Assignment 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).**

```
➔ import re

text = "The Board of Directors of the Company at their meeting held on January 17, 2024"

matches = re.findall ('[ a-z, A-z,0-9]', text)

print (matches)
```

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

```
➔ import re

pattern = r'ba*nana'

# -‘*’ Matches 0 or more (greedy) repetitions of the preceding RE.

text = 'I love banana'

match = re.search(pattern,text)

if match:
    print (f"match found:{match.group()}")
else:
    print ("No match")
```

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

```
➔ import re

pattern = r'ab+sent'

# - ‘+’Matches 1 or more (greedy) repetitions

text = 'sia was absent today'

match = re.search(pattern,text)

if match:
    print (f"match found:{match.group()}")
else:
    print ("no match")
```

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

➔ import re

```
pattern = r'ba?nana'
# - '?' Matches 0 or 1  (greedy) repetitions
text = 'I love banana'
match = re.search(pattern, text)

if match:
    print(f"match found: {match.group()}")
else:
    print ("No match")
```

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

➔ import re

```
def match_pattern(input_string):
    pattern = re.compile(r'ab{3}')
    match = (pattern.search(input_string))
    return bool(match)
input_string = 'abbbsfimsblflv'

print(f"Does '{input_string}' match the pattern? {match_pattern(input_string)}")
```

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

➔ import re

```
def match_pattern(input_string):
   pattern = re.compile(r'ab{2,3}')
# - ab{2,3} matches the letter 'a' followed by two to three 'b' characters.
pattern.search(input_string) checks if the pattern is found anywhere in the input string.
The bool() function converts the match result to a boolean value.
   match = (pattern.search(input_string))
   return bool(match)
input_string = 'abbbsfimsblflv'


print(f"Does '{input_string}' match the pattern? {match_pattern(input_string)}")
```

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

➔ import re

```
target_string = "a mountain claimb"
y = re.match("^a.*b$", target_string)
 if y:
   print("Match found:", y.group())
else:
   print("No match")
```

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

➔ import re

```
pattern = r'^[A-Za-z]'
# - ’^’- matches  a word at the beginning of a string
text = 'Good, morning!'
match = re.search(pattern, text)

if match:
   print (f"Match found:{match.group()}")
```

```
else:
    print ("No Match")
```

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

```
➔ import re

pattern = r'morning$'
# - ‘$’ - matches a word at the end of a string
text = 'Good morning'
match = re.search (pattern, text)

if match:
    print (f"Match found: {match.group()}")
else:
    print ("No 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']

```
➔ import re

def find_four_digit_words(input_string):
    pattern = re.compile(r'\b\d{4}\b')
# \b – Asserts a word boundry, \d{4} – matches exactly 4 digits.

    return pattern.findall(input_string)

input_string = '01 0132 231875 1458 301 2725.'

result = find_four_digit_words(input_string)

print(result)
```