PROGRAMMING ASSIGNMENT COSC3127
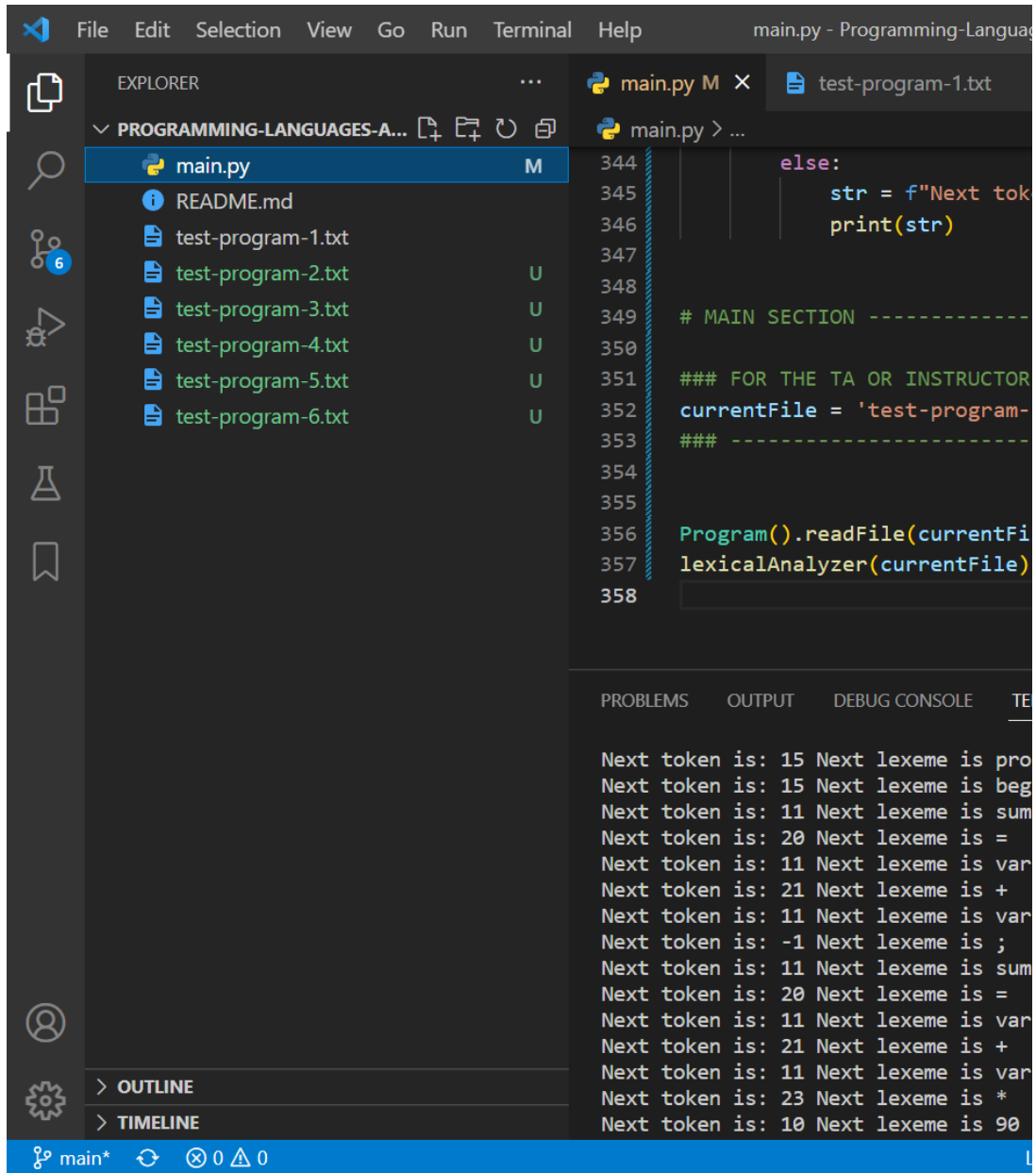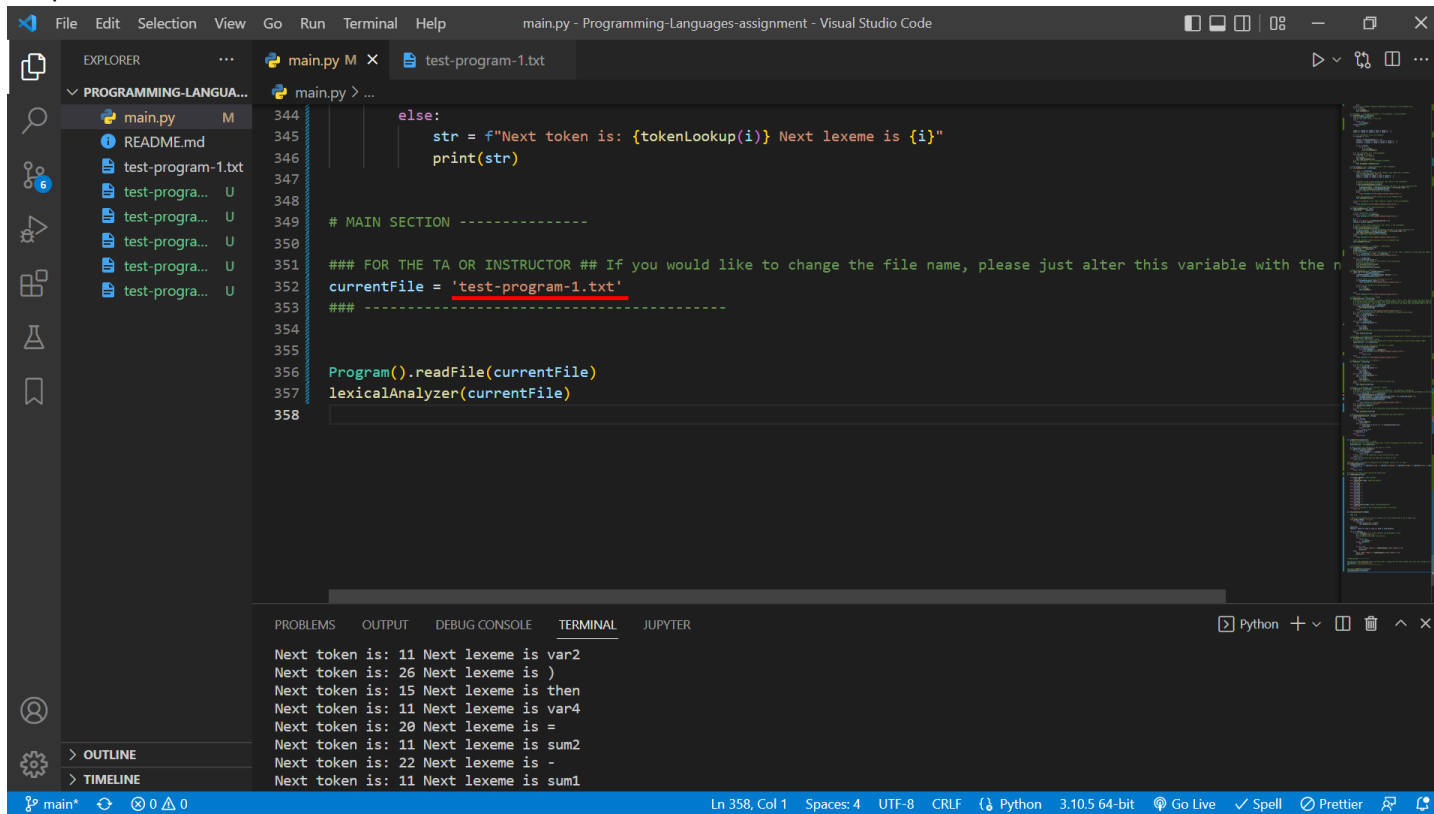
1. All files:

The correct input test file is test-program-1.txt

2. Output of first file:
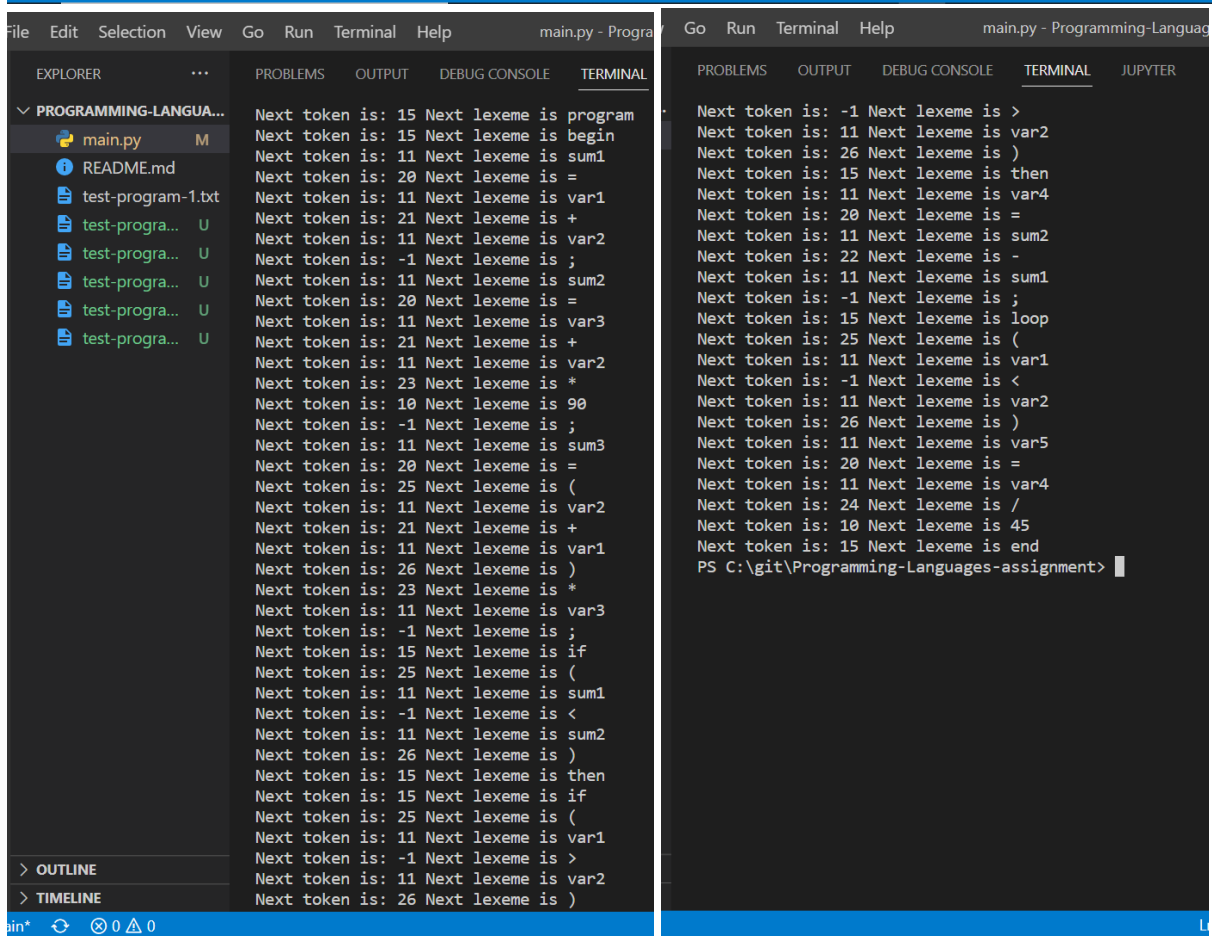
```
344          else:
345              str = f"Next token is: {tokenLookup(i)} Next lexeme is {i}"
346              print(str)
347
348
349  # MAIN SECTION ---------------
350
351  ### FOR THE TA OR INSTRUCTOR ## If you would like to change the file name, please just alter this variable with the n
