1. What is the name of the feature responsible for generating Regex objects?

The re module re.compile() allows to compile Res into objects.

1. Why do raw strings often appear in Regex objects?

Raw strings help us in treating backlash as a normal character and not to be escaped.

1. What is the return value of the search() method?

Match objects

1. From a Match item, how do you get the actual strings that match the pattern?

X= re.search (r”\b string\w”,txt).group()

1. In the regex which created from the r'(\d\d\d)-(\d\d\d-\d\d\d\d)', what does group zero cover? Group 2? Group 1?

Group zero returns entire matched text and is equal to group() method

Group 1 returns string of 3 numbers

Group 2 returns string of 4 numbers

a string of three numbers, a hyphen, three more numbers, another hyphen, and four numbers.

1. In standard expression syntax, parentheses and intervals have distinct meanings. How can you tell a regex that you want it to fit real parentheses and periods?

They can be escaped using backlash \(, \)

1. The findall() method returns a string list or a list of string tuples. What causes it to return one of the two options?

If there is exactly one group, return a list of strings matching that group. If multiple groups are present, return a list of tuples of strings matching the groups.

1. In standard expressions, what does the | character mean?

Either or

1. In regular expressions, what does the character stand for?

? it means zero or more occurrences.

1. In regular expressions, what is the difference between the + and \* characters?

+ means one or more occurrences

\* means zero or more occurrences

1. What is the difference between {4} and {4,5} in regular expression?

There must be at least 4 to 5 repetitions

1. What do you mean by the \d, \w, and \s shorthand character classes signify in regular expressions?

\d Returns the strings that contain digits (0-9)

\w Returns the string that contains any word characters a to Z , 0-9 and underscore \_ character.

\s Returns string that has white space characters.

1. What do means by \D, \W, and \S shorthand character classes signify in regular expressions?

\D Returns the strings that does not contain digits (0-9)

\W Returns the string that does not contains any word characters a to Z , 0-9 and underscore \_ character

\S Returns string that does not contain white space characters

1. What is the difference between .\*? and .\*?

\*? Gives string with zero or more occurrences.

? give zero or one occurrences.

1. What is the syntax for matching both numbers and lowercase letters with a character class?

x = re.search("[a-z0-9]", txt)

1. What is the procedure for making a normal expression in regax case insensitive?

(?i)

re.IGNORECASE

1. What does the . character normally match? What does it match if re.DOTALL is passed as 2nd argument in re.compile()?

Any character except new line. If the DOTALL flag has been specified then this matches any character including new line.

1. If numReg = re.compile(r'\d+'), what will numRegex.sub('X', '11 drummers, 10 pipers, five rings, 4 hen') return?

re.compile(r'\d+') it will replace all the string with numbers 0-9

numRegex.sub('X', '11 drummers, 10 pipers, five rings, 4 hen') it will replace all X with the string

1. What does passing re.VERBOSE as the 2nd argument to re.compile() allow to do?

This flag allows you to write regular expressions that look nicer and are more readable by allowing you to visually separate logical sections of the pattern and add comments

20. How would you write a regex that match a number with comma for every three digits? It must match the given following:

'42'

'1,234'

'6,368,745'

but not the following:

'12,34,567' (which has only two digits between the commas)

'1234' (which lacks commas)

^\d{1,3}(,\d{3})\*$

21. How would you write a regex that matches the full name of someone whose last name is Watanabe? You can assume that the first name that comes before it will always be one word that begins with a capital letter. The regex must match the following:

'Haruto Watanabe'

'Alice Watanabe'

'RoboCop Watanabe'

but not the following:

'haruto Watanabe' (where the first name is not capitalized)

'Mr. Watanabe' (where the preceding word has a nonletter character)

'Watanabe' (which has no first name)

'Haruto watanabe' (where Watanabe is not capitalized)

^[A-Za-z]+((\s)?([A-Za-z])+)\*$

22. How would you write a regex that matches a sentence where the first word is either Alice, Bob, or Carol; the second word is either eats, pets, or throws; the third word is apples, cats, or baseballs; and the sentence ends with a period? This regex should be case-insensitive. It must match the following:

'Alice eats apples.'

'Bob pets cats.'

'Carol throws baseballs.'

'Alice throws Apples.'

'BOB EATS CATS.'

but not the following:

'RoboCop eats apples.'

'ALICE THROWS FOOTBALLS.'

'Carol eats 7 cats.'

Able to do this but was unable to get the solution

tt=re.search(r'Alice|Bob|Carol(.\*?)apples|cats|baseball', txt1).group(1)

'. eats|pets|throw.'