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Topic	Regular Expression	Last updated on	09 October 2024

1. Which module in Python supports regular expressions?
    a. re
    b. regex
    c. pyregex
    d. none of the mentioned

Ans: a.re

Explanation: re is a part of the standard library and can be imported using: import re.

2. What does the function re.match do?
    a. matches a pattern at the start of the string
    b. matches a pattern at any position in the string
    c. such a function does not exist
    d. none of the mentioned

Ans: a.matches a pattern at the start of the string

Explanation: It will look for the pattern at the beginning and return None if it isn't found.

3. What does the function re.search do?
    a. matches a pattern at the start of the string
    b. matches a pattern at any position in the string
    c. such a function does not exist
    d. none of the mentioned

Ans: b.matches a pattern at any position in the string

Explanation: It will look for the pattern at any position in the string.

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4. The function of re.search is _____.
    a. Matches a pattern at the start of the string
    b. Matches a pattern at the end of the string
    c. Matches a pattern from any part of a string
    d. Such a function does not exist

Ans: c.Matches a pattern from any part of a string

Explanation: The re module of Python consists of a function re.search. It's function is to match a pattern from anywhere in a string.

5. The character Dot (that is, '.') in the default mode, matches any character other than _____
    a. caret
    b. ampersand
    c. percentage symbol
    d. newline

Ans: d. newline

Explanation: The character Dot (that is, '.') in the default mode, matches any character other than newline. If the DOTALL flag is used, then it matches any character other than newline.

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6. The expression a{5} will match _____ characters with the previous regular expression.
    a. 5 or less
    b. exactly 5
    c. 5 or more
    d. exactly 4

Ans: b. exactly 5

Explanation: The character {m} is used to match exactly m characters to the previous regular expression. Hence the expression a{5} will match exactly 5 characters and not less than that.

7. _____ matches the end of the string.
    a. '^', '$'
    b. '$', '^'
    c. '$', '?'
    d. '?', '^'

Ans: a. '^', '$'

Explanation: '^' (carat) matches the start of the string.
'$' (dollar sign) matches the end of the string.

8. Which of the following special characters matches a pattern only at the end of the string?
    a. \B
    b. \X
    c. \Z
    d. \A

Ans: c.\Z

Explanation: \B matches a pattern which is not at the beginning or end of a string. \X refers to re.VERBOSE. \A matches a pattern only at the start of a string. \Z matches a pattern only at the end of a string.

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9. What type of string is r'hello'?
    a. Raw String
    b. Normal String
    c. Multiline String
    d. Byte String

Ans: a. Raw String

Explanation: Raw strings treat backslashes as literal characters, not escape characters.

10. What is a Raw String in Python?
    a. A string that recognizes escape sequences
    b. A string that only contains numbers
    c. A string that ignores escape sequences
    d. A string that is encrypted

Ans: c. A string that ignores escape sequences

Explanation: Raw strings in Python (prefixed with 'r') ignore escape sequences, treating them as literal characters.

11. What is true about a raw string?
    a. It recognizes escape sequences.
    b. It doesn't recognize escape sequences.
    c. It only accepts numeric characters.
    d. It is always empty.

Ans: b. It doesn't recognize escape sequences.

Explanation: In raw strings, backslashes are treated as literal characters.

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12. What is a character with a special meaning in regular expressions called?
    a. Special Character
    b. WildCard Character
    c. Meta Character
    d. Escape Character

Ans: b. WildCard Character

Explanation: Wild card characters match various patterns in regular expressions.

13. What does the group() method of a regular expression return?
    a. A list of all matches
    b. The string that matched the regular expression
    c. The number of matches
    d. The pattern used for matching

Ans: b. The string that matched the regular expression

Explanation: The group() method returns the portion of the string that matched the pattern.

14. What is the wildcard? (period) match?
    a. Any digit
    b. Any letter
    c. Any single character except a new line
    d. Any whitespace

Ans: c. Any single character except a new line

Explanation: The period can match any character except for newline characters.

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15. What does the wildcard ^ (caret) match?
    a. The end of the string
    b. Any character
    c. The start of the string
    d. Any whitespace

Ans: c. The start of the string

Explanation: The caret matches the beginning position of the string.

16. What does the wildcard $ (dollar) match?
    a. The beginning of the string
    b. Any character
    c. The end of the string
    d. A whitespace character

Ans: c. The end of the string

Explanation: The dollar sign matches the position at the end of the string.

17. What does the wildcard [...] (characters within square brackets) match?
    a. A single character
    b. Any string
    c. A whitespace character
    d. A digit

Ans: a. A single character

Explanation: Square brackets match any single character listed within them.

