Assignmente Larguages Help Handouts

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Intr https://eduassistpro.github.

Character classes

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Regular expressions: Motivation

Suppose you are testing the performance of a new sorting algorithm by measuring its runtime on randomly generated arrays of numbers

Assignment Project Exam Help Generating an unsorted array with 10000 elements took 1.250 seconds

Sortin

Sortin https://eduassistpro.github.

Sorting took 8.951 seconds

Your task is to write a program that determines the aver the sorting algorithm: WeChat edu_assist_program that determines the aver

Average runtime for 10000 elements is 8.886 seconds

Solution: The regular expression / Sorting took (\d+\.\d+) seconds/ allows us to get the required information

→ Regular expressions are useful for information extraction

Regular expressions: Motivation

Suppose you have recently taken over responsibility for a company's website. You note that their HTML files contain a large number of URLs optaining superfluous pourrences of Exam Help http://www.myorg.co.uk/info/refund.../vat.html

Your task i

https://eduassistpro.github.

while making sure that relative URLs like

../vid-Aidd WeChat edu_assist_pr

are preserved

Solution: s!/[^\/]+/\.\.!!; removes a superfluous dot-segment

→ Substitution of regular expressions is useful for text manipulation

Regular expressions: Introductory example

 $\hfill Ahttps?: \hfill (at | dog) \hfill (at |$

Assignment Project Exam Help • h, t, p, s, :, \/, c, a, t, d, o, g are characters

- ? and
- [^\/ https://eduassistpro.github.

- (cat|dog) is alternation within a capture grou
 \1 is a a coefficient we capture Ture CU_assist_pressure of the coefficient of the capture of the capture

Pattern match operation

 To match a regular expession regexpr against the special variable \$_ simply use one of the expressions / regexpr/ or m/regexpr/

Stignishe target string of the pattern match

 In a scal https://eduassistpro.github.

- ...}
- if (m/) Add WeChat (edu) // assist_pr

Regular expressions: Characters

The simplest regular expression just consists of a sequence of

Assignment telescopect backs am Help that matches exactly this sequence of characters occurring as a substring

in the targ

```
*_ * https://eduassistpro.github.
if (/cbc/) { print "Match\n"} else { print "Noumatch\n" }
```

Output:

Match Add WeChat edu_assist_pr

```
$_ = "ababcbcdcde";
if (/dbd/) { print "Match\n"} else { print "No<sub>||</sub>match\n" }
```

Output:

No match

Regular expressions: Special variables

Often we do not just want to know whether a regular expession matches

a target string, but retrieve additional information

A SISTENMENT OF COLOR TO SECOND TO SECOND

Note th

- The state that the state of t
- The special variable \$& returns the match it

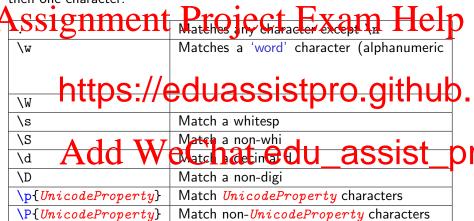
```
$_ = "alta (b) (de We Chat edu assist plif (/cbc/) { print "Match of found of at open of a specific found of a specific found
```

Output:

Match found at position 4: cbc

Regular expressions: Special escapes

There are various special escapes and metacharacters that match more then one character:



Regular expressions: Unicode properties

• Each unicode character has one or more properties, for example, which script it belongs it

Assignment Projecte Examplical p

- \P{*U*
- Exam https://eduassistpro.github.

Ara	3.7 Jagasolotpi orgiti is
ASCII	ASCII characters
Curre Cy_Sy	Digits-in Liquipedu_assist
Digit 144	Volgits-intalled-ipts-UU_assist_
Greek	Greek characters
Han	Chinese kanxi or Japanese kanji characters
Space	Whitespace characters

See http://perldoc.perl.org/perluniprops.html for a complete list

Regular expressions: Character class

 A character class, a list of characters, special escapes, metacharacters and unicode properties enclosed in square brackets, matches any single

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- One m
- A care type://eduassistpro.github.that is, it matches any single character that is not from within the class, for example, [^01a-z]

Add WeChat edu_assist_pr

```
if (/[bc][b-e][^bcd]/) {    print "Match_at_positions_$-[0]_to_",$+[0]-1,":_$\&\n"};
```

Output:

Match at positions 8 to 10: cde

Quantifiers

• The constructs for regular expressions that we have so far are not sufficient to match, for example, natural numbers of arbitrary size

A SIST WITH THE TOTAL THE STORE OF THE STORE

This is ma



Quantifiers are greedy by default and match the longest leftmost sequence of characters possible

Quantifiers

```
regexpr*
Match regexpr 0 or more times

regexpr+
Match regexpr 1 or more times

Reference to the second times

regexpre (n)
Match regexpr exactly n times

regex

regex

regex
```

Example https://eduassistpro.github.

Output:

Match at positions 13 to 18: 10.486 Match at positions 3 to 8: 481370

Quantifiers

Example:

```
"E00481370";
issignment.Project.Exam.Help
Output:
```

† https://eduassistpro.github.

- The reg
- As the example illustrates, the regular expression
 - match Add WeChat edu_assist_pr
 - - → quantifiers are greedy by default

Revision

Read

A Shipter 7: In the World of Regular Expressions Help Chapter 8: Matching with Regular Expressions

of

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- http://perldoc.perl.org/perlre.html
- http://perldoc.perl.org/perlretut.html
- http://www.perlfect.com/articles/regextutor.shtml