**ASSIGNMENT NO. 2: Regular Expression Practice Questions**

**Question 1- Write a RegEx pattern in python program to check that a string contains only a certain set of characters (in this case a-z, A-Z and 0-9).**

**SOLUTION: def string\_contained\_char(string):**

**charRe = re.compile(r'[^a-zA-Z0-9]')**

**string = charRe.search(string)**

**return not bool(string)**

**Print(string\_contained\_char("ABCDEFpython1234"))**

**print(string\_contained\_char("$&#\*@%!}{"))**

**Print(string\_contained\_char("ISRO890#$@&}{"))**

**O/P: True**

**False**

**False**

**Question 2- Write a RegEx pattern that matches a string that has an ‘a ‘ followed by zero or more b's**

**SOLUTION: : def text\_is(text):**

**patterns = '^ab\*?'**

**if re.search(patterns, text):**

**return ('Its a match!')**

**else:**

**return('Not matched!')**

**print(text\_is("ac"))**

**print(text\_is("abc"))**

**print(text\_is("abbc"))**

**print(text\_is("ba"))**

**O/P:**

**Its a match!**

**Its a match!**

**Its a match!**

**Not matched!**

**Question 3- Write a RegEx pattern that matches a string that has an a followed by one or more b's**

**SOLUTION: def text\_is(text):**

**patterns = 'ab+?'**

**if re.search(patterns, text):**

**return 'Its match!'**

**else:**

**return('Not matched!')**

**print(text\_is("ab"))**

**print(text\_is("abc"))**

**print(text\_is("ac"))**

**OUTPUT:**

**Its match!**

**Its match!**

**Not matched!**

**Question 4- Write a RegEx pattern that matches a string that has an a followed by zero or one 'b'.**

**SOLUTION: def text\_is(text):**

**patterns = 'ab?'**

**if re.search(patterns, text):**

**return 'Its a match!'**

**else:**

**return('Not matched!')**

**print(text\_is("ab"))**

**print(text\_is("abc"))**

**print(text\_is("bbc"))**

**print(text\_is("aabbc"))**

**OUTPUT: Its a match!**

**Its a match!**

**Not matched!**

**Its a match!**

**Question 5- Write a RegEx pattern in python program that matches a string that has an a followed by three 'b'.**

**SOLUTION:**

**def text\_is(text):**

**patterns = 'ab{3}?'**

**if re.search(patterns, text):**

**return 'Found a match!'**

**else:**

**return('Not matched!')**

**print(text\_is("abbb"))**

**print(text\_is("aabbbbbgc"))**

**print(text\_is("aabababc"))**

**OUTPUT: Found a match!**

**Found a match!**

**Not matched!**

**Question 6- Write a RegEx pattern in python program that matches a string that has an a followed by two to three 'b'.**

**SOLUTION:**

**def text\_is(text):**

**patterns = 'ab{2,3}?'**

**if re.search(patterns, text):**

**return 'Its a match!'**

**else:**

**return('Not matched!')**

**print(text\_is("ab"))**

**print(text\_is("abb"))**

**print(text\_is("aabbbbbc"))**

**OUTPUT: Not matched!**

**Its a match!**

**Its a match!**

**Question 7- Write a Python program that matches a string that has an 'a' followed by anything, ending in 'b'.**

**SOLUTION:**

**def text\_is(text):**

**patterns = 'a.\*?b$'**

**if re.search(patterns, text):**

**return 'Found a match!'**

**else:**

**return('Not matched!')**

**print(text\_is("abcd"))**

**print(text\_is("acchhfb"))**

**print(text\_is("accddbbjjjb"))**

**OUTPUT: Not matched!**

**Found a match!**

**Found a match!**

**Question 8- Write a RegEx pattern in python program that matches a word at the beginning of a string.**

**SOLUTION:**

**def text\_is(text):**

**patterns = '^\w+'**

**if re.search(patterns, text):**

**return 'Its a match!'**

**else:**

**return('Not matched!')**

**print(text\_is("G20"))**

**print(text\_is(" #G20"))**

**print(text\_is("Bhaaratam asmaakam matrabhumihi"))**

**SOLUTION:**

**Its a match!**

**Not matched!**

**Its a match!**

**Question 9- Write a RegEx pattern in python program that matches a word at the end of a string.**

**Write a Python program that matches a word at the end of a string, with optional punctuation.**

**SOLUTION:**

**import re**

**def text\_is(text):**

**#patterns = '\w+\S\*\w[^0-9][A-Za-z][^?!.]\*[?.!]$'**

**#patterns = '\s+[A-Za-z]+\W?\Z$'**

**#patterns = '^[A-Za-z][\w\s]+[?.!]$'**

**#patterns = '\b\w+[.!?,:]\*$'**

**patterns = '\w+\s\S\*[^?!.]?$'**

**if re.search(patterns, text):**

**return( 'Its a match!')**

**else:**

**return('Not matched!')**

**print(text\_is("abhhc"))**

**print(text\_is("abbnoc"))**

**print(text\_is("ab34"))**

**print(text\_is("bab"))**

**print(text\_is("We must continue to believe in the power of diplomacy, India says in UN speech!."))**

**OUTPUT:**

**Not matched!**

**Not matched!**

**Not matched!**

**Not matched!**

**Its a match!**

**Question 10- Write a RegEx pattern in python program to find all words that are 4 digits long in a string.**

**Sample text- '01 0132 231875 1458 301 2725.'**

**Expected output- ['0132', '1458', '2725']**

**SOLUTION:**

**#pattern='\w{4}\s'**

**pattern= r"\b\w{4}\b"**

**text='01 0132 231875 1458 301 2725'**

**matches= re.findall(pattern,text)**

**print(matches)**

**OUTPUT:**

**['0132', '1458', '2725']**