# ONLINE PROGRAMMING ENVIRONMENT

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**Abstract -** *In today's era where everything is based on computing, different programing languages are being constantly used. Different compilers are used to compile different programming languages. Hence there is a need to have different compilers on the same machine. This process of setting up different compilers on the machine can be overcome by using online programming environment. In today's scenario many online programming environment are available but they have certain limitations. This paper aims at creating a system which will support users to write, edit, compile and run programs. The overall system can be used to reduce the hardware cost and minimize management efforts to maintain the system.*

*Key Words:* **Compiler, Online Programming, Online Compiler, Programming, Coding Platform.**

## 1. INTRODUCTION

There is a need of different compilers to compile different programming languages. The user need to install all those compilers in own system resulting usage of space. When using an online programming environment there is no need to install and run the application on the users own computer. User does not have to purchase resources; and can use the provided resources according to the requirements. This service is an integrated solution for most of the compiling. A software platform that encompasses all the necessary components, application programming interfaces and libraries required by programmers and developers to author, compile, debug and execute language-specific applications. Programming platforms are typically accompanied with development tools that enable effortless application development.  User needs not to bother about the internal architecture of machine, operating system usage, so on. This infrastructure is a model capable of delivering distinguished services like reducing hardware maintenance complexity, real time workload balancing, etc.

## 2. LITERATURE REVIEWED

An online compiler has the same basic functionality as a conventional compiler, however with one significant difference: all of a project or application's source code is stored and executed online via a web browser. Storing and executing source code online significantly reduces both the hardware and the software required by programmers when working on any given project, allowing programmers and development teams to quickly begin projects for a wide range of platforms, devices, and operating systems.

In this we are basically do the Compilation of a centralized mechanism for the institution or system is the primary objective of project. Codes and scheduling of the transmission of codes for the application are stored in the database.

## 3. SYSTEM OVERVIEW

An online compiler cum interpreter (OCC), an easy cooperation and it is also easily executes code for the client side or machine.  The main objective of this project is to provide very convenient online tool which compile and execute program into a single editor which is common for all languages.  It can be use on mobile device.  User can execute the program from anywhere.  Independent of the OS for smartphones as well as computers.

### 3.1 Technologies Used

It is basically a web-based application constructed for the ease in the running aspect on a platform whether being online or offline for the students and the several MNC in the market. This project is made by using Java, CSS, GCC, HTML, XAMPP.

### 3.2 Working Methodology:

In this project the compilation of the programming language C, JAVA are being in running state as of now. This project so designed can be used in any other system too via internet. This design made the usage of the memory unit to the least possible by compiling it on the same single platform without any failure or difficulties.

To make this platform a success, we created an interface using the methodology RAI (Remote Access Interface). A class is then made with a "main" function, through which the program of the user can be compiled in different compilers. Henceforth, the user is supposed to write the code within main function. The given figure illustrates the flow of our entire system both on client end and server end.
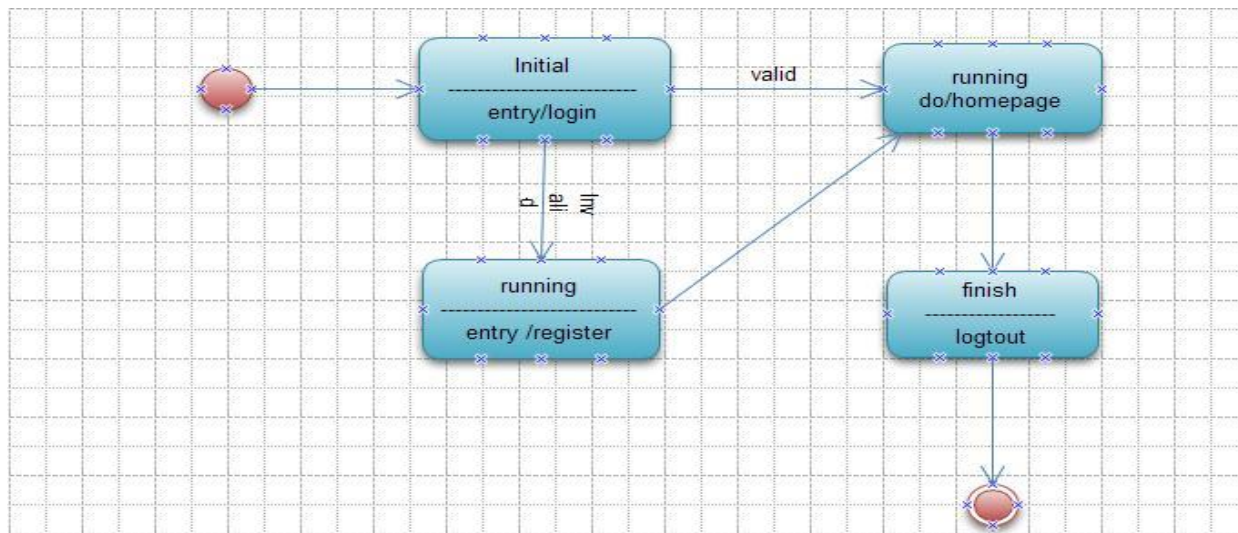


**Fig - 1:** System Flow

### 4.  RESULT

Development Environment is accessible from various devices like desktops, laptops, and smart phones with an internet connection. This paper explains the implementation details of the web based IDE which is present on the server and which support execution of programs in various languages. As the application is deployed on the server there is no need to install and download it and because of this most of the operating system issues or hardware compatibility issues are eliminated. This application can be accessed in real world from any device with an internet connection.

### 5.  CONCLUSION

With online programming platforms, we can be much more flexible and productive in utilizing dynamically allocated compilers to create programs in various programming languages. There are several online compilers available. Compilers which needs hardware support is major issue among them. The future scope for this project is to introduce the test cases of different languages. We hope our paper will provide a better solution for various online compilers needs hardware support and pave the way further research in this area.

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