Report for Lab Work 08: Linux Regular Expressions & Filters.

|  |  |  |
| --- | --- | --- |
| **Student Name Surname** | **Student ID (nV)** | **Date** |
|  |  |  |

3.0. Generate You Variant Nr.

a) Write your Surname in the letters of the English alphabet. Must be at least 7 letters, if not enough, then add the required number of letters from the Name (if not enough, then repeat Surname and Name).

For example, for Li Yurijs there will be LIYURIJS.

b) Replace the first 7 letters with their ordinal numbers in the alphabet.

For example, 12 09 25 21 18 09 10.

c) Consistently add these 7 numbers.

For example, (12 + 09 + 25 + 21 +18 + 09 + 10) = 104

d) The resulting will be your variant Nr.

For example, Variant Nr = 104

3.1. Regular Expressions understanding.

**Remark 1.**

In all of the below, the question is, does the regular expression match the FULL string.  
Slash (/) is the delimiter character showing where the regular expression begins and ends.  
Strings to be matched start and end with non-blank characters: there are no leading or trailing blanks.

**Remark 2.** Select odd questions Nr for odd Variant Nr; even questions Nr for even Variant Nr

**Table 1. REs understanding.**

|  |  |  |
| --- | --- | --- |
| Nr | Task Description | Your Answer (a, b, c, ...) |
| 1.  a)  b)  c)  d)  e) | Which of the following matches regexp /a(ab)\*a/  abababa  aaba  aabbaa  aba  aabababa |  |
| 2.  a)  b)  c)  d) | Which of the following matches regexp /ab+c?/  abc  ac  abbb  bbc |  |
| 3.  a)  b)  c)  d)  e)  f) | Which of the following matches regexp /a.[bc]+/  abc  abbbbbbbb  azc  abcbcbcbc  ac  asccbbbbcbcccc |  |
| 4.  a)  b)  c) | Which of the following matches regexp /abc|xyz/  abc  xyz  abc|xyz |  |
| 5.  a)  b)  c)  d)  e)  f)  g) | Which of the following matches regexp /[a-z]+[\.\?!]/  battle!  Hot  green  swamping.  jump up.  undulate?  is.? |  |
| 6.  a)  b)  c)  d)  e)  f) | Which of the following matches regexp /[a-zA-Z]\*[^,]=/  Butt=  BotHEr,=  Ample  FIdDlE7h=  Brittle =  Other.= |  |
| 7.  a)  b)  c)  d)  e)  f) | 7 Which of the following matches regexp /[a-z][\.\?!]\s+[A-Z]/  (\s matches any space character)  A. B  c! d  e f  g. H  i? J  k L |  |
| 8.  a)  b)  c)  d) | Which of the following matches regexp /(very )+(fat )?(tall|ugly) man/  very fat man  fat tall man  very very fat ugly man  very very very tall man |  |
| 9.  a)  b)  c)  d)  e) | Which of the following matches regexp /<[^>]+>/  <an xml tag>  <opentag> <closetag>  </closetag>  <>  <with attribute=”77”> |  |
| 10.  a)  b)  c)  d)  e) | Which of the following matches regexp /\bb[ou]y\b/  bbouy man  bouy man  very fat boy man  very tall buy  tail buoy |  |

3.2. Regular Expressions creation.

**Table 2. Egrep REs creation.**

|  |  |  |
| --- | --- | --- |
| Nr | Your Task Variant Nr and Text | Your Answer (RE) |
| Example  4.2.2.1.0. | For example.  0. Use egrep commandfor create and test Your REs, allowing to find the correct time in the format Mm.Ss (00.00 – 59.59). **Remark.** Create pattern with possible leading zeros in each field (for example, 59.01 or 59.1 or 01.00 or 01.0 or 1.0). | For example.  #!/bin/sh  egrep "\<\  ([0-9]|[0-5][0-9])\.\  ([0-9]|[0-5][0-9]\  \>" $1 |
| 4.2.2.2.0. | 0. Use egrep command for create and test Your REs, allowing to find the correct IPv4 address that matches with every Class networks (0.0.0.0-255.255.255.255). **Remark.** Create pattern with possible leading zeros in each octet. (See solution example before page). | #!/bin/sh  egrep "\<\  ([0-9]|[0-9][0-9]|[01][0-9][0-9]|2[0-4][0-9]|25[0-5])\.\  ([0-9]|[0-9][0-9]|[01][0-9][0-9]|2[0-4][0-9]|25[0-5])\.\  ([0-9]|[0-9][0-9]|[01][0-9][0-9]|2[0-4][0-9]|25[0-5])\.\  ([0-9]|[0-9][0-9]|[01][0-9][0-9]|2[0-4][0-9]|25[0-5])\  \>" $1 |
| 4.2.2.1. | Time finding.  Select Your sub-task Nr = (Your Variant Nr) mod 4 + 1. Example for Var.Nr =104 🡪 104 mod 4 + 1 = 0 + 1 = 1.  Your Task Variant Text |  |
| 4.2.2.2. | IP address finding.  Select Your sub-task Nr = (Your Variant Nr) mod 5 + 1. Example for Var.Nr =104 🡪 104 mod 5 + 1 = 4 + 1 = 5.  Your Task Variant Text |  |
| 4.2.2.3. | Date finding.  Select Your sub-task Nr = (Your Variant Nr) mod 6 + 1. Example for Var.Nr =104 🡪 104 mod 6 + 1 = 2 + 1 = 3.  Your Task Variant Text |  |
| 4.2.2.4. | Credit Card finding.  Select Your sub-task Nr = (Your Variant Nr) mod 7 + 1. Example for Var.Nr =104 🡪 104 mod 7 + 1 = 6 + 1 = 7.  Your Task Variant Text |  |