352  currentFile = 'test-program-1.txt'
353  ### ---------------------------------------
354
355
356  Program().readFile(currentFile)
357  lexicalAnalyzer(currentFile)
358
```

Terminal output (first panel):
```
Next token is: 11 Next lexeme is var2
Next token is: 26 Next lexeme is )
Next token is: 15 Next lexeme is then
Next token is: 11 Next lexeme is var4
Next token is: 20 Next lexeme is =
Next token is: 11 Next lexeme is sum2
Next token is: 22 Next lexeme is -
Next token is: 11 Next lexeme is sum1
```
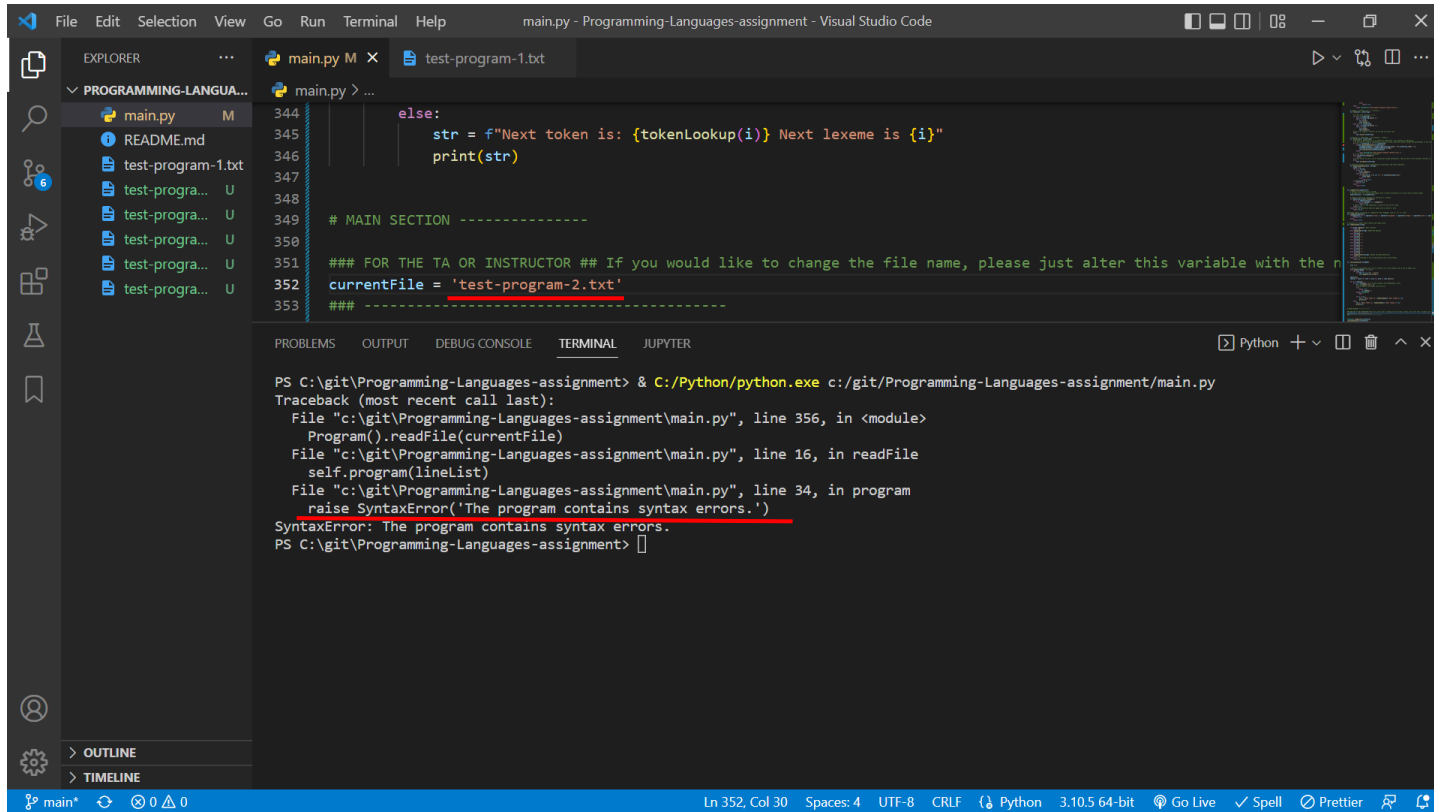
Terminal output (second panel):
```
Next token is: 15 Next lexeme is program
Next token is: 15 Next lexeme is begin
Next token is: 11 Next lexeme is sum1
Next token is: 20 Next lexeme is =
Next token is: 11 Next lexeme is var1
Next token is: 21 Next lexeme is +
Next token is: 11 Next lexeme is var2
Next token is: -1 Next lexeme is ;
Next token is: 11 Next lexeme is sum2
Next token is: 20 Next lexeme is =
Next token is: 11 Next lexeme is var3
Next token is: 21 Next lexeme is +
