

Assignment #5

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1. PP 10.3

First I tried to set it up as a case to implement the speakers but it failed.

```
Exception in thread "main" java.lang.Error: Unresolved compilation problems:
    The method Senator() is undefined for the type SpeakerAssembly
    The method Attorney() is undefined for the type SpeakerAssembly
    The method Preacher() is undefined for the type SpeakerAssembly

    at SpeakerAssembly.main(SpeakerAssembly.java:18)
```

I tried a second time using an enum and still got an error. I put in the Main method and still got an error.

```
<terminated> SpeakerAssembly [Java Application] C:\Program Files\Java\jre1.8.0_111\bin\javaw.exe
Error: Main method not found in class SpeakerAssembly, please define the
    public static void main(String[] args)
or a JavaFX application class must extend javafx.application.Application
```

```
public class SpeakerAssembly {

    enum SpeakerEnum {SENATOR, ATTORNEY, PREACHER} ;
    Speaker getSpeaker(SpeakerEnum speakerType)
    {
        switch (speakerType){
            case SENATOR :
                return new Senator();

            case ATTORNEY :
                return new Attorney();

            case PREACHER :
                return new Preacher();
        }
    }
}

1
2 public class Attorney implements Speaker {
3     public void speak() {
4         System.out.println("Welcome.");
5     }
6     public void announce(String str) {
7         str = "You can't handle the truth.";
8     }
9 }
10
11
12 }
13
```

```
public class Preacher implements Speaker {  
    public void speak() {  
        System.out.println("Welcome.");  
    }  
  
    public void announce(String str) {  
        str = "Thank you for gathering today.";  
    }  
}
```

```
public class Senator implements Speaker {  
  
    public void speak() {  
        System.out.println("Welcome.");  
    }  
  
    public void announce(String str) {  
        str = "Hi I am Senator Clinton and I am running for President.";  
    }  
}
```

Assignment_5 ▶ src ▶ (default package) ▶

```
1  
2 public interface Speaker {  
3  
4     public void speak();  
5     public void announce (String str);  
6 }  
7  
8
```

2. PP10.4

```

Assignment_5 ▸ src ▸ (default package) ▸ Sorting ▸ insertionSort(Comparable[]): vc
1
2 public class Sorting {
3
4     @SuppressWarnings({ "unchecked", "rawtypes" })
5     public static void selectionSort(Comparable[] list)
6     {
7         int max;
8         Comparable temp;
9         for (int index = 0; index < list.length - 1; index++)
10        {
11            max = index;
12            for (int scan = index + 1; scan < list.length; scan++)
13                if (list[scan].compareTo(list[max]) > 0)
14                    max = scan;
15            // Swap the values
16            temp = list[max];
17            list[max] = list[index];
18            list[index] = temp;
19        }
20    }
21
22    @SuppressWarnings({ "rawtypes", "unchecked" })
23    public static void insertionSort(Comparable[] list)
24    {
25        for (int index = 1; index < list.length-1; index++)
26        {
27            Comparable key = list[index];
28            int position = index;
29            // Shift larger values to the left
30            while (position > 0 && key.compareTo(list[position - 1]) < 0)
31            {
32                list[position] = list[position - 1];
33                position--;
34            }
35
36            // Swap the values
37            temp = list[max];
38            list[max] = list[index];
39            list[index] = temp;
40        }
41    }
42
43    @SuppressWarnings({ "rawtypes", "unchecked" })
44    public static void insertionSort(Comparable[] list)
45    {
46        for (int index = 1; index < list.length-1; index++)
47        {
48            Comparable key = list[index];
49            int position = index;
50            // Shift larger values to the left
51            while (position > 0 && key.compareTo(list[position - 1]) < 0)
52            {
53                list[position] = list[position - 1];
54                position--;
55            }
56            list[position] = key;
57        }
58    }
59
60 }

```

3. PP11.1

```
Enter a string (DONE to exit): hello
Enter a string (DONE to exit): superccalifarlindtics
Exception in thread "main" StringTooLong: String too long.
    at Driver.main(Driver.java:13)
```

```
import java.util.Scanner;

public class Driver {
    public static void main (String[] args)
        throws StringTooLong{
        Scanner scan = new Scanner(System.in);
        String input;

        System.out.print("Enter a string (DONE to exit): ");
        input = scan.nextLine();
        while (!input.equals("DONE")){
            if(input.length()>20)
                throw new StringTooLong();
            System.out.print("Enter a string (DONE to exit): ");
            input = scan.nextLine();
        }
    }
}
```

Assignment_5 ▸ src ▸ (default package) ▸ StringTooLong ▸

```
1
2 public class StringTooLong extends Exception {
3     public StringTooLong(){
4         super ("String too long.");
5     }
6 }
7
8 }
9
```

4. PP11.2

Assignment_5 ▸ src ▸ (default package) ▸ StringTooLong ▸

```
1
2 public class StringTooLong extends Exception {
3     public StringTooLong(){
4         super ("String too long.");
5     }
6 }
7
8 }
9
```

StringTooLong.java Driver.java

Assignment_5 ▸ src ▸ (default package) ▸ Driver ▸ main(String[]): void

```
1 import java.util.Scanner;
2
3 public class Driver {
4     public static void main (String[] args)
5     throws StringTooLong{
6         Scanner scan = new Scanner(System.in);
7         String input;
8
9         System.out.print("Enter a string (DONE to exit): ");
10        input = scan.nextLine();
11
12        try{
13            while (!input.equals("DONE")){
14                if(input.length()>20)
15                    throw new StringTooLong();
16                System.out.print("Enter a string (DONE to exit): ");
17                input = scan.nextLine();
18            }
19        }
20        catch (Exception e)
21        {
22            System.out.println(e.equals("Please type less than 20 characters."));
23        }
24    }
25
26 }
```