Powershell Platform

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Abstract- The goal of developing "POWERSHELL PALTFORM" is to develop a learning platform for learners to learn a PowerShell scripts. At present, adopting a new language is very difficult. Learners can't learn the programming language very easily.

This work focuses on learning the PowerShell scripts very easily. Microsoft developed the PowerShell software as well as PowerShell commands which is similar to executing the commands in the command prompt. But the PowerShell platform gives the extra facilities to users. This project is a platform for learners. We can write the PowerShell scripts in the learning platform and observe the result. The main advantage of this system is to reduces the complexity of learning the new language.

I. INTRODUCTION

"POWERSHELL PLATFORM" is a learning platform for learners. This platform provides the facility to the users/learners to write the PowerShell scripts and observe the result. Learners can use the commands links to get the details of that particular commands. Users can search the particular command. And this project used MVC (Model View Controller) to develop this project.

The **Model-View-Controller (MVC)** is an architectural pattern that separates an application into three main logical components: the model, the view, and the controller. Each of these components are built to handle specific development aspects of an application.

Developer/Admin can have the complete control over the application

II. PROBLEM DESCRIPTION

The user was not provided with any platform that is capable of practicing the exercises and study at the same place. There was no facility to access any computer in the intranet remotely. The users faced inconsistency and different outputs with respect to other computer when they run some specific scripts. There was no option that the users can be monitored. The administrator couldn't keep in account about the privileges provided to the users and no action could be taken in case of loopholes. . There was no security check on the users that are working on PowerShell Platform. Diagnosing and fixing problems or potential problems with any computer by remote access. It was a big problem not being able to be consistent by running the scripts on some others PC and getting the same output with another PC. There was no secure way to execute the scripts on one place and working as a complete controlled feature for all the users. There was no facility for administrators to submit and evaluate each user's assessment that is to be evaluated through the test scripts and saving it for further use.

III. SOLUTION DESCRIPTION

The PowerShell Platform provides the user a complete setup with all the facilities to practice and learn related to PowerShell. The platform provides all the users to execute the commands, when executed the output of the commands do not change with respect to the computer it is being executed on. All the services used are consistent and do not rely on any hardware. The platform provides security and the administrator can make sure by deploying access and privileges to the users to ensure no violation and to ensure security management. With the help of PowerShell Platform, the administrator can access any computer and remotely run scripts on it. This feature ensures efficient script plan if we run the same script on different computer. It has provisioning and evaluation system to all the user. The administrator has automatic evaluation for the assessment and store the necessary remarks along with the user details.

IV. LITERATURE SURVEY

Learning a new language is the biggest problem. This is the newest application till now it is not existing. So, this is the only one application which is used to learn the language.
At present peoples are very much interested to learn the programming languages. But they find difficulty in finding the correct platform for learning. **PowerShell** is a task automation and configuration management framework, consisting of a command-line shell and associated scripting language. It is developed by Microsoft. Windows PowerShell is very difficult to understand for beginners. Beginners have no knowledge about PowerShell scripts. So they are not comfortable to learn the scripts.

This PowerShell platform overcome this problem. This platform helps the learners to learn the language very comfortably.

V. EXISTING SYSTEM

Windows PowerShell is a shell developed by Microsoft for purposes of task automation and configuration management. This powerful shell is based on the .NET framework and it includes a command-line shell and a scripting language.

But windows PowerShell is not a user friendly application. User is not comfortable to work with this existing application.

VI. PROPOSED SYSTEM REFERENCE

As the existing system has lot of limitation the proposed system i.e., **"POWERSHELL PLATFORM"** has been developed with key intension to overcome the limitation associated with **"WINDOWS POWERSHELL".**

Our proposed PowerShell platform is a very good platform for learners. If users need any helps like syntax, basics of commands etc. are available in this platform. And it also gives the feature of comparing two files, the files containing the commands. There is a remote connection feature for admin so that he can view the commands which are executing in another system of user.

VII. IMPLEMENTATION DETAILS

We use the following Platform and

Technology:
Operating System: Windows 7,8,10
Software: Visual Studio .Net [Framework 4.0 and above]
Database: Microsoft SQL

The proposed system is developed to support the following feature:

➤ Number of user can access the system simultaneously.
➤ The system provides interactive screen to most of the normal users.
➤ User can view the last submission of command.
➤ He can search the particular commands.
➤ User can give the feedback about this platform.
➤ Admin can compare the scripts and will give the marks.

➤ Admin can export the result to the excel file.

VIII. RESULT & DISCUSSION

Many functionalities are available for users and admin.

Users and Admin can execute the powershell scripts. User can view the last submitted scripts. Figure 1 shows this functionality.

Figure 1.

In this the user is able to write the PowerShell commands and scripts in the editor window and as soon the user clicks Submit button the output of the input script or command is shown in the output window. The user can also execute multiple commands from a list of commands in the input window. the user is able to select the text that he wants to execute and click on submit. There are a times when the user writes incorrect or incomplete commands, in these cases the output window displays respective error to the user.

The user after complete execution of the commands is able to clear the input and output window of the editor using the clear button.

PowerShell Platform provides the user with a function to open a PowerShell script that is stored in the user's computer at any location. When the user opens the selected file the content of the file is copied to the input window ready to be
executed. This helps the user to readily execute the scripts that may be used frequently instead of doing the tedious work of writing them again.

Any user that is using the PowerShell Platform for execution of commands is able to get the last submission of the commands that the user submitted. Last submission stores the last command submitted of every user that has submitted a

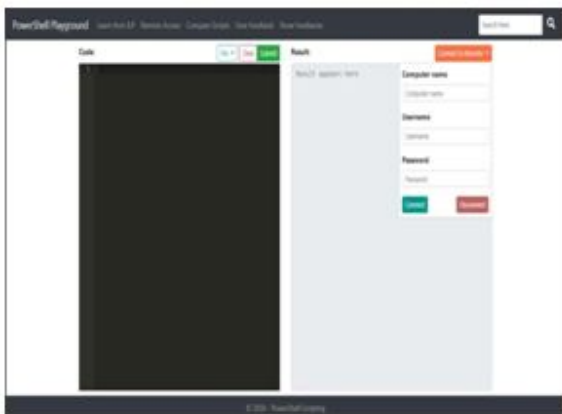command so that the user is able to access the command next time it uses it.

Figure 2. Remote Connection

PowerShell Platform has a feature that allows the admin to connect to a remote computer so that the admin can execute scripts and commands remotely. The admin has to fill in the credentials that after successful access shows which computer admin is accessing remotely and also provide automated evaluation of scripts of the users whose results can be accessed later for further use.

IX. CONCLUSION

PowerShell Platform is used by users for executing PowerShell commands and also to be used during exam for doing the automated evaluation. PowerShell Platform combines the uniqueness of providing you with all the facilities for a PowerShell along with the better user interface giving you an environment for development and wholesome experience. It is the platform that is made for any institute that focus on development and study of PowerShell course on the go and has all the qualities for hands-on practice that makes it a complete package for study and practice. It facilitates the users to save the scripts and to open any script file from system. It gives the user facility to search any PowerShell command and provides them links to useful resources.

PowerShell Platform provides resources to the user to study and work. The platform is explicitly used by PowerShell users and facilitates easy access and assessment of the users. PowerShell Platform, if extended to intranet in institutes of learning, can be used for daily exercises and practice by the users along with rectifying errors by learning from various links and can also be used as a hands-on assessment tool for all the users when needed by the institute under the supervision of the administrator.

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