```
1  /**
2   * Develop a simple 5-function calculator program that allowed the user t
   o select from a menu of operations: add two numbers, subtract two numbers
   , multiply two numbers, divide two numbers, raise a number to a power, an
   d then enter the two numbers and perform the desired calculation.
3   * This lab was designed to teach you how to use switch statements
4   * @author Aryan Gupta
5   * @version 1.0, 10/14/2015
6   */
7  import java.util.Scanner;
8  import static java.lang.System.*;
9  import static java.lang.Math.*;
10
11 public class CalculatorAlt
12 {
13     //Instance variables declared
14     private int firstOperand, secondOperand;
15     private String operationType;
16
17     public CalculatorAlt()
18     {
19         firstOperand = 0;
20         secondOperand = 0;
21         operationType = "";
22     }//default constructor
23
24     public CalculatorAlt (String operation, int firstInt, int secondInt)
25     {
26         firstOperand = firstInt;
27         secondOperand = secondInt;
28         operationType = operation;
29     }//loaded constructor
30
31     //Does the operation the user wanted. It uses a switch statement to c
   ompare the operation string the user inputted with 5 common math operatio
   ns
32     public double doOperation()
33     {
34         switch (operationType){
35             case "+":
36                 return addNum(firstOperand, secondOperand);
37             case "-":
38                 return subtractNum(firstOperand, secondOperand);
39             case "/":
40                 return divideNum(firstOperand, secondOperand);
41             case "*":
42                 return multiplyNum(firstOperand, secondOperand);
43             case "^":
44                 return powerNum(firstOperand, secondOperand);
```

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45              default:
46                  System.out.println( operationType + " isn't what you thin
    k it is; think about it");
47          }
48          return 0.0;
49      }//meathod doOperation
50
51      private double addNum(int firstOperand, int secondOperand)
52      {
53          return (firstOperand + secondOperand);
54      }
55
56      private double subtractNum(int firstOperand, int secondOperand)
57      {
58          return (firstOperand - secondOperand);
59      }
60
61      private double divideNum(int firstOperand, int secondOperand)
62      {
63          return (firstOperand / secondOperand);
64      }
65
66      private double multiplyNum(int firstOperand, int secondOperand)
67      {
68          return (firstOperand * secondOperand);
69      }
70
71      private double powerNum(int firstOperand, int secondOperand)
72      {
73          return ( pow(firstOperand, secondOperand));
74      }
75
76  }
```