

Reviewer: Nayana Raj Cheluvaraju

Course: SOEN 6011

Team: Team B

Professor: P.Kamthan

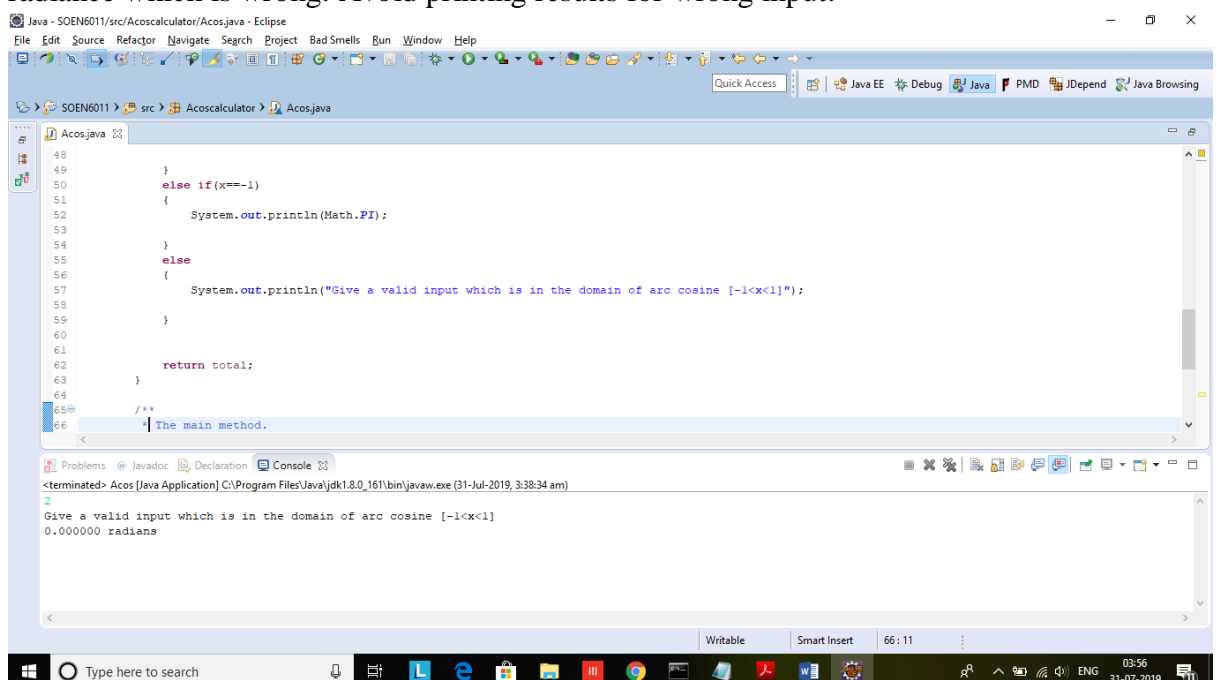
Problem 5 -- Review report for function F1: arccos(x)

The review for above function is being carried by multiple ways:

1. Manually
2. Tools
 - Eclipse -Find Bugs
 - Eclipse – PMD
 - Eclipse – checkstyle

Results observed through manual calculation:

1. Naming convention are not followed according to coding standard. Example:
 - Class name :Acos
Name is very short and looking at name user will not recognize or predict function as there is no function called Acos. *Instead it could be ArccosImp.*
 - Method name : sum
Short name and it does not say sum of which function.
2. Function name says sum(), along with calculation of sum there is also calculation of range inside function. So, I recommend changing function name.
3. When the wrong input is given, along with message, it also displays result which leads confusion to the user. Example: when input is 2, output printed is 0.0000 radiance which is wrong. Avoid printing results for wrong input.