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18. What does the pattern r'[4-8]' match?
    a. Any single number between 0 and 3
    b. Any single number between 4 and 8
    c. Any letter
    d. Any digit

Ans: b. Any single number between 4 and 8

Explanation: The range specifies matching any character in that range.

19. What does the pattern r'[A-D]' match?
    a. Any number
    b. Any alphabet between A and D
    c. Any lowercase letter
    d. Any uppercase letter

Ans: b. Any alphabet between A and D

Explanation: The pattern matches any single uppercase letter from A to D.

20. What does the pattern r'[ad]' match?
    a. Any single alphabet except a or d
    b. Any digit
    c. Any single alphabet - a or d
    d. Any character

Ans: c. Any single alphabet - a or d

Explanation: It matches either 'a' or 'd'.

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21. What does the pattern r'[^abc]' match?
    a. a, b, or c
    b. Any character except a, b, or c
    c. Only digits
    d. Any letter

Ans: b. Any character except a, b, or c

Explanation: The caret inside brackets negates the characters, matching anything else.

22. What does the pattern r'[0-4][0-9]' match?
    a. Any two-digit number
    b. Numbers from 00 to 49
    c. Numbers from 40 to 49
    d. A single digit

Ans: b. Numbers from 00 to 49

Explanation: The first digit is between 0 and 4, and the second between 0 and 9.

23. What does the pattern r'[a-zA-Z]' match?
    a. Any digit
    b. Any lowercase letter
    c. Any uppercase letter
    d. Any alphabet - a-z or A-Z

Ans: d. Any alphabet - a-z or A-Z

Explanation: This matches any single letter, whether uppercase or lowercase.

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24. What does the wildcard \w (lowercase) match?
    a. Non-word characters
    b. Any single letter, digit, or underscore
    c. Only letters
    d. Any whitespace

Ans: b. Any single letter, digit, or underscore

Explanation: \w matches word characters, which include letters, digits, and underscores.

25. What does the wildcard \W (uppercase) match?
    a. Word characters
    b. Non-word characters
    c. Digits
    d. Letters

Ans: b. Non-word characters

Explanation: \W matches any character that is not a word character.

26. What does the wildcard \s match?
    a. Any digit
    b. Any letter
    c. Whitespace
    d. Non-whitespace

Ans: c. Whitespace

Explanation: \s matches spaces, tabs, and newline characters.

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27. What does the wildcard \d match?
    a. Non-digit characters
    b. Any digit
    c. Letters
    d. Special characters

Ans: b. Any digit

Explanation: \d matches any single digit character (0-9).

28. What does the wildcard \D match?
    a. Any digit
    b. Non-digits
    c. Letters only
    d. Special characters

Ans: b. Non-digits

Explanation: \D matches any character that is not a digit.

29. What does the wildcard \A match?
    a. The end of the string
    b. The beginning of the string
    c. Any character
    d. Any whitespace

Ans: b. The beginning of the string

Explanation: \A matches only the start of the string.

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30. What does the wildcard \Z match?
    a. The beginning of the string
    b. The end of the string
    c. Any character
    d. Any whitespace

Ans: b. The end of the string

Explanation: \Z matches only the end of the string.

31. Which of the following is a match for the pattern "he..o"?
    a. "hello"
    b. "he12o"
    c. "he!!o"
    d. All of the above

Ans: d. All of the above

Explanation: The pattern matches any five-character string starting with "he" and ending with "o" with any two characters in between.

32. Which of the following is a match for the pattern ^hello?
    a. "hello"
    b. "hello world"
    c. "hellothere"
    d. "hellooooooo"

Ans: a. "hello"

Explanation: The ^ asserts that "hello" must be at the start of the string.

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33. Which of the following is a match for the pattern planet$?
    a. "planet"
    b. "hello planet"
    c. "our blue planet"
    d. All the above

Ans: a. "planet"

Explanation: The $ asserts that "planet" must be at the end of the string.

34. Which string will match the regular expression he.+o?
    a. "hello"
    b. "heo"
    c. "heo123"
    d. "he!!"

Ans: a. "hello"

Explanation: The .+ requires at least one character between "he" and "o".

35. Which string will match the regular expression he.?o?
    a. "heo"
    b. "hello"
    c. "he123o"
    d. "heyo"

Ans: a. "heo"

Explanation: The .? allows for zero or one character between "he" and "o".

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36. Which of the following creates a pattern object?

a. re.create(str)
b. re.regex(str)
c. re.compile(str)
d. re.assemble(str)

Ans: c. re.compile(str)

Explanation: This function converts a given string into a regex pattern object.

