**Composing and Using Regular Expressions**

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1. **Define regular expressions and explain their purpose.**

Regular expretion are sets of symbols and syntactic elements used to match patterns of text. To put it in other ways, it is a text string for describing a search pattern. It can be achieved by using the engine which is a software that can process them by matching the pattern to the given string. In addition, the engine is part of a larger application which can’t be access directly. There are used for describing a search pattern which make them to be a wildcard. The can also Changing Date Formats which comes from different part of the word. Dates in U.S. English and British English for instance are written different; therefore, regular expression does the job of doing that conventional. In the United States, the date for Christmas Day 2017 would be written as 12/25/2017 while in the U.K. would be written as 25/12/2017

1. **Provide at least three (3) examples which demonstrate the way regular expressions work.**

There is a text editor called [EditPad Pro](http://www.editpadpro.com) and a specialized text processing tool called [PowerGREP](http://www.powergrep.com) which can use the regular expression like \b[A-Z0-9.\_%+-]+@[A-Z0-9.-]+\.[A-Z]{2,6}\b to search for any email address. Moreover, different programming languages use the same regular expression to see whether the user in the form validation has entered the acceptable formatted email address which can be made possible by a single line of code of the particular programming language

Regular expression is a pattern describing a certain amount of text which make them good for searching, text processing and data validation. If you want to get results with just one search, regular expressions are the best solution. You can search for word like separate with this regex s[ae]p[ae]r[ae]te which will give you what you are look for.

Regular expression can be used to search for phones using this \b1?[-( ]\*207[-) ]\*\d{3}[- ]\*\d{4}\b which will result in all phone numbers in area code 207.This make them powerful if you want to find the number of people you knew. Moreover, regular expressions can be used to update data which can be done by searching and replacing it.

1. **Examine the shortcomings of regular expressions and describe at least two (2) situations where using them might be inappropriate.**

Regular expressions tend to be easier to write than they are to read which make them hard to distribute more especially by programmer. Therefore, it might be inappropriate to use the one written by anyone in a program because the could complicated the whole program. This can result in the program which look simple, but difficult to debag.

Regular expressions can be very power more especially in the Linux environment because some commands are not appropriate for any regular user because they can be dangerous. For instance, the dir \*.exe command is so power that anyone can used it to list all files in the current directory which is equivalent to entering the following at the command line dir \*.\*. Using the command on a director which has the system password by a regular user is inappropriate because of the user ‘s security in the system which is going to be exposed. Such command should be users by someone who has administrative power such as root which can be a good way of protecting users ‘s privacy.

**Bibliography**

1. <http://www.bsd.org/regexintro.html>
2. <https://www.regexbuddy.com/regex.html>
3. http://www.worldcat.org/wcpa/servlet/DCARead?standardNo=0764574892&standardNoType=1&excerpt=true