A) Demonstration Timeslot

05/07/2020, 15:15~15:30, TA: Kevin Pfeil,

Zoom link: https://oregonstate.zoom.us/j/3077356858

B) Test Cases

Setting	Input	Expected Result	Actual Result
What is the minimum car speed in km/h (100~500)?	-1	Please try again; enter a number between 100 and 500:	Please try again; enter a number between 100 and 500:
What is the minimum car speed in km/h (100~500)?	150	What is the maximum car speed in km/h (100~500)?	What is the maximum car speed in km/h (100~500)?
What is the minimum car speed in km/h (100~500)?	600	Please try again; enter a number between 100 and 500:	Please try again; enter a number between 100 and 500:
What is the maximum car speed in km/h (100~500)?	200 (because the minimum car speed is 150km/h)	How long is the race course in km (10~200)?	How long is the race course in km (10~200)?
What is the maximum car speed in km/h (100~500)?	100 (because the minimum car speed is 150km/h)	Please try again; enter a number between 100 and 500:	Please try again; enter a number between 100 and 500:
What is the maximum car speed in km/h (100~500)?	1000	Please try again; enter a number between 100 and 500:	Please try again; enter a number between 100 and 500:
How long is the race course in km (10~200)?	300	Please try again; enter a number between 10 and 200:	Please try again; enter a number between 10 and 200:
How long is the race	0	Please try again;	Please try again;

course in km (10~200)?		enter a number between 10 and 200:	enter a number between 10 and 200:

C) How much time did this program take you to finish? How does it compare to the time you estimated in your design document?

It took about 1 hour to finish this program. In my design document, I estimated it will take about 3 hours, but actually it took only about 1 hour. The expected implementation time was three times of the actual implementation time.

D) Why do you think we advise keeping functions no more than 20 lines long?

In my opinion, the reason of keeping functions no more than 20 lines long is to reduce useless lines in the program and increase the proficient and efficient in reading the program in order to revise the program much easier.

E) When is it useful to create a function with a void return type?

It is useful to create a function with a void return type when we are making a complicated function that don't return a value, or going to reduce the line of the main function.

\<EXTRA CREDIT\>

1. Average Output
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What is the minimum car speed in km/h(100~500)?100

What is the maximum car speed in km/h(100~500)?500

How long is the race course in km(10~200)? 100

Car 1 Tachyon: 280km/h, finishes in 21.4286minutes.

Car 2 Higgs: 349km/h, finishes in 17.192minutes.

Car 3 Flash: 152km/h, finishes in 39.4737minutes.

Car 4 Sliver Suffer: 483km/h, finishes in 12.4224minutes.

Car 5 Berry Alan: 146km/h, finishes in 41.0959minutes.

Car 6 Lightning Mcqueen: 247km/h, finishes in 24.2915minutes.

Car 7 Aerosmith: 393km/h, finishes in 15.2672minutes.

Car 8 Speedster: 455km/h, finishes in 13.1868minutes.

Car 9 Velocirapter: 240km/h, finishes in 25minutes.

Car 10 Godspeed: 247km/h, finishes in 24.2915minutes.

The Champion of the race is Sliver Suffer!

The average speed of the race is 299.2km/h.

2. I will recommend to use the loop in the program in order to allow the player to enter valid numbers if they enter invalid numbers more than once.