Next token is: 11 Next lexeme is var2
Next token is: 23 Next lexeme is *
Next token is: 10 Next lexeme is 90
Next token is: -1 Next lexeme is ;
Next token is: 11 Next lexeme is sum3
Next token is: 20 Next lexeme is =
Next token is: 25 Next lexeme is (
Next token is: 11 Next lexeme is var2
Next token is: 21 Next lexeme is +
Next token is: 11 Next lexeme is var1
Next token is: 26 Next lexeme is )
Next token is: 23 Next lexeme is *
Next token is: 11 Next lexeme is var3
Next token is: -1 Next lexeme is ;
Next token is: 15 Next lexeme is if
Next token is: 25 Next lexeme is (
Next token is: 11 Next lexeme is sum1
Next token is: -1 Next lexeme is <
Next token is: 11 Next lexeme is sum2
Next token is: 26 Next lexeme is )
Next token is: 15 Next lexeme is then
Next token is: 15 Next lexeme is if
Next token is: 25 Next lexeme is (
Next token is: 11 Next lexeme is var1
Next token is: -1 Next lexeme is >
Next token is: 11 Next lexeme is var2
Next token is: 26 Next lexeme is )
```
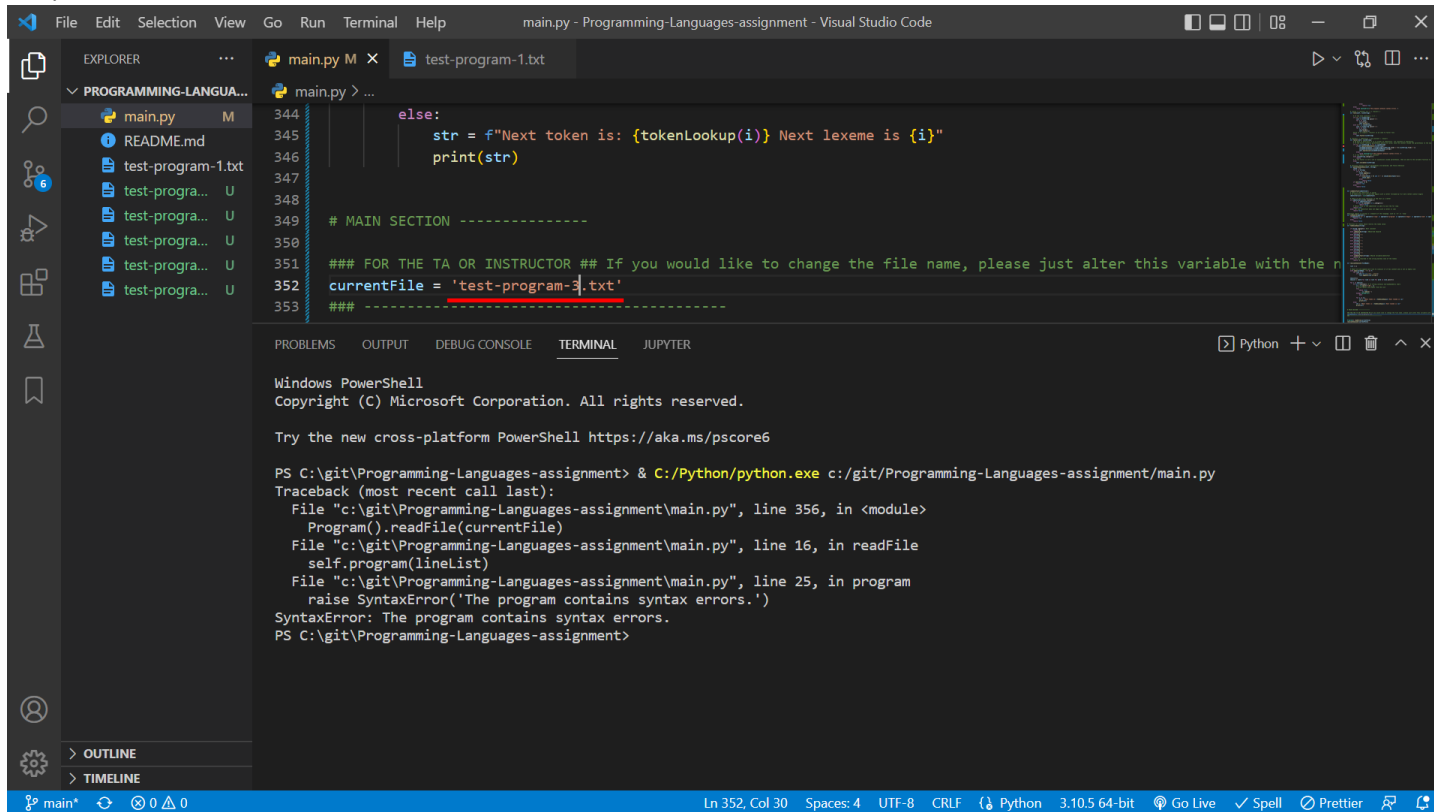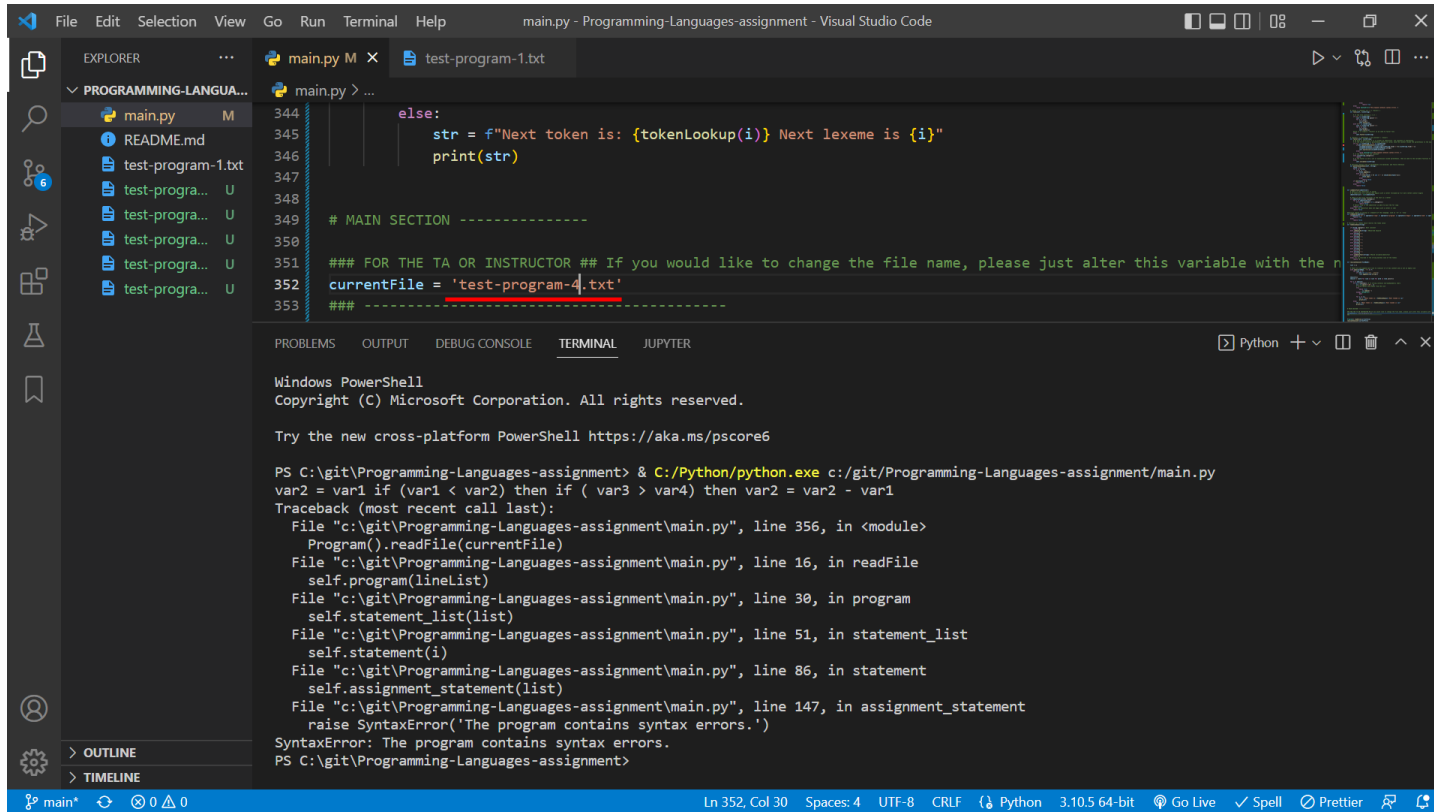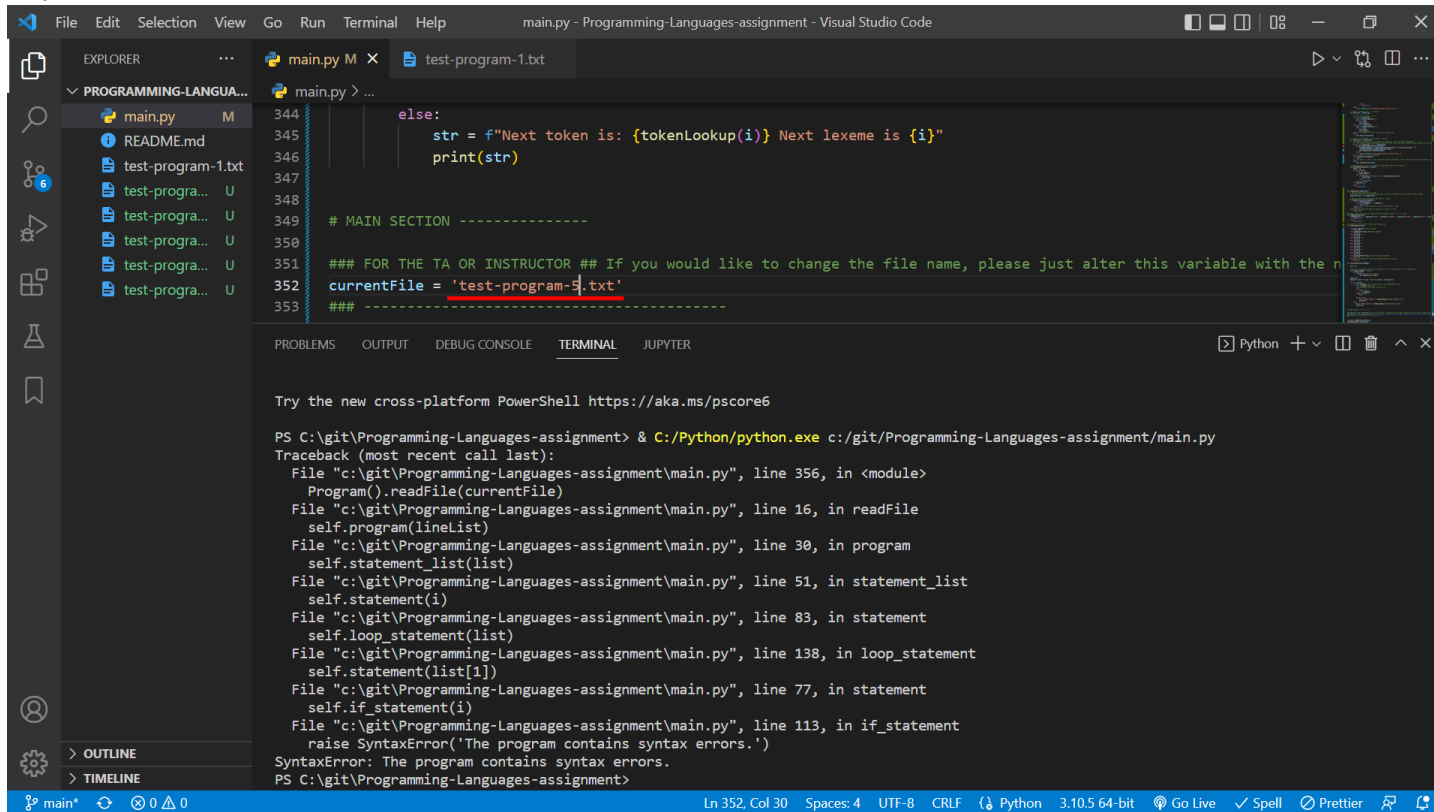
