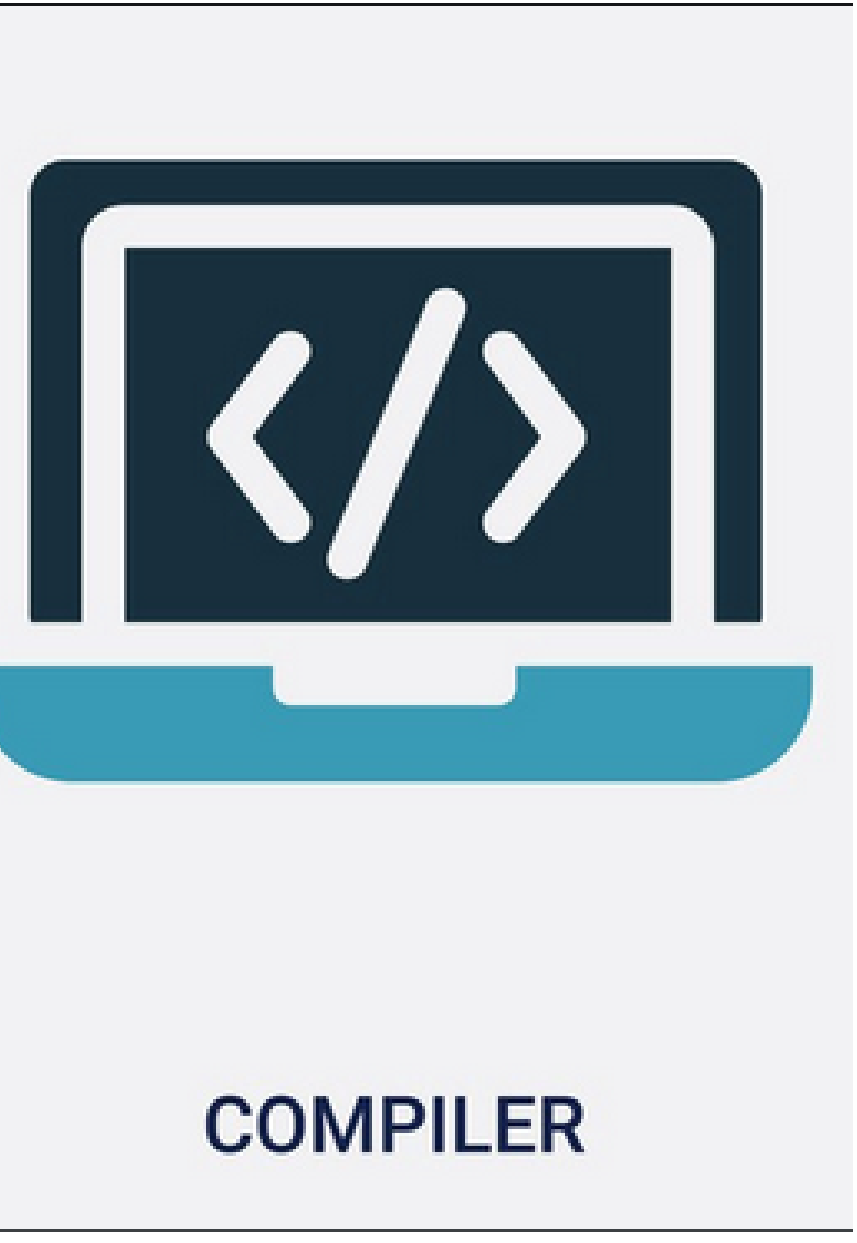

Online Compiler

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Introduction

As Cloud computing is a model for enabling convenient, on demand network access to a shared pool of configurable computing resources that can be rapidly provisioned and released with minimal management effort. I decided to make a project that aims to create an online compiler which helps to reduce the problems of portability of storage and space by making use of the concept of cloud computing.
The ability to use different compilers allows the programmer to pick up the fastest or the most convenient tool to compile the code and remove the errors. Moreover a web based application can be used remotely through any network connection which is platform independent. The errors/Output of the compiled program can be display in a more convenient way.

