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USE OF MULTICOMPILER THROUGH CLOUD SERVER

Pralhad Gavali,

Assistant Professor, Dept of IT, K.E.S.R.I.T, Islampur, Maharashtra

Utkarsh Patil,

Pratiksha Kude,

Aishwarya Patil

Bachelor of Engineering, Dept of IT, K.E.S.R.I.T, Islampur, Maharashtra

Abstract: The long standing field of Cloud Computing has become more prevalent and feasible to use. Cloud computing platforms allow for the easy access and use of resources that in the past were simply not available to ordinary user. In our system we would implement a cloud where multiple programming languages compiler would be hosted. There is no need of development kit of programming language on each client machine. The system deals with Integrated Development Environment for programming languages such as C, C++, java, HTML and PHP. User can use any text editor or IDE to write program by using computer or android mobile phones and the user will choose the option to select in which programming language he/she wants to compile the code. User can communicate with centralized server compiler through Internet. Server will compile code and send output to the client machine. Mainly our aim is to use cloud server which helps to reduce the problems of portability of storage and space which occur by installing compiler on each machine.

Key Words: Login, Registration, Upload, Notification.

I. INTRODUCTION

Cloud computing is a technology which enables us to store the information centrally and access that information as well as the application. Cloud computing now is used in networking, web and as service. Previously we had to install compiler or interpreter for different programming languages on each machine due to which the problems such as storage arise. Also we know that in today's life Smartphone are very common, every third person has his/her own Smartphone. But we cannot run programs on Smart phones due to the problem of storage that occur when we want to install compiler on Smartphone. By using cloud computing we can reduce this problems. Here we are going to use the cloud as a service.

In our project, we will store the compilers and interpreters of programming languages such as C, C++, Java and PHP on cloud server. Web server is another server which will contain the database of user and is used for the authentication purpose. For using our system he/she must be connected to an internet. Firstly user will have to register to the application and provide username and password. The user will write a program by using text editor and he/she will upload the program to web server. Web server will send this code to cloud server, it will compile the code and send output or error (if present) to web server. Web server will send this to the particular user.

The importance of our project is that we can use this application anytime by using internet as a medium. We can also use our Smartphone to compile and run the code.

II. RELATED WORK

Pune Institute of Computer Technology and Emerging Science and Engineering have implemented system that provided online compiler using cloud technology. In this paper they are using two main aspects of Cloud Computing (Cloud Infrastructure and technical blog). First they have used Cloud Infrastructure to implement Cloud. Second one is an important application of their system is technical blog. If users come across to query while doing program then they can put their query in technical blog. If any other user or anyone else on the technical blog knows the answer of that query then they can put it on the technical blog. The discussion is visible to the all users. This paper is aimed to develop cloud based server to provide centralized compilation for different programming languages like C++, Java, and assembly language. They also provide other facilities such as compilation log and administrator control. The administrator control prevents client from installation of compilers on each machine.

In this paper they are described an online compiler. They have used the concept of cloud computing. The main advantage of cloud computing is to reduce the problem of storage and portability. Compilers have ability to compile code fastest and it is convenient tool to remove errors. The Online Compiler is web-based application. The web-based applications are platform independent. They can be used remotely. The online compiler stores the errors/outputs of the program in convenient manner. The use of cloud computing reduces the problem which occur due to installation of compiler on each machine.

III. SIGNIFICANCE OF THE PROJECT

We are going to create centralized system from where we can compile and run program by using internet as a medium. We can access the system through android Smartphone due to which it is easy to run the programs. Also the problems occurred due to installation of compiler on each machine such as portability of memory space and storage is removed. The system can be accessed and used by anyone who is registered to our system and have an internet connection.

IV. PROPOSED SYSTEM**a) Architecture Diagram:**

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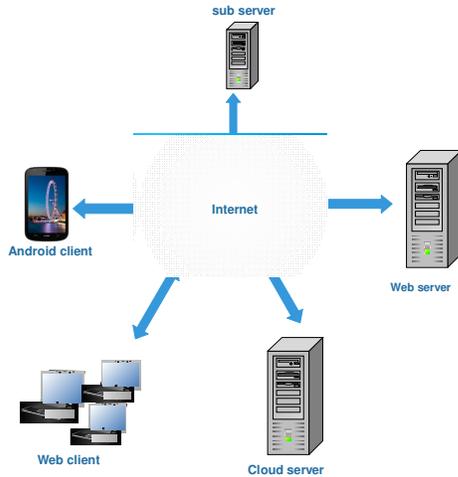


Fig. 1 Architecture Diagram

Cloud computing is an effective technology through which we can use many processes remotely and also it is a faster process. The main aim is to create centralized compiler which is accessible to anyone from anywhere. Also it makes the system lightweight. Advantage of our system is that we can also use it through our android Smartphone.

