

CS 3342 – Homework #1

Part A1:

```

Match 1: false
Match 2: false
Match 3: true
Match 4: false
Match 5: true
Match 6: false
Match 7: true
Match 8: true
Match 9: false

```

Part A2:

```

19 // PART A2
20 System.out.println("Match 10: " + Pattern.matches("[\\d]", "9"));
21 System.out.println("Match 11: " + Pattern.matches("[\\w]", "a"));
22 System.out.println("Match 12: " + Pattern.matches("b*a", "a"));
23 System.out.println("Match 13: " + Pattern.matches("colo*r", "color"));
24 System.out.println("Match 14: " + Pattern.matches("[789][0-9]{4}", "99530"));
25 System.out.println("Match 15: " + Pattern.matches("[789]{2}[0-5]{3}", "89530"));
26
27 Pattern p = Pattern.compile("\\d");
28 Matcher m = p.matcher("332");
29 System.out.println("Find 1: " + m.find());
30
31 p = Pattern.compile("[^abc]");
32 m = p.matcher("123The ");
33 System.out.println("Find 2: " + m.find());
34
35 p = Pattern.compile("[\\S]");
36 m = p.matcher("The color green ");
37 System.out.println("Find 3: " + m.find());
38
39 }
40
41 }
42

```

< Problems @ Javadoc Declaration Console X

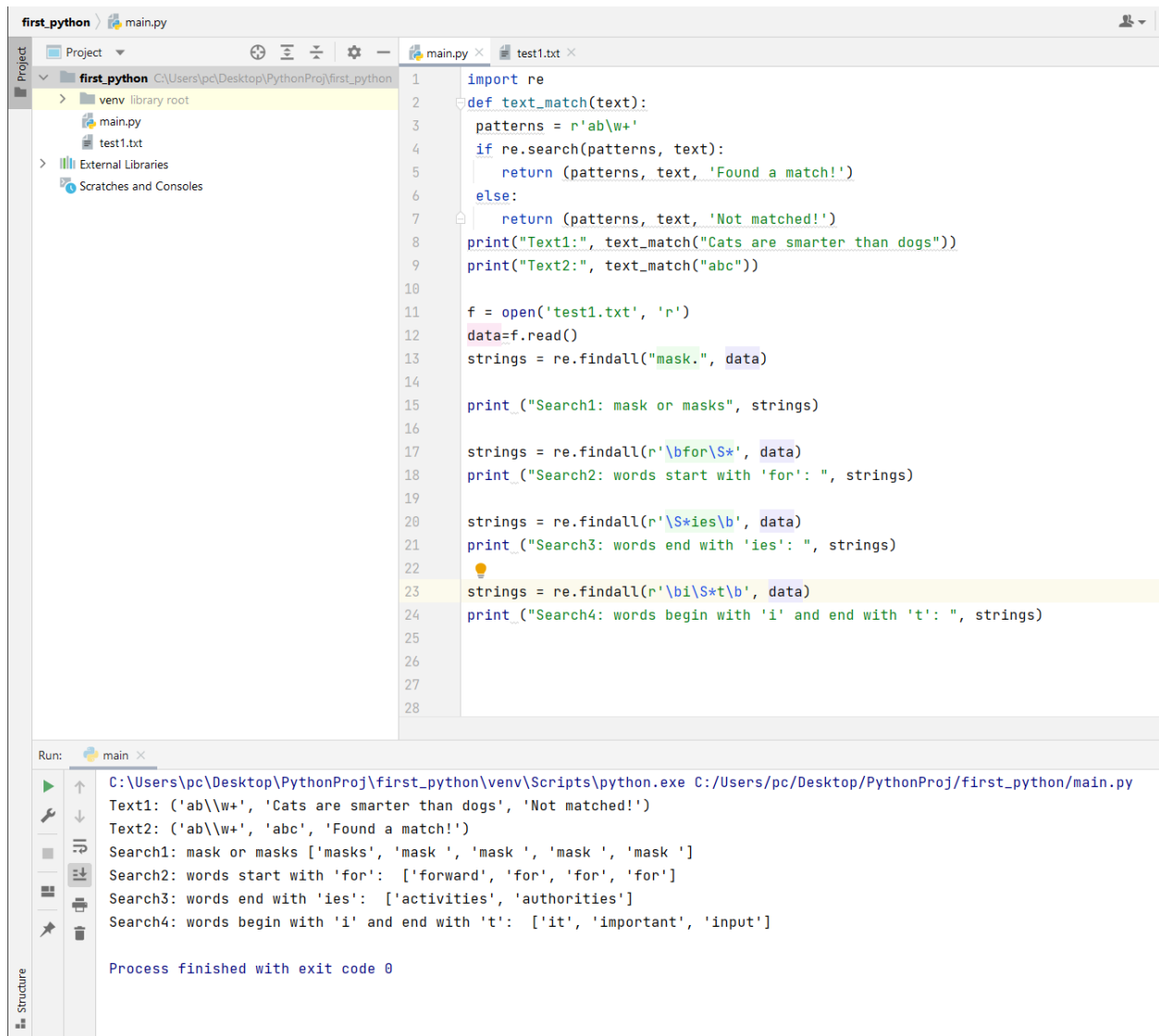
<terminated> App (8) [Java Application] C:\Users\pc\p2\pool\plugins\org.eclipse.justj.openjdk.hotspot.jre.full.win32.x86_64_17.0.1

```

Match 10: true
Match 11: true
Match 12: true
Match 13: true
Match 14: true
Match 15: true
Find 1: true
Find 2: true
Find 3: true

```

Part B



The screenshot shows a Python IDE with a project named 'first_python'. The file explorer on the left shows the project structure, including a 'venv' directory and files 'main.py' and 'test1.txt'. The main editor displays the code in 'main.py', which defines a 'text_match' function and uses it to process text from 'test1.txt'. The console at the bottom shows the output of the script, including the results of the 'text_match' function and the results of four different regular expression searches.

```
1 import re
2 def text_match(text):
3     patterns = r'ab\w+'
4     if re.search(patterns, text):
5         return (patterns, text, 'Found a match!')
6     else:
7         return (patterns, text, 'Not matched!')
8 print("Text1:", text_match("Cats are smarter than dogs"))
9 print("Text2:", text_match("abc"))
10
11 f = open('test1.txt', 'r')
12 data=f.read()
13 strings = re.findall("mask.", data)
14
15 print("Search1: mask or masks", strings)
16
17 strings = re.findall(r'\bfor\S*', data)
18 print("Search2: words start with 'for': ", strings)
19
20 strings = re.findall(r'\S*ies\b', data)
21 print("Search3: words end with 'ies': ", strings)
22
23 strings = re.findall(r'\bi\S*t\b', data)
24 print("Search4: words begin with 'i' and end with 't': ", strings)
25
26
27
28
```

Run: C:\Users\pc\Desktop\PythonProj\first_python\venv\Scripts\python.exe C:/Users/pc/Desktop/PythonProj/first_python/main.py

Text1: ('ab\\w+', 'Cats are smarter than dogs', 'Not matched!')

Text2: ('ab\\w+', 'abc', 'Found a match!')

Search1: mask or masks ['masks', 'mask ', 'mask ', 'mask ', 'mask ']

Search2: words start with 'for': ['forward', 'for', 'for', 'for']

Search3: words end with 'ies': ['activities', 'authorities']

Search4: words begin with 'i' and end with 't': ['it', 'important', 'input']

Process finished with exit code 0