



OUTFUEL



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L03



Out drive your debt

MOTIVATION & MISSION

- WITH GAS PRICES INCREASING RAPIDLY, A LOT OF AN INDIVIDUAL'S INCOME GOES TOWARDS FUEL NEEDS RATHER THAN OTHER NECESSITIES.
- BY SIMPLY SPENDING LESS AT EVERY RE-FILL, THE USER WILL ULTIMATELY SAVE A TREMENDOUS AMOUNT OF MONEY.
- **OUTFUEL IS THE SOLUTION!**
- OUTFUEL'S GOAL IS SIMPLE. HELP THE USER SAVE MONEY.
- ALSO PROVIDES THE CONSUMER WITH SOME INSIGHT ON HOW MUCH FUEL THEY HAVE CONSUMED, AND HOW MUCH MONEY HAVE SPENT IN TOTAL.
- THIS WILL ALLOW THE USER'S TO BECOME MORE AWARE OF THEIR EXPENDITURES.



OUTFUEL

HOW IT WORKS



- ASK THE USER TO CREATE AN ACCOUNT, AND GIVE SPECIFIC INFORMATION REGARDING THEIR VEHICLE.
- THE INFORMATION WILL INCLUDE: BRAND, YEAR, MODEL ** MUST BE A MODEL THAT IS WITHIN THE DATASET / IF NOT, CONSUMER CAN CHOOSE TO INPUT MPG ESTIMATES OF THEIR VEHICLE MANUALLY , ENGINE DISPLACEMENT , FUEL TANK CAPACITY , TYPE OF GAS USED.
- ASK THE USER TO INPUT THE AMOUNT OF GAS CURRENTLY IN THE CAR. THE APPLICATION WILL ASK THIS QUESTION AFTER EVERY RE-FILL.
- ONCE USER'S ROUTE TAKES PLACE, OUTFUEL WILL MEASURE THE DISTANCE TAKEN DURING THE TRIP,
- APP WILL CALCULATE AN ESTIMATE OF THE TOTAL FUEL CONSUMED DURING THE TRIP.
- WILL THEN ADD THIS CONSUMPTION TO PRIOR FUEL CONSUMED DURING PREVIOUS TRIPS. THE USER WILL BE PROVIDED WITH ALL THIS INFORMATION.
- WARN THE USER WHEN THEIR TANK IS CLOSE TO EMPTY.
- DISPLAY A LIST OF GAS STATIONS, WITH INFORMATION ON PRICES AND LOCATIONS. THE USER CAN CHOOSE TO RANK THEM BASED ON PRICE OR LOCATION.
- OUTFUEL WILL PROCEED TO GUIDE THEM TO THIS STATION. AFTER THEIR RE-FILL, THE USER WILL BE PROMPTED TO INPUT THE AMOUNT OF GAS THEY HAVE FILLED.
- KNOWING THE PRICE OF THE GAS TYPE AND THE AMOUNT OF GAS THEY HAVE FILLED, THE TOTAL COST CAN BE CALCULATED & WILL BE INCLUDED IN THEIR SUMMARY.

WHY OUTFUEL?

**SAVE
BIG!**

- OUTFUEL PROVIDES INSIGHT ON USER'S EXPENDITURES – ALLOWING CONSUMER'S TO BETTER PLAN FOR FUTURE BUDGETING.
- WILL ALLOW THEM TO SAVE BIG !!
- THE APPLICATION TAKES USE OF A DATASET REGARDING MPG ESTIMATES FOR ALL 1984 – 2007, 2011 – 2016 MODEL YEARS .
- DATASET LISTS ALL GAS STATION LOCATIONS WITH THEIR RESPECTIVE PRICES IN NEW SOUTH WALES, AUSTRALIA.



OUTFUEL

ALGORITHMS

- **WILL IMPLEMENT MERGESORT:**
 - STABILITY
 - $O(N \lg N)$ WORST CASE TIME COMPLEXITY
- **CHALLENGES:**
 - MERGESORT IS NOT IN PLACE, WILL REQUIRE MORE MEMORY
 - HOW WILL IT BE IMPLEMENTED EXACTLY?



ALESSANDRA GUERINONI

OUTFUEL

THIS WAS AN INTERESTING PROJECT AND IF IT WAS ONE OF THE PROJECTS IN MY TEAM,
I WOULD HAVE LIKED TO IMPLEMENT IT

- A. STRONGLY DISAGREE
- B. DISAGREE
- C. NEITHER AGREE NOR DISAGREE
- D. AGREE
- E. STRONGLY AGREE