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CECS 342-04
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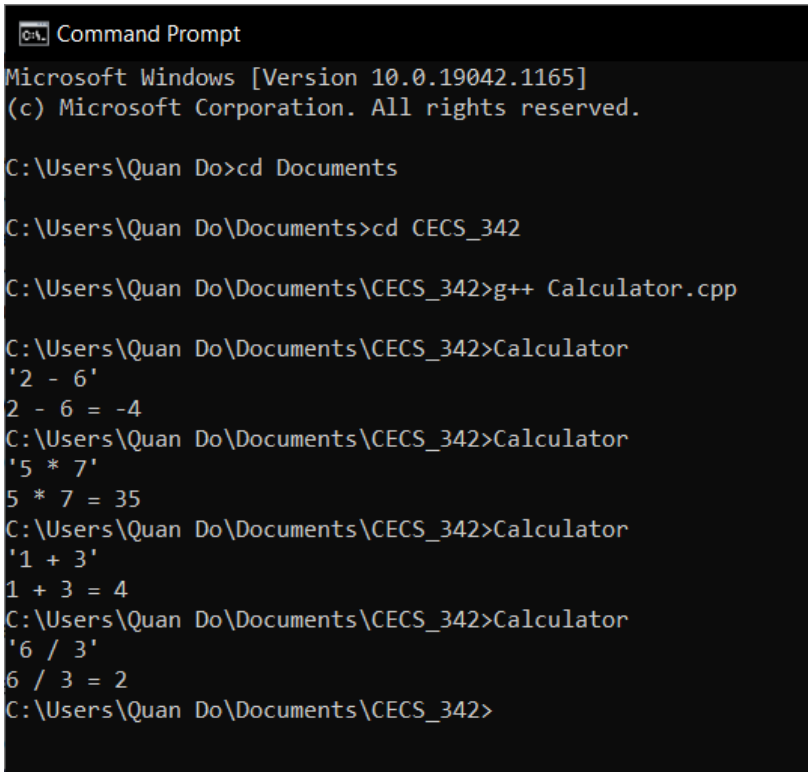
CECS 342 Lab 1