Study of current System

Compilers are used to run programs and convert them from a text format to executable format. A compiler that is to be installed manually on every system physically requires a lot of space and also configuring of it if not installed using default parameters.
Also once a program is compiled it becomes platform dependent. It is also not easy to carry the same program code to multiple systems if situation doesn't permit the usage of a single system. Another drawback is that we would need to install a different complier on each language on which we wish to work.

Study of current System

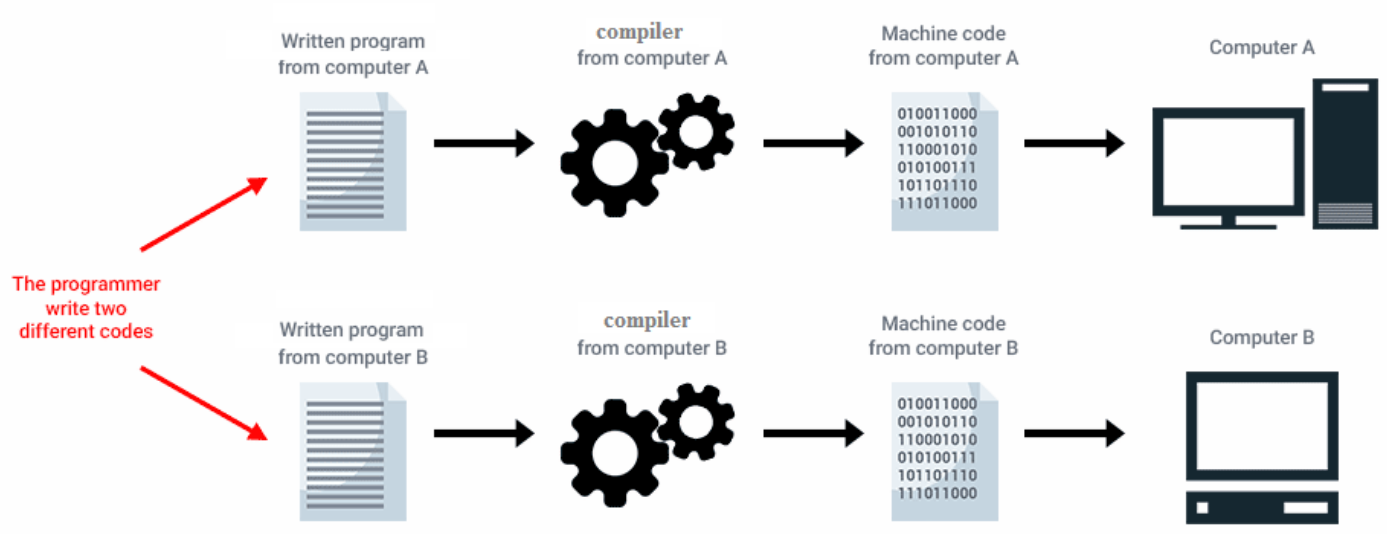

Figure: current system

Problem and weakness of Current System

- A compiler that is to be installed manually on every system physically requires a lot of space and also configuring of it if not installed using default parameters.
- Also once a program is compiled it becomes platform dependent.
- It is also not easy to carry the same program code to multiple systems if situation doesn't permit the usage of a single system.
- We would need to install a different complier on each language on which we wish to work.
- Device and location dependence, users are unable to access systems using a web browser regardless of their location or what device they are using (e.g., PC, mobile phone).

