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 1 /*************************************************************
 2 * AUTHOR    : Ali Eshghi
 3 * STUDENT ID    : 1112261
 4 * ASSIGNMENT #4 : Assessing Recursion Performance
 5 * CLASS         : CS 1B
 6 * SECTION       : MW - 7:30 pm - 9:50 pm
 7 * DUE DATE      : 11/26/2019
 8 *************************************************************/
 9
10 #ifndef MYHEADER_H_
11 #define MYHEADER_H_
12
13
14
15 #include <iostream>
16 #include <iomanip>
17 #include <string>
18 #include <cstdlib>
19 #include <chrono>
20 #include <ctime>
21 using namespace std;
22 using namespace std::chrono;// using namespace std::chrono
23
24 /*************
25  *  VARIABLE *
26  *************/
27
28 enum MenuOption //PROCESS - used for the menu
29 {
30     EXIT,
31     FACTLOOP,
32     FIBLOOP,
33     FACTREC,
34     FIBREC
35 };
36
37
38 /*****************************************************************
39  * PrintHeader
40  *    This function receives receives an assignment name, type
41  *     and number then outputs the appropriate header
42  *
43  *    returns  nothing -> This will output the class heading.
44  *****************************************************************/
45 void PrintHeader(string asName,  // IN - assignment Name
46                  char   asType,  // IN - assignment type
47                  int    asNum);  // IN - assignment number
48
49
50 /*****************************************************************
51  * Menu
52  *    This function will print the program menu into the console.
53  *
54  *    returns  nothing -> This will output the menu.
55  *****************************************************************/
```

```
56 void Menu();
57
58
59 /*****************************************************************
60  * GetCheckInput
61  *    This function will get the user's option from the menu and
62  *     returns it into the main.
63  *
64  *    returns  nothing -> This will output the menu.
65  *****************************************************************/
66 void GetCheckInp(int &userOption);  //IN & PROCESS - user's input
67
68
69 /*****************************************************************
70  * CheckInpFact
71  *    This function gets the user's input and pass
72  *     it back to the main.
73  *
74  *    returns  integer -> target number for fib/fact
75  *****************************************************************/
76 int CheckInpFact(); //IN & PROCESSS - user's input
77
78 /*****************************************************************
79  * Fact
80  *    This function will calculate the factorial of user's number.
81  *
82  *    returns  integer -> factorial of the target number
83  *****************************************************************/
84 int Fact(int userInt);  //IN & PROCESS - user's input
85
86
87 /*****************************************************************
88  * SeriesFib
89  *    This function will calculate the fibbonacci number of user's number
90  *    input
91  *
92  *    returns  integer -> fibbonacci result of the target number
93  *****************************************************************/
94 int SeriesFib(int userInp); //IN & PROCESS - user's input
95
96 /*****************************************************************
97  * FactLoop
98  *    This function will calculate the factorial number of user's number
99  *    input using a loop
100 *
101 *    returns  integer -> factorial result of the target number
102 *****************************************************************/
103 int FactLoop(int userInp);  //IN & PROCESS - user's input
104
105 /*****************************************************************
106  * SeriesFibLoop
107  *    This function will calculate the fibbinacci result number of
108  *    user's number input using a loop
109  *
110  *    returns  integer -> fibbonacci result of the target number
```

```
111  ***************************************************************/
112 int SeriesFibLoop(int userInp); //IN & PROCESS - user's input
113
114 #endif /* MYHEADER_H_ */
115
```