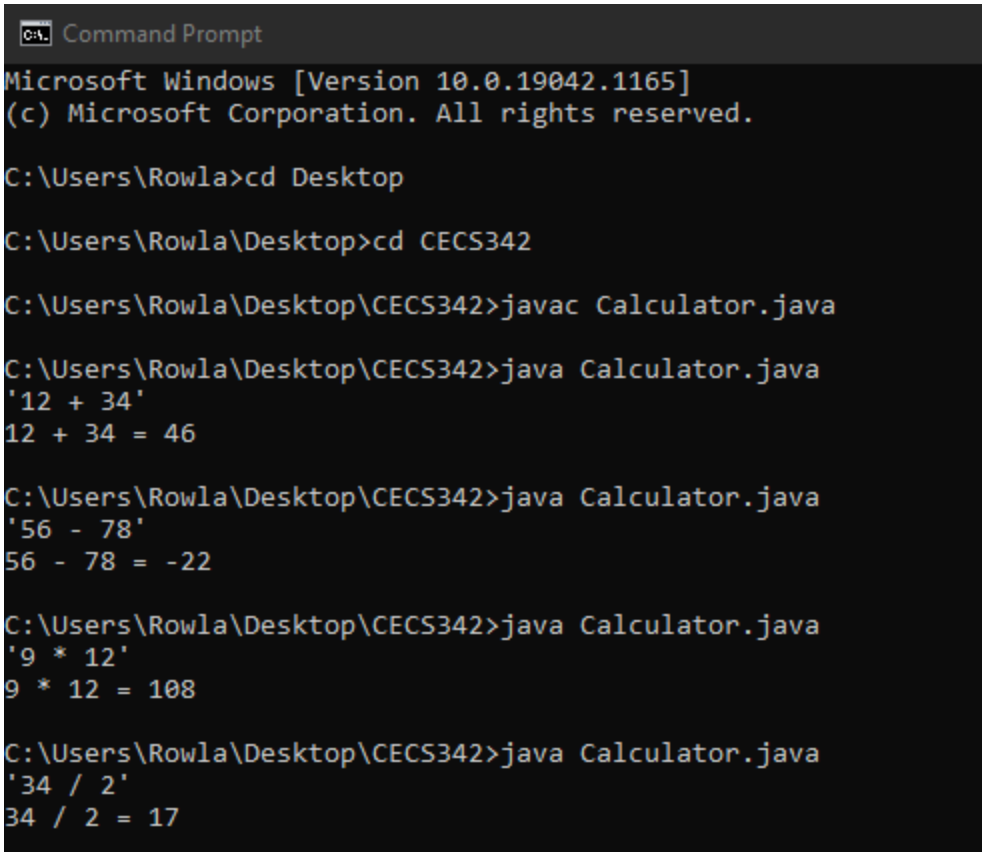
Calculator.cpp

```
#include <sstream>
#include <cstring>
#include <cmath>
#include <iostream>
using namespace std;

int main ()
{
  string input;
  getline(cin, input);

  input.erase(0,1);
  input.erase(input.size() - 1);

  char temp[input.length() + 1];
  strcpy(temp, input.c_str());
  int j = 0;

  string num[4];

  for(int i = 0; i < input.length(); i++){
    if(temp[i] == ' '){
      j++;
    continue;
    }
    else if(temp[i] == '+' || temp[i] == '-' || temp[i] == '*' || temp[i] == '/'){
    num[j] = temp[i];
    }
    else{
    num[j] += temp[i];
    }
  }

  int x = 0;
  int y = 0;

  stringstream a(num[0]);
  stringstream b(num[2]);

  a >> x;
  b >> y;
  int val = 0;

  if(num[1] == "+"){
    val = x + y;
    cout<< input << " = " << val;
  }
  else if(num[1] == "-"){
    val = x - y;
    cout<< input << " = " << val;
  }
  else if(num[1] == "*"){
    val = x * y;
    cout<< input << " = " << val;
  }
  else if(num[1] == "/"){
    val = floor(x / y);
    cout<< input << " = " << val;
  }
  return 0;
}
```



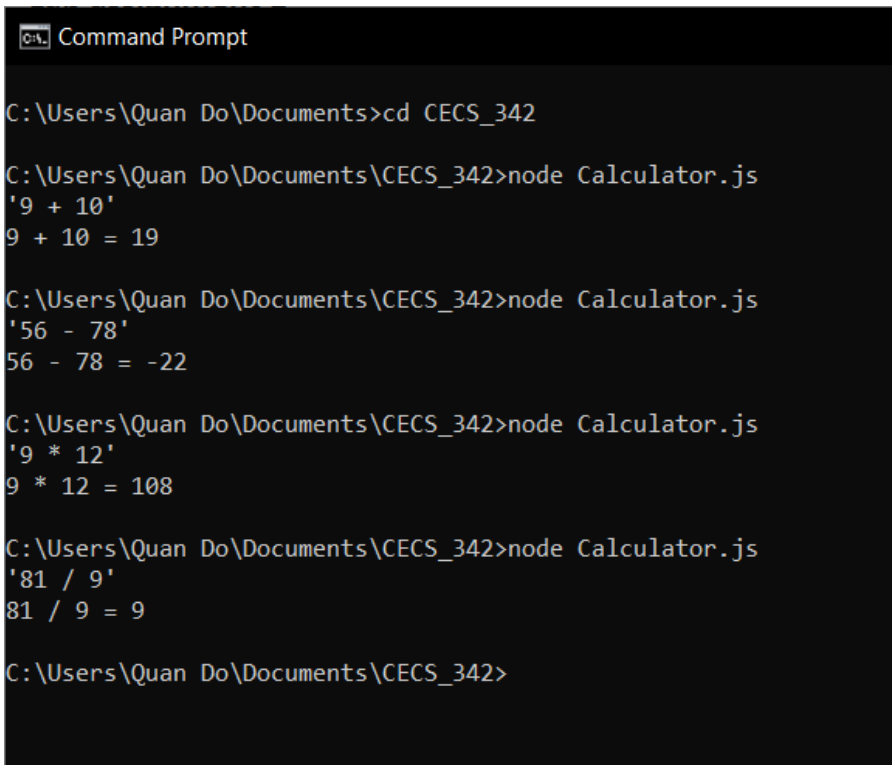
Calculator.java

```java
import java.util.Scanner;

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

        String temp = input.replaceAll("'", "");
        String[] temp1 = temp.split(" ");

        int sol = 0;

        if(temp1[1].equals("+")){
            sol = Integer.parseInt(temp1[0]) + Integer.parseInt(temp1[2]);
            System.out.println(temp + " = " + sol);
        }
        else if(temp1[1].equals("-")){
            sol = Integer.parseInt(temp1[0]) - Integer.parseInt(temp1[2]);
            System.out.println(temp + " = " + sol);
        }
        else if(temp1[1].equals("*")){
            sol = Integer.parseInt(temp1[0]) * Integer.parseInt(temp1[2]);
            System.out.println(temp + " = " + sol);
        }
        else if(temp1[1].equals("/")){
            sol = Integer.parseInt(temp1[0]) / Integer.parseInt(temp1[2]);
            System.out.println(temp + " = " + sol);
        }
    }
}
```


