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1 *****
2 * PROGRAMMED BY : Blake Allard
3 * CLASS : CS1A
4 * SECTION : M/W 8am
5 * EXR #23 : Integer Calculator
6 *****
7
8 Enter the first integer: 3
9 Enter the second integer: 6
10
11 The SUM is: 9
12 The PRODUCT is: 18
13 The LARGEST is: 6
14 The AVERAGE is: 4.5
15
16
17 Enter the first integer: -6
18 Enter the second integer: 10
19
20 The SUM is: 4
21 The PRODUCT is: -60
22 The LARGEST is: 10
23 The AVERAGE is: 2.0
24
25
26 Enter the first integer: 100
27 Enter the second integer: 50
28
29 The SUM is: 150
30 The PRODUCT is: 5000
31 The LARGEST is: 100
32 The AVERAGE is: 75.0
33
34
35 Enter the first integer: -999
36
```

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1  /*****
2  * AUTHOR      : Blake Allard
3  * STUDENT ID  : 358888
4  * EXERCISE #  : Integer Calculator
5  * CLASS       : CS1A
6  * SECTION     : MW 8am
7  * DUE DATE    : 11/08/24
8  *****/
9
10 #include <iostream> /* cout , cin */
11 #include <iomanip> /* setw , setprecision, fixed */
12 using namespace std;
13
14 /*****
15 * Function AddTwoNums:    Accepts two integers and returns the sum
16 * Function MultiplyTwoNums: Accepts two integers and returns the product
17 * Function FindLargest:   Accepts two integers and returns the larger number
18 * Function AverageTwoNums: Accepts two integers and returns the average
19 *****/
20
21 int AddTwoNums (int num1 , int num2);
22 int MultiplyTwoNums(int num1 , int num2);
23 int FindLargest (int num1 , int num2);
24 double AverageTwoNums (int num1 , int num2);
25
26 int main()
27 {
28
29     /*****
30     * CONSTANTS
31     * -----
32     * OUTPUT - USED FOR CLASS HEADING
33     * -----
34     * PROGRAMMER      : Programmer's Name
35     * CLASS           : Student's Course
36     * SECTION         : Class Day / Times
37     * EXERCISE NUMBER : Exercise/Assignment/Lab #
38     * EXERCISE NAME    : Title of the Exercise/Assignment/Lab
39     *****/
40
41     //OUTPUT - used for class heading
42     const char PROGRAMMER[] = "Blake Allard";
43     const char CLASS[]      = "CS1A";
44     const char SECTION[]    = "M/W 8am";
45     const char EX_NUM[]     = "23";
46     const char EX_NAME[]    = "Integer Calculator";
47 }
```

```

48 //FORMATTING - used for setw size
49 const char PROMPT_SIZE = 26;
50
51 /*****
52  * VARIABLES
53  *****/
54
55 int    num1;           //IN    & CALC - first of the two general numbers
56 int    num2;           //IN    & CALC - second of the two general numbers
57 int    sum;            //CALC & OUT - sum of two numbers
58 int    product;        //CALC & OUT - product of two numbers
59 int    largerNum;      //CALC & OUT - larger of two numbers
60 double avg;           //CALC & OUT - average of two numbers
61
62 /*****
63  * OUTPUT - class heading
64  *****/
65
66 cout << left;
67 cout << "*****\n";
68 cout << "* PROGRAMMED BY : " << PROGRAMMER << endl;
69 cout << "* " << setw(14) << "CLASS" << ": " << CLASS << endl;
70 cout << "* " << setw(14) << "SECTION" << ": " << SECTION << endl;
71 cout << "* EXR #" << setw(9) << EX_NUM << ": " << EX_NAME << endl;
72 cout << "*****\n\n";
73 cout << right;
74
75 /*****
76  * INPUT - read in two inputs
77  *****/
78
79 cout << left;
80
81 cout << setw(PROMPT_SIZE);
82 cout << "Enter the first integer: ";
83 cin >> num1;
84
85
86 while(num1 != -999)
87 {
88
89     cout << setw(PROMPT_SIZE);
90     cout << "Enter the second integer: ";
91     cin >> num2;
92     cin.ignore(10000, '\n');
93
94     /*****

```

```
195      * PROCESSING - Calls: AddTwoNums      which returns the sum
196      *                               MultiplyTwoInts which returns the product
197      *                               FindLargest    which returns the greater number
198      *                               AverageTwoInts  which returns the average
199      *****/
200
201      sum      = AddTwoNums      (num1 , num2);
202      product  = MultiplyTwoNums(num1 , num2);
203      largerNum = FindLargest    (num1 , num2);
204      avg      = AverageTwoNums (num1 , num2);
205
206      /*****
207      * OUTPUT - the sum
208      *          - the product
209      *          - the largest number
210      *          - the average
211      *****/
212
213      cout << endl;
214
215      cout << setw(PROMPT_SIZE);
216      cout << "The SUM is: "      << sum      << "\n";
217      cout << setw(PROMPT_SIZE);
218      cout << "The PRODUCT is: "  << product  << "\n";
219      cout << setw(PROMPT_SIZE);
220      cout << "The LARGEST is: "  << largerNum << "\n";
221
222      cout << setprecision(1)      << fixed;
223
224      cout << setw(PROMPT_SIZE);
225      cout << "The AVERAGE is: "  << avg      << "\n\n";
226
227
228      cout << setw(PROMPT_SIZE);
229      cout << "Enter the first integer: ";
230      cin  >> num1;
231
232      } //... end while(num1 != -999)
233
234
235      cout << right;
236
237      return 0;
238  }
239
```

```
1 /*****
2 * Function AddTwoNums:      Accepts two integers and returns the sum
3 * Function MultiplyTwoNums: Accepts two integers and returns the product
4 * Function FindLargest:    Accepts two integers and returns the larger number
5 * Function AverageTwoNums: Accepts two integers and returns the average
6 *****/
7
8 int AddTwoNums(int num1, int num2)
9 {
10     double sum;
11     sum = num1 + num2;
12     return sum;
13 }
14
15 int MultiplyTwoNums(int num1 , int num2)
16 {
17     int product;
18     product = num1 * num2;
19     return product;
20 }
21
22 int FindLargest(int num1, int num2)
23 {
24     int larger;
25     larger = num1 > num2 ? num1
26                : num2;
27     return larger;
28 }
29
30 double AverageTwoNums(int num1, int num2)
31 {
32     double avg;
33     avg = double(num1 + num2) / 2;
34     return avg;
35 }
36
```