System Architecture

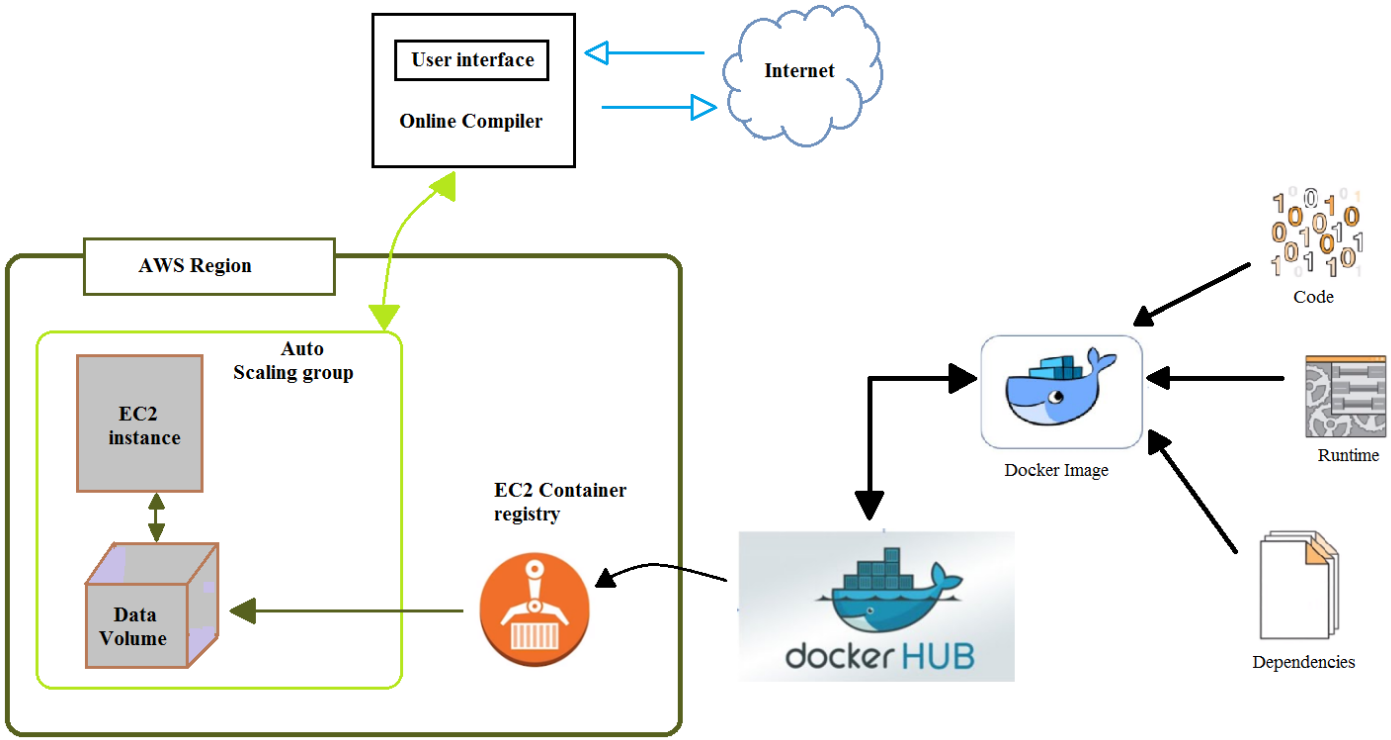

Figure: system architecture

Implementation

The extensive support for deploying PHP based applications in AWS triggered the idea of building the application using PHP. Also the web application to create an online compiler was developed. The code is a server side script. The compilers are hosted on virtual machines created in our Linux AWS cloud account.

