

```

1  /*****
2  /*
3  /*   A sample solution for Homework-1 Part-2.
4  /*
5  /*
6  /*****
7
8  /* Include libraries */
9  #include <stdio.h>
10
11 #define NUMBER_OF_YEARS 5    /* Compute the cost for NUMBER_OF_YEARS */
12
13 /* Writes initial cost, annual fuel cost, tax rate and
14  * NUMBER_OF_YEARS costs of a house to a file
15  */
16 int printCostToFile(FILE * file, int initialCost,
17                     int annualFuelCost, double taxRate, double cost);
18
19 int main()
20 {
21     FILE * inputFile, *outputFile; /* Files */
22
23     int initialCost, annualFuelCost;
24     double taxRate;
25     double cost;
26
27     /* Open files */
28     inputFile = fopen("input.txt", "r");
29     outputFile = fopen("output.txt", "w");
30
31     /* Print headings to the output file */
32     fprintf(outputFile,
33             "Initial House Cost\tAnnual Fuel Cost\tTax Rate\tTotal Cost\n");
34
35     /* Read information of 1st house*/
36     fscanf(inputFile, "%d%d%lf", &initialCost, &annualFuelCost, &taxRate);
37     /* Compute the cost */
38     cost = initialCost + NUMBER_OF_YEARS * annualFuelCost
39           + NUMBER_OF_YEARS * taxRate * initialCost;
40     /* Write the information of 1st house to the output file */
41     printCostToFile(outputFile, initialCost, annualFuelCost, taxRate, cost);
42
43     /* Read information of 2nd house*/
44     fscanf(inputFile, "%d%d%lf", &initialCost, &annualFuelCost, &taxRate);
45     /* Compute the cost */
46     cost = initialCost + NUMBER_OF_YEARS * annualFuelCost
47           + NUMBER_OF_YEARS * taxRate * initialCost;
48     /* Write the information of 2nd house to the output file */
49     printCostToFile(outputFile, initialCost, annualFuelCost, taxRate, cost);
50
51     /* Read information of 3rd house*/
52     fscanf(inputFile, "%d%d%lf", &initialCost, &annualFuelCost, &taxRate);
53     /* Compute the cost */
54     cost = initialCost + NUMBER_OF_YEARS * annualFuelCost
55           + NUMBER_OF_YEARS * taxRate * initialCost;
56     /* Write the information of 1st house to the output file */
57     printCostToFile(outputFile, initialCost, annualFuelCost, taxRate, cost);

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57
58  /* Read information of 3rd house*/
59  fscanf(inputFile, "%d%d%lf", &initialCost, &annualFuelCost, &taxRate);
60  /* Compute the cost */
61  cost = initialCost + NUMBER_OF_YEARS * annualFuelCost
62        + NUMBER_OF_YEARS * taxRate * initialCost;
63  /* Write the information of 1st house to the output file */
64  printCostToFile(outputFile, initialCost, annualFuelCost, taxRate, cost);
65
66  /* Read information of 4th house*/
67  fscanf(inputFile, "%d%d%lf", &initialCost, &annualFuelCost, &taxRate);
68  /* Compute the cost */
69  cost = initialCost + NUMBER_OF_YEARS * annualFuelCost
70        + NUMBER_OF_YEARS * taxRate * initialCost;
71  /* Write the information of 4th house to the output file */
72  printCostToFile(outputFile, initialCost, annualFuelCost, taxRate, cost);
73
74  /* Read information of 5th house*/
75  fscanf(inputFile, "%d%d%lf", &initialCost, &annualFuelCost, &taxRate);
76  /* Compute the cost */
77  cost = initialCost + NUMBER_OF_YEARS * annualFuelCost
78        + NUMBER_OF_YEARS * taxRate * initialCost;
79  /* Write the information of 5th house to the output file */
80  printCostToFile(outputFile, initialCost, annualFuelCost, taxRate, cost);
81
82  /* Do not forget to close files */
83  fclose(inputFile);
84  fclose(outputFile);
85
86  return 0;
87 }
88
89
90 /* Writes initial cost, annual fuel cost, tax rate and      *
91  * NUMBER_OF_YEARS costs of a house to a file              */
92 int printCostToFile(FILE * file, int initialCost,
93                    int annualFuelCost, double taxRate, double cost)
94 {
95     /*formatted printting tip: use - to align left */
96     fprintf(file, "%-24d%-24d%-16.3f%.0f\n",
97             initialCost, annualFuelCost, taxRate, cost);
98
99     return 0;
100 }
```