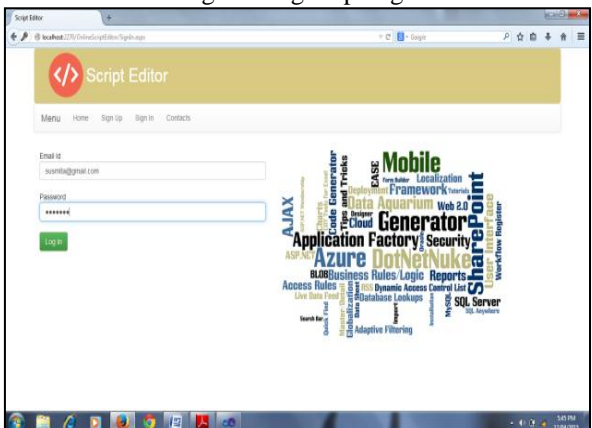


Fig. 11: Sign In Page

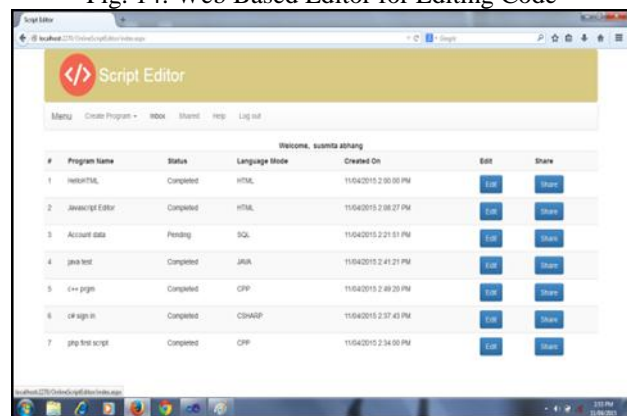


Figure 15: Saved Program List In Inbox



#### D. Operations:

- 1) Sign Up/ Registration: This module registers the new user by accepting the details and store it in database After registration users gets email id
- 2) Sign In/ Login: A registered use should login with his email id and password to use Web based ISE
- 3) Create Program: This module allows valid user to create programs in different languages.
- 4) Save: this module allows the valid users to save their program by filling program name and status. All programs can be save in two ways save to server and save to local.
- 5) Delete Users: This module allows Admin to delete users.
- 6) Edit: This module allows editing saved programs and saving again.
- 7) Share: This module allow user to share their programs or code to other users email id.
- 8) Change Theme: This module allows users to change the theme of editor.
- 9) Clear Program: This module allows to clear editor or to clear code.
- 10) Download: This module allows users to download the code.
- 11) Print: This module allows printing page.
- 12) Logout: User can logout from his account by using this module.

#### VII. ADVANTAGES AND DISADVANTAGES

##### A. Advantages:

- 1) Web based intelligent script editor support multiple language.
- 2) Development can be done by low configuration devices.
- 3) User can use any device with internet connection.
- 4) This avoids large installation setup.
- 5) Provide project management tool with sharing facility

##### B. Disadvantages:

- 1) Web based ISE must require Internet connection.
- 2) Still not provided execution environment.

#### VIII. APPLICATIONS

The application of project is provide web based environment. This can be used in small companies .Client machine need not be of high configuration. Web based ISE can be used in School/Collages/Institutes for programming also student can learn multiple languages with any device like PC, mobile, tab.

#### IX. FUTURE WORK

Web based ISE provides editing of code or programs which can save, edit and share but cannot execute or compile this will be future work to add compiler to run edited code online and also no of languages will be added.

#### X. CONCLUSION

ISE provide web based environment. We discussed how we can move the software development environment from one paradigm (The desktop) to another (The web). User should have his personal account to access editor. Login require email id and password for authentication. User can write code in their browser everywhere and can save to server and also can share to other users. Code or programs can download to local storage. ISE can use in any device like PC, tablet and mobile which has browser with internet connection. We implemented lightweight editor by avoiding installation setup for different languages. Programming in different languages can be done in this single web based editor.

#### REFERENCES

- [1] Code Mirror Available: <http://codemirror.net/>
- [2] Codeany where Available: <https://codeanywhere.net/>
- [3] <http://W3Schools.com/>
- [4] Mala Dutta, Kamal K Sethi, Ajay Khatri - "Web Based Integrated Development Environment" International Journal of Innovative Technology and Exploring Engineering (IJITEE) ISSN: 2278-3075, Volume-3, Issue-10, March 2014
- [5] Collabode : Collaborative Coding in the Browser Max Goldman, Greg Little, Robert C. Miller-MIT CSAILs