**Assignment-16**

**Q1. What is the benefit of regular expressions?**

Regular expressions are useful in search and replace operations. The typical use case is to look for a sub-string that matches a pattern and replace it with something else. Most APIs using regular expressions allow you to reference capture groups from the search pattern in the replacement string.

**Q2. Describe the difference between the effects of "(ab)c+" and "a(bc)+." Which of these, if any, is the unqualified pattern "abc+"?**

"(ab)c+" = (ab) + c

"a(bc)+." = unqualified pattern

**Q3. How much do you need to use the following sentence while using regular expressions?**

**import re**

Only one time.

**Q4. Which characters have special significance in square brackets when expressing a range, and under what circumstances?**

: has special significance. This : must have numeric value either on both sides or one side.

**Q5. How does compiling a regular-expression object benefit you?**

It finds a particular pattern from the document.

**Q6. What are some examples of how to use the match object returned by re.match and re.search?**

# import re module

import re

Substring ='string'

String1 ='''We are learning regex with geeksforgeeks

regex is very useful for string matching.

It is fast too.'''

String2 ='''string We are learning regex with geeksforgeeks

regex is very useful for string matching.

It is fast too.'''

# Use of re.search() Method

print(re.search(Substring, String1, re.IGNORECASE))

# Use of re.match() Method

print(re.match(Substring, String1, re.IGNORECASE))

# Use of re.search() Method

print(re.search(Substring, String2, re.IGNORECASE))

# Use of re.match() Method

print(re.match(Substring, String2, re.IGNORECASE))

**Q7. What is the difference between using a vertical bar (|) as an alteration and using square brackets as a character set?**

(a|b|c) is a regex "OR" and means "a or b or c", although the presence of brackets, necessary for the OR, also captures the digit.

**Q8. In regular-expression search patterns, why is it necessary to use the raw-string indicator (r)? In   replacement strings?**

Because regular expressions are frequently static strings, which are conveniently represented as string literals. And from the different string literal notations available, raw strings are a convenient choice, when the regular expression includes a backslash character.