Firstly the users have to do registration to our system and provide username and password. After successful registration he/she is able to use our system. Then after he can login the system and upload the code and select the compiler. When he/she uploads the code it will first store to the web server and web server will send this code to cloud server. Cloud server will compile the code and send output or error (if present) to the web server. Web server will send this to client. In whole session the information about the activities by the client are stored to the database of the web server. The system is also used through the android mobile phones which are connected to the internet.

Our system will work as follows:

- **Home Page**

After successful installation of application on android phone it will give the following home page window. First user must have to register to use the functionalities of the application. Without registration user will not get access to Continue and Login.



Fig. 2 Home Page

- **Registration**

While doing registration users must have to fill all the information properly. If users keep any of the field blank the system will give error message. After successfully registration all the information will get stored in the database. Here we have used Xampp server.

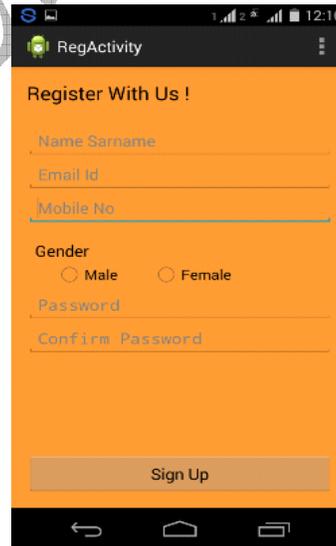


Fig. 3 Registration Page

- **Login**

While doing login user must have to fill all the information correctly. The filled information by the user at the time of login will matched with information present in the database. If the information get matched then the login is successful otherwise it will give error message.

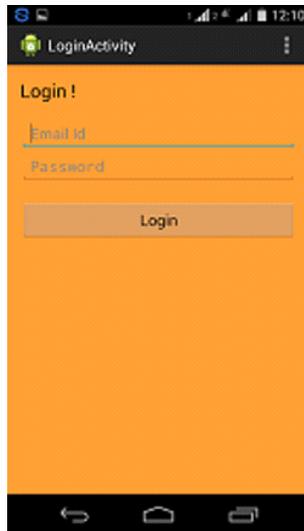


Fig. 4 Login Page

- **Menu**

Once the logging is successful then users will be forwarded to the above window. It will provide flexibility to upload files and exit from the above window back to the home window.



Fig. 5 Menu Page

- **File Upload**

- When the user selects the upload file, the user will be forwarded to the upload window shown in Figure 5.
- Then the user has to select the file to upload on the cloud server; for this, the user has to select the file button.
- After selection of the file, the user will get the window shown in Figure 5.
- After selecting the file, the user has to click on the upload button.
- Once the user presses the upload button, the user will get the view as shown in Figure 5.
- After file uploading is completed, the user will get the view as shown in Figure 5.

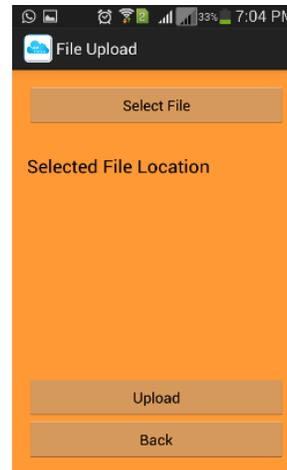


Fig. 6 File Upload Page

V. CONCLUSION

The proposed system has implemented an effective cloud server compiler for languages like C, C++, PHP, and Java. The cloud server compiler reduces the problem of storage and portability by avoiding the installation of compilers. It will provide flexibility to users to select the convenient compiler as per their need. It has the ability to compile code fastest and it is convenient to remove the errors of the code. After compiling the code, the centralized server compiler will send an output to the client machine. By the proposed system, we can also reduce the problem of storage and space. The proposed system can be used on an Android phone as well as on computers.

VI. RESULT AND DISCUSSION

1. User:

- User is able to log in to the system successfully and view notifications successfully.
- User is able to select and upload files successfully.
- User is able to select an appropriate compiler.

2. Database:

- The information is successfully stored in the database.
- The information is successfully retrieved from the database.

3. Client:

- The file is successfully transferred through the web client to the web server.
- The file is successfully transferred through the Android mobile to the web server.

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