

Cloud Compiler and Technical Support

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Abstract — The system mainly deals with the creation of Integrated Development Environment

for the java language to code compile, run, test and debug the code using the browser based IDE through the Internet and a web browser. The client machine doesn't having java development kit. The paper aims to describe an centralized compiler which helps to reduce the problems of portability and storage space. The errors/ outputs of the code are stored in a more convenient way. Also, installation of the compiler on each computer is avoided. It was assumed that the user will use his or her favorite text editor to create and correct program files In this system we also create new java editor to create and correct program files and install mobile technology in which we can type program code in mobile and send to centralized server compiler and get the accepted output through GSM phone, but we required to connect another mobile technology to the centralized server. Another important application of our system is if we occur any query while doing the program then put this query in technical blog and if anyone are interested to give answer of that question then they put their answer on the technical blog and show this discussion for all user.

Keyword-Java Compiler, Cloud Computing, Technical Blog,Logger ,GSM Phone, Bluetooth Dongle, LAN Cable.

I. INTRODUCTION

Today computer has become an integral part of a student's life. With computer there came languages which were used to build great applications and computing. Languages paved way for great jobs and increased living standards. But today's system gave rise to maintaining big hardware's and labs which are accessible only from personal presence and cannot be accessed remotely. So there arises a need to help students access the system from anywhere which can increase their programming capabilities a lot if they can access the compiler from anywhere and take advantage of remote capabilities. Today smart phone is part of our daily life but compilers cannot be installed and used on a smart phone but through our system we can compile program on mobile. This problem is huge and needs to be resolved as smart phone use will increase rapidly as new operating systems like ANDROID are being used by all smart phone companies as it is user friendly. So we thought of designing a project which will make the compiler machine free and can be accessed anywhere anytime. The project will also have a technical blog which will help the users interact with each other. We are going to develop a BLUETOOTH compiler, LAN compiler and GSM compiler. We are also going to develop a ANDROID application which will help the users to access a compiler from a smart phone.

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II. JAVA COMPILER

The primary functions of our system are:

A.COMPILE OPTION:-This would take the code in the text box to the server side for its compilation and at the server side the compiler package has been imported.

B.EXECUTE OPTION:-The user is provided with the links of all the executable files that were present in his or her folder and were already compiled at least once without errors.

C.START TEST OPTION:-Till this button is not clicked the test does not start and the student cannot start writing the code.

III. SYSTEM ARCHITECTURE



Fig. 1 : System architecture

In overall system used cloud, one computer (as server), many computer (as client), Android mobile, simple GSM mobile etc. The main advantage of cloud over the other non-network methods is of faster processing. Also, many processors can be used remotely, without the knowledge of the users, in order to expedite the processing. The system uses a dual-layered architecture. Today's compilers also generated a new problem as smart phones are getting a daily part of our life. We will use two mobiles one is Android and another is simple GSM mobile to write programs this can be done from the user's simple mobiles text editor, and for android mobile need to install smart editor for write program then and then only we can write program and execute program through server.

In system mobile is connected to server because of when we write program on simple mobile or android mobile this program will send to the server's mobile then server will compile this program automatically and send report(error message or output) back to the users mobile through messages. Then other technology



developed in system is the one layer consists of clients, which are of lower configuration. The other layer consists of the server connected through LAN cable. When we type program on client the use of smart editor then send this to the server and server automatically compile and send output or error message to client computer. The use of cloud we will store information related student registration in the form of id and password. In our system the programs information and “In” and “Out” entries of program store on the server with the help of logger. Logger automatically create folder on server store all information related to user record with its roll no.

IV. ADVANTAGE

A. USER ENTRY:-

In this user class the administrator will provide a unique id and password for each user.

B. GSM COMPILER:-

In this the user class the system will provide GSM as a medium to use the compiler remotely

C. LAN COMPILER:-

In this the user class the system will provide LAN as a medium to use the compiler.

D. BLUETOOTH COMPILER:-

In this the user class the system will provide BLUETOOTH as a medium to use the compiler remotely

E. LAN EDITOR:-

In this user class the user can write and compiler a program from a client machine

F. GSM EDITOR FOR ANDROID:-

In this user class the user can write and compiler a program from a smart phone using GSM as a medium

G. BLUETOOTH EDITOR FOR ANDROID:-

In this user class the user can write and compiler a program from a smart phone using BLUETOOTH as a medium

H. TECHNICAL BLOG:-

In this user class a blog will be provided to the user where he can have a discussion with other users.

V. NEED FOR PROJECT

The main advantage of cloud computing over the other non network methods is of faster processing. Also, many processes can be executed remotely, without the knowledge of the user, in order to expedite the processing. Thus, keeping the main reason for creating the project is to provide a centralized compiling scheme for institutions or organizations. Also, it will act as a centralized repository for the entire codes store on server. The other major advantage that this system will have over the others is that it will make the users system lightweight i.e. there will be no need to maintain separate compilers/JDK's at the client-side and also main advantage is client are asked technical query to all other user & get the accepted solution about this query system provide technical blog in which user can discuss with each other.

In order to achieve our target of a compiler independent

application we will need to take into consideration following things :-The compiler should be accessed from all mediums such as BLUEOOTH, GSM and LAN. The user should provide a single authentication to use the application, user can choose which medium to use to access the compiler. Log of the application interfaces should be maintained and can be viewed by the administrator. The system should be automatic. The cloud access should be known by the administrator in order to create a technical blog. The administrator needs to maintain the server properly. The APK of the android application should be provided to the user. The APK should handle the mediums such as BLUETOOTH and GSM combine.

Thus, for educational institutions this will prove to be highly efficient. Also, the process of maintenance and distribution of dynamic usernames and passwords will be greatly simplified. Also, authentication and personalized task distribution will be made possible.

VI. CONCLUSION

As compared to the current scenario where each machine need to install compilers separately. This would eliminate the need to install compilers separately So reduce memory space. So we can compile our code at the centralized server. Another advantage of such project is that whenever the compiler package is to be upgraded it can be done easily without again installing it on each and every machine. Now user are not compile the program on mobile but our system compile the program with the help of mobile. All programs are store automatically on server so it is time consuming process.

REFERENCES

1. Cloud Documentation and Centralized Compiler for Java & Php
2. Online Java Compiler Using Cloud Computing .[Mayank Patel]
3. Online C/C++ Compiler using Cloud Computing.[Aamir Nizam Ansari, Siddharth Patil, Arundhati Navada, Aditya Peshave, Venkatesh Borole,Pune Institute of Computer Technology, Pune,University of Pune.
4. CENTRALIZED C# COMPILER USING CLOUD COMPUTING. [A.RABIYATHUL BASARIYA Computer Science and Engineering Sudharsan Engineering College, K.TAMIL SELVI ,Sudharsan Engineering College ktamil10@yahoo.co.in]
5. Grobauer, B. Walloschek, T. Stocker, E., “Understanding Cloud Computing Vulnerabilities”, Security & Privacy,IEEE March-April 2011
6. Chunye Gong Jie Liu Qiang Zhang Haitao Chen Zhenghu Gong, “The Characteristics of Cloud Computing”, Parallel Processing Workshops (ICPPW), 2010 39th International Conference