Implementation

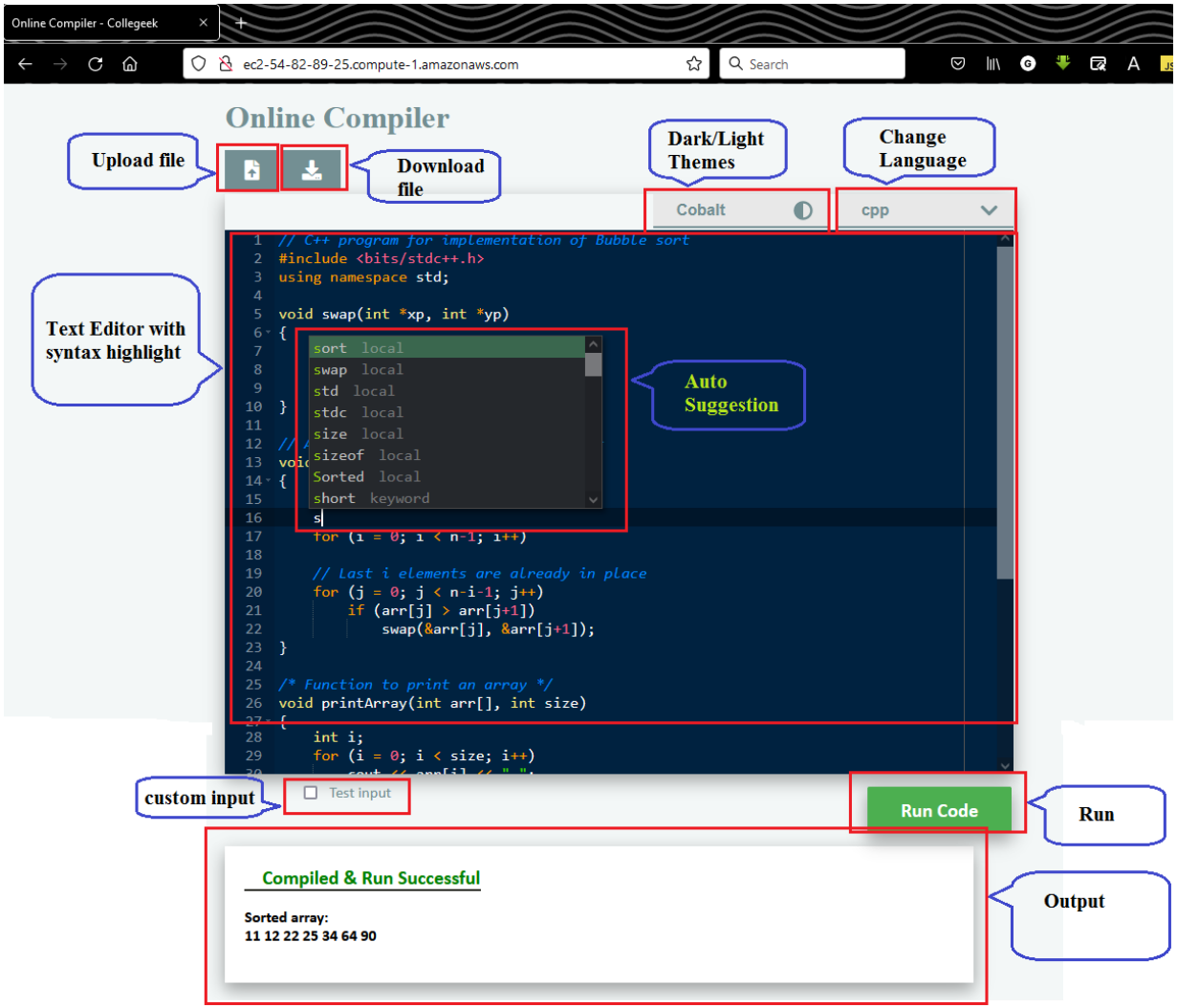

Figure: Compiler

CONCLUSION

The main reason for creating the project is to provide a centralized compiling scheme. Also, it will act as a centralized repository for all the codes written. 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 at the client side.
A compiler, which is the heart of any computing system, transforms source code from a higher level language to a lower, machine level language. This is mainly done in order to create executable files which can then be run in order to execute the program and its instructions. As compared to the current scenario where each compilers required to be installed on each machine separately this would eliminate the need to install compilers separately. So we can check our code at the centralized server.

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Thank You