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1 /*****
2 * AUTHOR      : Andrew Gharios
3 * STUDENT ID   : 1449366 & 1182192
4 * ASSIGNMENT #4 : Input & Output - New Salary
5 * CLASS        : CS1A
6 * SECTION      : MW 8AM-10:20AM
7 * DUE DATE     : 3/29/21
8 *****/
9 #include <iostream>
10 #include <iomanip>
11 using namespace std;
12 /*****
13 * New Salary Program
14 *
15 *
16 * This programs receive the user's name, current Salary and raise amount, and
17 * calculates the new Annual and Monthly payment as well as the retroactive
18 * payment based on the amount increase inputted.
19 *
20 * INPUT:
21 * name          : The user's name.
22 * currentSalary : The current salary of the user.
23 * raise         : User's percent increase.
24 *
25 * OUTPUT:
26 * name          : User's Name
27 * newAnnual     : User's new annual salary.
28 * newMonthly    : User's new monthly salary.
29 * retroActive   : User's retroactive pay.
30 *****/
31
32 int main()
33 {
34     /*****
35      * CONSTANTS
36      * -----
37      * OUTPUT - USED FOR CLASS HEADING
38      * -----
39      * PROGRAMMER      : Programmer's Name
40      * CLASS           : Student's Course
41      * SECTION         : Class Days and Times
42      * ASSIGNMENT #4   : Assignment's name.
43      * -----
44      * WEEKLY_PAY used to create a constant payment of 20 dollars per week.
45      * -----
46      * WEEKLY_PAY      : Weekly payment to user's money.
47      * -----
48      * NAME_SIZE used to save a constant size for namesizes.
49      * -----
50      * NAME_SIZE       : size for name strings.
51      * -----
52      * SETW Column sizes.
53      * -----
54      * INPUT_COL       : size for Input column.
55      * ANNUAL_COL      : size for annual column.
56      * MONTHLY_COL     : size for monthly column.
57      * RETRO_COL       : size for retro column.
58      *****/
59     const char PROGRAMMER[] = "Andrew Gharios";
60     const char CLASS[]      = "CS1A";
61     const char SECTION[]    = "MW 8:00a - 10:30a";
62     const char AS_NAME[]    = "Input & Output - New Salary";

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63
64     const int NAME_SIZE          = 30;
65     const int INPUT_COL          = 29;
66     const int ANNUAL_COL         = 10;
67     const int MONTHLY_COL        = 19;
68     const int RETRO_COL          = 20;
69
70
71     char    name[NAME_SIZE]; // IN & OUT   - Name of the user.
72     int     currentSalary;    // IN & CALC - user's current salary.
73     double  raise;            // IN & CALC - user's pay increase.
74     double  raiseAmount;      // CALC    - user's raise amount.
75     double  newAnnual;        // CALC & OUT - User's new Annual salary.
76     double  newMonthly;       // CALC & OUT - User's new Monthly salary.
77     double  retroActive;      // CALC & OUT - User's retroactive Pay.
78
79     /*****
80      * OUTPUT - class heading
81      *****/
82     cout << left;
83     cout << "*****\n";
84     cout << " * PROGRAMMED BY : " << PROGRAMMER << endl;
85     cout << " * " << setw(14) << "CLASS" << ": " << CLASS << endl;
86     cout << " * " << setw(14) << "SECTION" << ": " << SECTION << endl;
87     cout << " * " << setw(14) << "ASSIGNMENT #4" << ": " << AS_NAME << endl;
88     cout << "*****\n\n";
89     cout << right;
90
91     /*****
92      *****/
93     // Input name.
94     cout << left;
95     cout << setw(INPUT_COL) << "What is your name? ";
96     cin.getline (name, NAME_SIZE);
97
98     // Input current salary.
99     cout << setw(INPUT_COL) << "What is your current salary? ";
100    cin >> currentSalary;
101
102    // Input pay increase.
103    cout << setw(INPUT_COL) << "What is your pay increase? ";
104    cin >> raise;
105    cin.ignore(10000, '\n');
106    cout << endl << endl;
107    cout << right;
108
109
110    /*****
111     * PROCESSING: Program calculates the user's new annual and monthly salary
112     * as well as the retroactive pay based on user's input.
113     *****/
114    raiseAmount = currentSalary * raise;
115    newAnnual   = currentSalary + raiseAmount;
116    newMonthly  = newAnnual / 12;
117    retroActive = raiseAmount / 12 * 6;
118
119    /*****
120     * OUTPUT: Outputs user's name, new annual & monthly salary, and
121     * retroactive pay.
122     *
123     * Expected Output:
124     * *****/

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125     * PROGRAMMED BY : Andrew Gharios
126     * CLASS          : CS1A
127     * SECTION        : MW 8:00a - 10:30a
128     * ASSIGNMENT #4  : Input & Output - New Salary
129     *****
130
131     What is your name?          Jean Cyr
132     What is your current salary? 80000
133     What is your pay increase?  .05
134
135
136     Jean Cyr's SALARY INFORMATION
137     New Salary      Monthly Salary      Retroactive Pay
138     84000.00        7000.00              2000.00
139
140
141
142     What is your name?          Abe Lincoln
143     What is your current salary? 5000
144     What is your pay increase?  .07
145
146
147     Abe Lincoln's SALARY INFORMATION
148     New Salary      Monthly Salary      Retroactive Pay
149     5350.00         445.83              175.00
150
151
152
153     What is your name?          Jose Martinez
154     What is your current salary? 125125
155     What is your pay increase?  .25
156
157
158     Jose Martinez's SALARY INFORMATION
159     New Salary      Monthly Salary      Retroactive Pay
160     156406.25       13033.85           15640.62
161
162     *****/
163
164     cout << fixed;
165     cout << setprecision(2);
166     cout << name << "\'s SALARY INFORMATION" << endl;
167
168     // Outputting columns for results.
169     cout << "New Salary"
170           << setw(MONTHLY_COL) << "Monthly Salary"
171           << setw(RETRO_COL)   << "Retroactive Pay" << endl;
172
173     // Outputting results.
174     cout << setw(ANNUAL_COL) << newAnnual
175           << setw(MONTHLY_COL) << newMonthly
176           << setw(RETRO_COL) << retroActive;
177
178
179     return 0;
180 }
181

```