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Maxwell Maia

21236277

22/02/2022

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#include <stdio.h>

#include <string.h>

typedef struct {

char make[20];

char model[20];

int year;

}car;

car garage[10];

void readCars(char myfilePath[], int numCars);

void displayGarage(int numCars);

int checkYear(int numCars, int year);

void main()

{

char myfilePath[] = "C:\\Users\\Maxwell SSD\\Desktop\\W19\\carsYear.csv";

readCars(myfilePath, 10);

displayGarage(10);

int ans = checkYear(10, 2016);

printf("There are %d cars with year %d in the garage.\n", ans, 2016);

}

void readCars(char myfilePath[], int numCars)

{

FILE\* fptr;

char line[200];

char delims[] = ",";

char delimsM[] = " ";

fopen\_s(&fptr, myfilePath, "r");

int i = 0;

int yearInt = 0;

if (fptr != NULL)

{

for(int j = 0; j <numCars; j++)

{

fgets(line, 200, fptr);

//printf("\nLine = %s\n", line); //out

char\* next = NULL;

char\* first = strtok\_s(line, delims, &next); //get make and model

//printf("makemodel = %s\n\n", first);

char makeModel[200];

strcpy\_s(makeModel, 200, first); //temporarily save the make and model string

first = strtok\_s(NULL, delims, &next); //get year as string

char yearString[200];

strcpy\_s(yearString, 200, first);

//printf("year = %s\n\n", first);

yearInt = atoi(yearString); //convert yearString to integer

garage[i].year = yearInt; //STORE YEAR

//Separate Make and model

char\* nextM = NULL;

char\* firstM = strtok\_s(makeModel, delimsM, &nextM);

//printf("make = %s\n\n", firstM);

strcpy\_s(garage[i].make, 20, firstM); //STORE MAKE

firstM = strtok\_s(NULL, delimsM, &nextM);

//printf("model = %s\n\n", firstM);

strcpy\_s(garage[i].model, 20, firstM); //STORE MODEL

strcpy\_s(line, 200, next);

i++;

}

}

}

void displayGarage(int numCars)

{

for (int i = 0; i < numCars; i++)

{

printf("Car: %d\n", i);

printf("Make = %s\nModel = %s\nYear = %d\n\n", garage[i].make, garage[i].model, garage[i].year);

}

}

int checkYear(int numCars, int year)

{

int count = 0;

for (int i = 0; i < numCars; i++)

{

if (garage[i].year == year)

{

count++;

}

}

return count;

}