37. The special character \B matches the empty string, but only when it is _____.

a. at the beginning or end of a word
b. not at the beginning or end of a word
c. at the beginning of the word
d. at the end of the word

Ans: b. not at the beginning or end of a word

Explanation: \B matches a position that is not at a word boundary.

38. What will be the output of the following Python code?

```
sentence = 'we are humans'

matched = re.match(r'(.*) (.*?) (.*)', sentence)

print(matched.groups())
```

a. ('we', 'are', 'humans')
b. (we, are, humans)
c. ('we', 'humans')
d. 'we are humans'

Ans: a. ('we', 'are', 'humans')

Explanation: This returns all the matched subgroups.

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39. What will be the output of the following Python code?

```
sentence = 'we are humans'

matched = re.match(r'(.*) (.*?) (.*)', sentence)

print(matched.group())
```

a. ('we', 'are', 'humans')
b. (we, are, humans)
c. ('we', 'humans')
d. 'we are humans'

Ans: d. 'we are humans'

Explanation: This returns the entire matched string.

40. What will be the output of the following Python code?

```
sentence = 'we are humans'

matched = re.match(r'(.*) (.*?) (.*)', sentence)

print(matched.group(2))
```

a. 'are'
b. 'we'
c. 'humans'
d. 'we are humans'

Ans: a. 'are'

Explanation: This returns the second subgroup matched.

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41. What will be the output of the following Python code?

```
sentence = 'horses are fast'

regex = re.compile('(?P<animal>\w+) (?P<verb>\w+) (?P<adjective>\w+)')

matched = re.search(regex, sentence)

print(matched.groupdict())
```

a. {'animal': 'horses', 'verb': 'are', 'adjective': 'fast'}
b. ('horses', 'are', 'fast')
c. 'horses are fast'
d. 'are'

Ans: a. {'animal': 'horses', 'verb': 'are', 'adjective': 'fast'}

Explanation: This returns a dictionary of named groups.

42. Which of the following functions clears the regular expression cache?

a. re.sub()
b. re.pos()
c. re.purge()
d. re.subn()

Ans:c. re.purge()

Explanation: This function clears the regex cache.

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43. Given the following code:

```
import re

pattern = r"he..o"

test_strings = ["hello", "he12o", "he!!o", "he__o", "he55o", "he!zo", "he&*o"]

for string in test_strings:
    match = re.match(pattern, string)
    if match:
        print(f"Matched: {string}")
    else:
        print(f"Did not match: {string}")
```

What will be the output?

a. Matched: hell/o
b. Matched: he585o
c. Matched: hezo
d. Matched: he&*o

Ans: d. Matched: he&*o

Explanation: The pattern matches any string starting with "he" followed by any two characters and ending with "o".

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44. What does the quantifier + check?
    a. Matches the preceding character zero or more times.
    b. Matches the preceding character one or more times.
    c. Matches the preceding character exactly once.
    d. Matches any character.

Ans:b. Matches the preceding character one or more times.

Explanation: The + quantifier requires that the preceding element appears at least once.

45. Which quantifier is used to check if the preceding character appears zero or more times starting from that position?
    a. +
    b. *
    c. ?
    d. {}

Ans: b. *

Explanation: The * quantifier allows for zero or more occurrences of the preceding element.

46. Which Python regular expression pattern matches one or more occurrences?
    a. +
    b. *
    c. ^
    d. ?

Ans: a. +

Explanation: The + pattern matches one or more occurrences of the preceding element.

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47. Which qualifier is used to check exactly or a range of occurrences?

a. +
b. *
c. {}
d. ?

Ans: c. {}

Explanation: Curly braces {} specify an exact number or range of occurrences.

48. What does the search() function do in Python's regular expressions?

a. Searches for a match at the beginning of the string
b. Searches for a match anywhere in the string
c. Searches for all matches in the string
d. Replaces matches in the string

Ans: b. Searches for a match anywhere in the string

Explanation: The search() function finds a match for the pattern anywhere in the string.

49. What does the match() function do in Python's regular expressions?

a. Searches for a match anywhere in the string
b. Searches for a match at the beginning of the string
c. Searches for all matches in the string
d. Replaces matches in the string

Answer: b. Searches for a match at the beginning of the string

Explanation: The match() function in Python's regular expressions checks if a pattern matches at the very start of a string.

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50. What is a Normal String in Python?

a. Ignore escape sequence

b. Recognize escape sequences

c. Limited to alphanumeric character

d. Have fixed lengths

Answer: b. Recognize escape sequences

Explanation: A normal string in Python can include escape sequences like \n for a newline and \t for a tab, allowing for special formatting. This means it can represent various characters beyond just regular text.