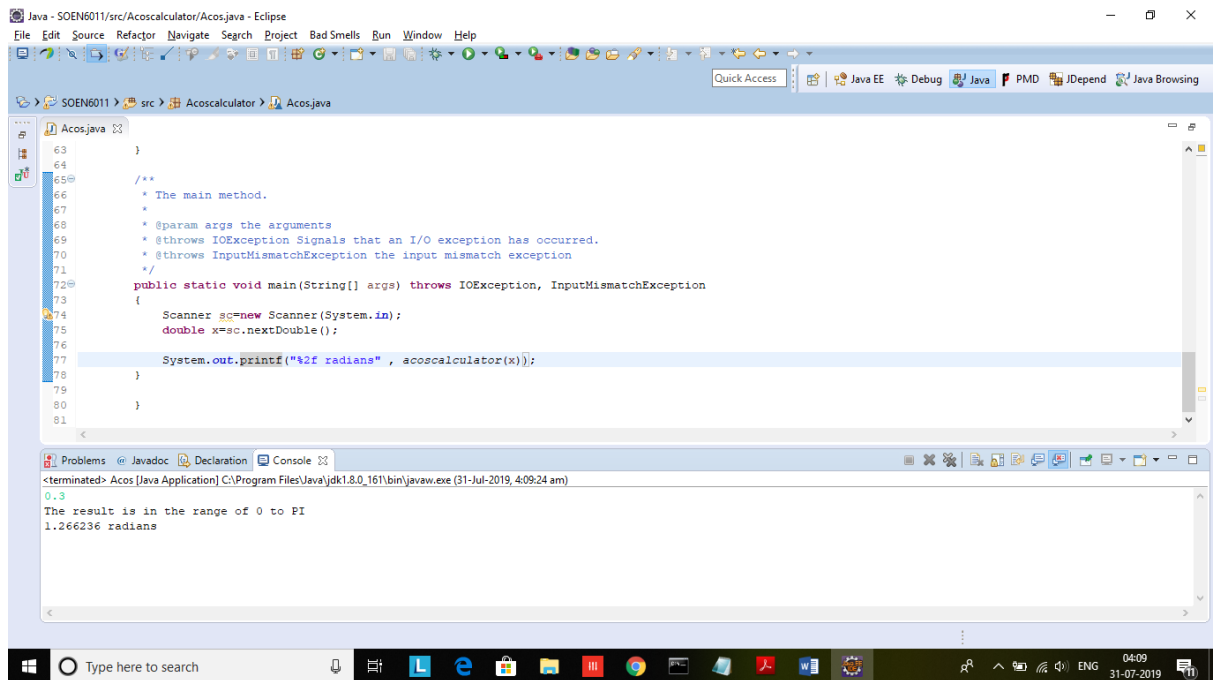
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Java - SOEN6011/src/Acoscalculator/Acos.java - Eclipse
File Edit Source Refactor Navigate Search Project Bad Smells Run Window Help

SOEN6011 > src > Acoscalculator > Acos.java

Acos.java
48
49
50     }
51     else if(x==--1)
52     {
53         System.out.println(Math.PI);
54     }
55     else
56     {
57         System.out.println("Give a valid input which is in the domain of arc cosine [-1<x<1]");
58     }
59
60
61     return total;
62 }
63
64
65 /**
66  * The main method.
67  */
68 public static void main(String[] args) {
69     // TODO Auto-generated method stub
70     // Your code here
71 }