Command Prompt
Microsoft Windows [Version 10.0.19042.1165]
(c) Microsoft Corporation. All rights reserved.
C:\Users\Rowla>cd Desktop
C:\Users\Rowla\Desktop>cd CECS342
C:\Users\Rowla\Desktop\CECS342>javac Calculator.java
C:\Users\Rowla\Desktop\CECS342>java Calculator.java
'12 + 34'
12 + 34 = 46
C:\Users\Rowla\Desktop\CECS342>java Calculator.java
'56 - 78'
56 - 78 = -22
C:\Users\Rowla\Desktop\CECS342>java Calculator.java
'9 * 12'
9 * 12 = 108
C:\Users\Rowla\Desktop\CECS342>java Calculator.java
'34 / 2'
34 / 2 = 17

Calculator.js

```
4   const readline = require("readline");
5
6   const rl = readline.createInterface({
7     input: process.stdin,
8     output: process.stdout,
9   });
10
11  rl.question("", function (answer) {
12      str = answer.replace(/'/g, "")
13      arry = str.split(" ")
14
15      a = 0
16
17      if(arry[1] == "+"){
18          a = parseInt(arry[0], 10) + parseInt(arry[2], 10)
19          console.log(`${str} = ${a}`)
20      }
21      else if(arry[1] == "-"){
22          a = parseInt(arry[0], 10) - parseInt(arry[2], 10)
23          console.log(`${str} = ${a}`)
24      }
25      else if(arry[1] == "*"){
26          a = parseInt(arry[0], 10) * parseInt(arry[2], 10)
27          console.log(`${str} = ${a}`)
28      }
29      else if(arry[1] == "/"){
30          a = Math.floor(parseInt(arry[0], 10) / parseInt(arry[2], 10))
31          console.log(`${str} = ${a}`)
32      }
33    rl.close();
34  });
```



Calculator.py

```
4   x = input().replace("'","")
5
6   a = 0
7   b = 0
8
9   if '+' in x:
10    a = x.split('+')
11    b = int(a[0]) + int(a[1])
12  elif '-' in x:
13    a = x.split('-')
14    b = int(a[0]) - int(a[1])
15  elif '/' in x:
16    a = x.split('/')
17    b = int(a[0]) // int(a[1])
18  elif '*' in x:
19    a = x.split('*')
20    b = int(a[0]) * int(a[1])
21
22  print(x + " = " + str(b))
```