GRAND-PRIX

WITH OPENMP IN C
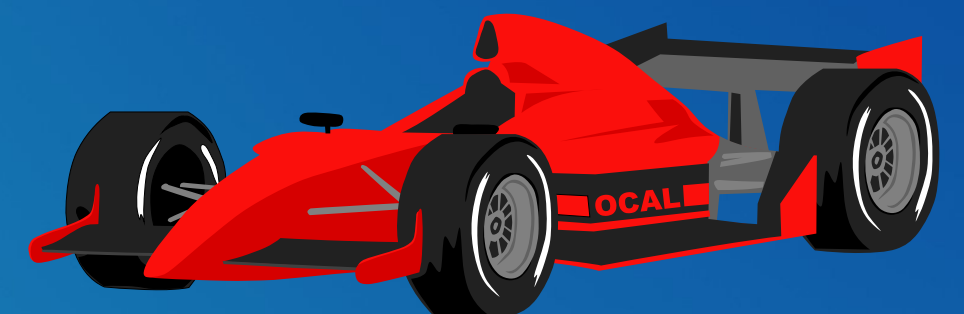
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- Description of the project
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- Flow Diagram
- Thread Diagram
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ARCHITECTURE

- UML
- Flow Diagram
- Thread Diagram

Car (Struct)

name: *char

id : int

speed : int

maxSpeed : int

acceleration : int

lap : int

image : char

place : int

racetime : double

percetage : double

finish : int

places : *int

GrandPrix

nlaps : int

ncars : int

pl : int

map : **int

names[] : *char

colors[] : *char

characters[] : *char

Car : struct

createCar(*char, int, **int, *int)

printMap(**Car) : void

*carFunction(void *, **Car) : void

carFunction

Start
carFunction(*car, **carros)

car->id == ncars

true → while pl < ncars

false → printMap(carros)

false → End

sleep(1)

false → while car->finish == 0

true

false → car->places[pl]=car->id
pl++ → End

for
i < ncars

end for

carros[i]->percentage - car->percentage > 0 &&
carros[i]->percentage - car->percentage < 2 &&
carros[i]->speed < car->speed

false

true

r = (rand() / RANDMAX) +1

r > 0.9

false

true → newSpeed = carros[i]->speed
car->speed=newSpeed

cAcc == 4

true → newASpeed = car->speed + car->acceleration

false → cAcc++