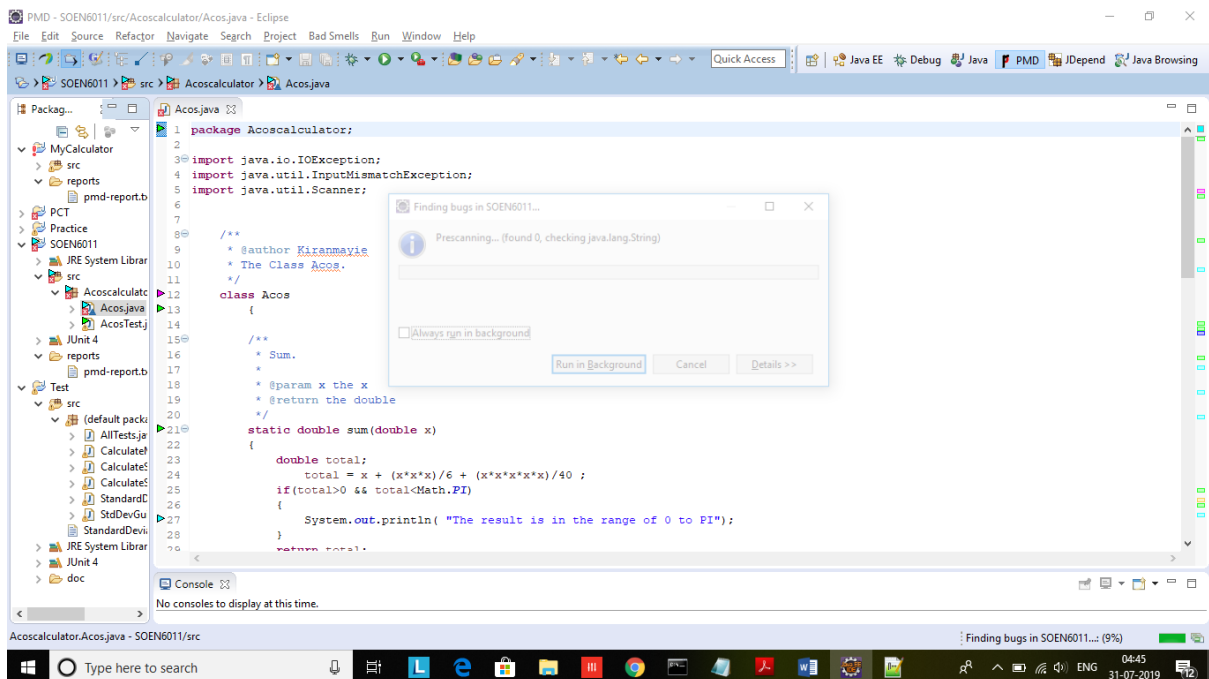
Problems @ Javadoc Declaration Console
<terminated> Acos [Java Application] C:\Program Files\Java\jdk1.8.0_161\bin\javaw.exe (31-Jul-2019, 3:38:34 am)
2
Give a valid input which is in the domain of arc cosine [-1<x<1]
0.000000 radians
```

4. I dint find error message(above image) promising.
5. Problem statement does not say to restrict the display rounding to 5 decimal places. Instead it says to develop calculator function, so it should display complete value.



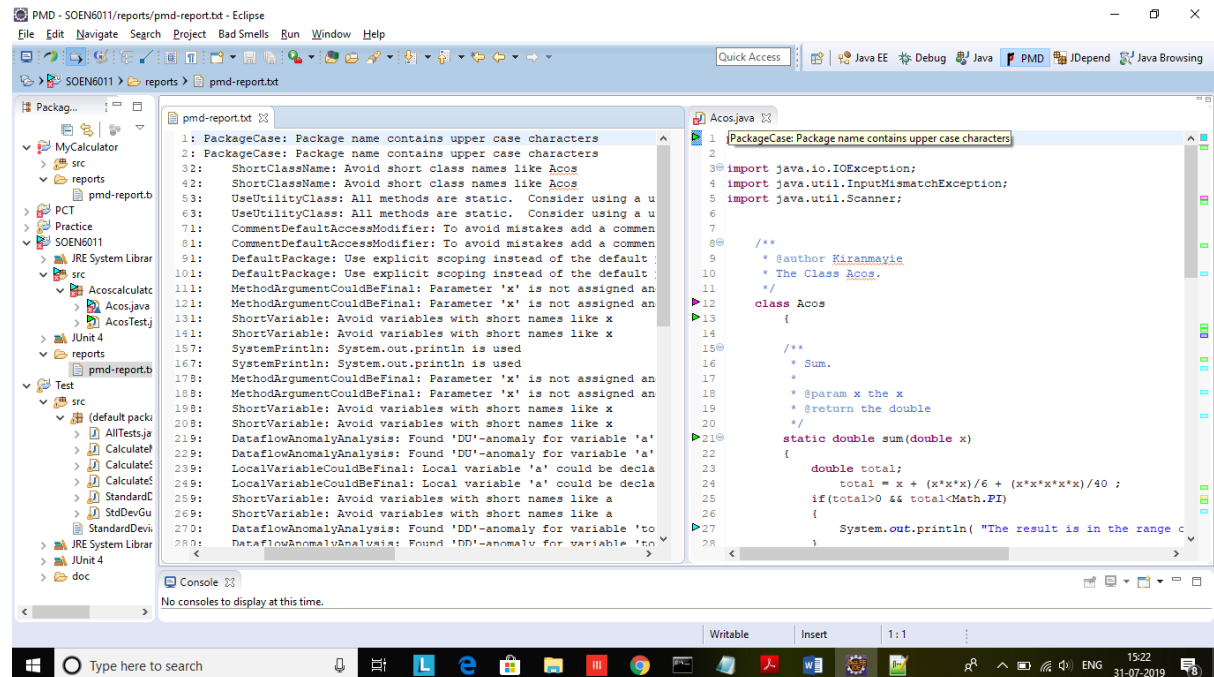
Results are observed by running Find-bugs tools.

No bugs encountered. Screenshot exhibit proof.



Below are the results generated from PMD tool :

The below screenshot shows the result generated by PMD tool, I have showed one example in screenshot showing how to trace error. In PMD file each error is repeated twice, just ignore repetition. I feel most of the errors are really valid. Example: error on class name, error for using println in unnecessary places etc.



Following are the results observed through Check style tool :

1. Indentation: Observed in whole program.
2. Whitespace expected around '=' , ',' etc.