Terminal output (third panel):
```
Next token is: -1 Next lexeme is >
Next token is: 11 Next lexeme is var2
Next token is: 26 Next lexeme is )
Next token is: 15 Next lexeme is then
Next token is: 11 Next lexeme is var4
Next token is: 20 Next lexeme is =
Next token is: 11 Next lexeme is sum2
Next token is: 22 Next lexeme is -
Next token is: 11 Next lexeme is sum1
Next token is: -1 Next lexeme is ;
Next token is: 15 Next lexeme is loop
Next token is: 25 Next lexeme is (
Next token is: 11 Next lexeme is var1
Next token is: -1 Next lexeme is <
Next token is: 11 Next lexeme is var2
Next token is: 26 Next lexeme is )
Next token is: 11 Next lexeme is var5
Next token is: 20 Next lexeme is =
Next token is: 11 Next lexeme is var4
Next token is: 24 Next lexeme is /
Next token is: 10 Next lexeme is 45
Next token is: 15 Next lexeme is end
PS C:\git\Programming-Languages-assignment>
```

3. Ouput of text file 2:

4. Output of file 3:

5. Ouput of file 4:

6. Ouput of file 5:

7. Ouput of file 6:

8. Examples of the files:

test-program-1.txt

```
1   program
2   begin
3
4   sum1 = var1 + var2;
5   sum2 = var3 + var2 * 90;
6   sum3 = (var2 + var1) * var3;
7
8   if (sum1 < sum2) then
9       if (var1 > var2) then
10          var4 = sum2 - sum1;
11
12  loop (var1 < var2)
13      var5 = var4/45
14
15  end
```

test-program-2.txt

```
1   program
2
3   var3 = 140;
4
5   if (sum1 < sum2) then
6       var4 = sum2 - sum1
7
8   end
```

```
program
begin

var2 = var1

if (var1 < var2) then
    if ( var3 > var4) then
     var2 = var2 - var1

end
```