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1
2  /* Project created by Sara Marfella IST188316 on May 16, 2017 */
3
4  #include "print.h"
5
6  /* Print Functions */
7
8  /* printRoutesList: prints the list of routes
9   * \param tripList      the header of the trips list
10  *                      (can be filtered)
11  * \param allStations   the header of all stations list
12  * \param selected_station_id the id for the station to print the routes
13  * \param limit         the number of routes to print
14  */
15 void printRoutesList(Trip * tripList, Station * allStations,
16                     int selected_station_id, int limit) {
17     Route * route = createRoutesList(tripList, allStations,
18                                     selected_station_id);
19     printf(" Total | ID | Name      => ID | Name      \n");
20     while (route != NULL) {
21         printf(" %04d |", route->total);
22         printf(" %02d |", route->id_start_station);
23         printf("%s => ", route->name_start_station);
24         printf(" %02d |", route->id_final_station);
25         printf("%s \n", route->name_final_station);
26         route = route->next;
27     }
28 }
29
30 /* printTripsList: prints trips list to screen
31 * \param head      the header for the trip list (can be filtered)
32 * \param limit     the number of trips to print
33 */
34 void printTripsList(Trip *head, int limit) {
35
36     struct Trip *aux = head;
37     int lineCounter = 1;
38
39     printf("ID          | Dur          | Start: Date          | St | ");
40     printf("End: Date          | St | Bike ID | Type | Year | G\n");
41
42     while (aux != NULL) {
43         printf("%07ld |", aux->id);
44         printf("%06d |", aux->duration);
45         printf("%02d/%02d/%d %02d:%02d |",
46              aux->start.month, aux->start.day,
47              aux->start.year, aux->start.hour, aux->start.minute);
48         printf("%02d |", aux->id_start_station);
49         printf("%02d/%02d/%d %02d:%02d |",
50              aux->end.month, aux->end.day, aux->end.year,
51              aux->end.hour, aux->end.minute);
52         printf("%02d |", aux->id_final_station);
53         printf(" %s |", aux->bike);
54         if (aux->type == REGISTERED) {
55             printf("Reg. |");
56         } else {
57             printf("Cas. |");
58         }
59         if (aux->year_birthday != 0) {
60             printf("%04d |", aux->year_birthday);
61         }
62         if (aux->gender == MALE) {
63             printf(" M");
64         } else if (aux->gender == FEMALE) {
65             printf(" F");
66         }

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67         printf("\n");
68         aux = aux->next;
69
70         lineCounter++;
71
72         if ((limit != 0) && (lineCounter >= limit)) {
73             return;
74         }
75     }
76     printf("\n%d trips found.\n", lineCounter);
77 }
78
79 /* printStationsList: prints stations list to screen
80  * \param head          the header for the stations list
81  * \param limit          the number of stations to print
82  * \param printWithNoTrips should print stations with no trips (YES, NO)
83  */
84 void printStationsList(Station *head, int limit, int printWithNoTrips) {
85     struct Station *aux = head;
86     int lineCounter = 0;
87     printf("ID | Name | Latitude | Longitude | MaxIn | MinIn ");
88     printf("| Avg In | MaxOut | MinOut | Avg Out\n");
89
90     while (aux != NULL) {
91
92         // only print if the station has some trips, or if it should
93         // print even with no trips
94         if ((printWithNoTrips == 2 && aux->max_bikesIn != 0
95             && aux->max_bikesOut != 0) || printWithNoTrips == 1) {
96
97             //printf("%d\n", lineCounter);
98
99             printf("%02d | ", aux->id);
100             printf("%s | ", aux->name);
101             printf(" %f | ", aux->latitude);
102             printf("%f | ", aux->longitude);
103             printf(" %03d | ", aux->max_bikesIn);
104             printf(" %03d | ", aux->min_bikesIn);
105             printf(" %06.2f | ", aux->avg_bikesIn);
106             printf(" %03d | ", aux->max_bikesOut);
107             printf(" %03d | ", aux->min_bikesOut);
108             printf(" %06.2f \n", aux->avg_bikesOut);
109         }
110
111         aux = aux->next;
112         lineCounter++;
113         if ((limit != 0) && (lineCounter >= limit)) {
114             return;
115         }
116     }
117 }

```