ONLINE COMPILER USING CLOUD COMPUTING

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COLLEGE : PROUDHADEVARAYA INSTITUTE OF TECHNOLOGY, HOSPET
BRANCH : DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
GUIDE : MR. MANJULA.S.D
STUDENTS : MS. AISHWARYA
            MS. ASHMA BANU
            MS. SHAHWEZ ANJUM
            MS.SHRUTHI M K

INTRODUCTION:

An online judge is an online system to test programs in programming contests. They are also used to practice for such contests. The system can compile and execute code, and test them with pre-constructed data. Submitted code may be run with restrictions, including time limit, memory limit, security restriction and so on. The output of the code will be captured by the system, and compared with the standard output. The system will then return the result. When mistakes were found in a standard output, rejudgment using the same method must be made. Some IDEs contain a compiler, interpreter, or both, such as NetBeans and Eclipse; others do not, such as SharpDevelop and Lazarus. Sometimes a version control system, or various tools to simplify the construction of a Graphical User Interface (GUI), are integrated. Many modern IDEs also have a class browser, an object browser, and a class hierarchy diagram, for use in object-oriented software development.

OBJECTIVES:

Cloud computing model is for enabling convenient as well as a network access to a shared pool of configurable computing resources. In this internet world all the things are online.Here we use an online compiler. This project’s main aim is, we can easily write program, compile and debug it in online. In this project, we have three online compilers namely, Online C/C++ , JAVA and perl compiler. Different programming languages are being compiled using cloudcomputing, which is portable and reduces the storage space, online java, c/c++, perl compiler using cloud computing, which provides most convenient tool to compile code and remove the errors. These three compilers provide online compiler service, so no need to install separate compiler on each PC. By using all these application we can conduct online practical examination.

METHODOLOGY:

A. Real Time Collaboration:
Real time collaboration is a technique that allows multiple users to edit the same file at the same time.  

B. Technical Blogs:
Technical blogs can be used by all the developers using the IDE to post technical information and share it with others. The blog posts will have technical contents related to various topics.
C. Online C, C++, Java and perl compiler using cloud computing:

Cloud computing explains the concepts of distributed computing, virtualization and utility computing. This system makes use of the dual layered architecture in which the lower layer consists of clients, which are of lower configuration and the upper layer consists of the server. It involves Service oriented architecture which reduces information technology overhead for the end-user and has greater flexibility, reduces total cost of ownership and on-demand services.

Diagrams:

Fig 1: A diagram of the operation of a typical Multi-language, multi-target Compile

Fig 2: Usecase diagram

Fig 3: Sequence Diagram
CONCLUSION:

Thus, we must have a system which will combine each above system’s advantages and will discard their disadvantages for the better future use of cloud computing. Moreover, in today’s world we require everything online so this all systems provide the best solution to these problems. By integrating and enhancing the capabilities of these essential technologies, we are introducing the ‘Online Compiler’ and to contribute to the current examination system. It would provide a platform for students to give practical examinations online. A cloud will be available where a server will be present which handle codes of all students and will compile codes separately sitting on another system. There are a few Browser Based IDEs which are primarily for web development. This project conveys the idea of the creation of a Browser Based IDE to code Java language in the cloud with the additional feature of real time collaboration for the users. It also conveys the idea of integrated forums and technical blog facilities for all the users of the IDE.

SCOPE FOR FUTURE WORK:

Initially this website includes three programming languages i.e, C, C++, JAVA and perl. We can improve this webpage by adding programming languages that come under command line aeguements. More templates can be added.