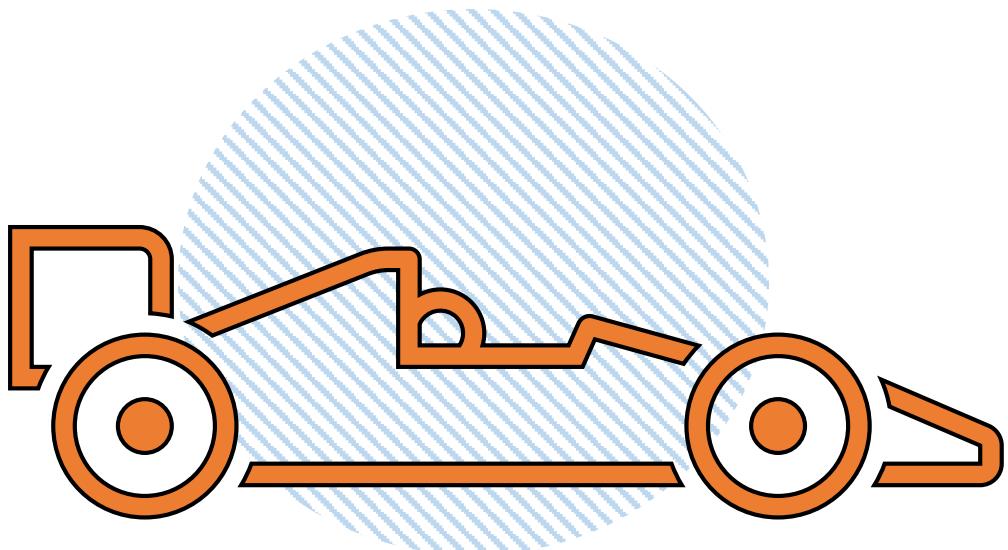


CAR RACE GAME



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Test Lab Final Project

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ABOUT THE PROJECT

- This is a Car Race game played by a single player using Keil, C programming language and implemented on hardware components (most importantly TivaC kit & Nokia 5110 ADC).
- The player moves in a direction where it is opposed by enemy cars. The player car should avoid hitting any of them.
- There are 3 lives granted to the player, should the car hit any of the opponent cars the player loses 1 life out of the 3. After 3 hits, the LCD screens "Game Over" along with the final score.
- The player car's position is controlled through the ADC slider.

Tools

- [\[Keil µVision IDE\]](#)
- [\[Tiva™ C Series TM4C123G LaunchPad Evaluation Board\]](#)
- [\[C Programming Language\]](#)
- Hardware Components:
 1. Nokia 5110 Blue LCD
 2. TivaC Microcontroller kit
 3. Bread board
 4. Jumper wires
 5. ADC slider

PREREQUISITES

- Installation of Keil.
- Loading the project repository files onto the TivaC kit using Keil.
- Connecting the Nokia 5110 Screen pins to the kit pins as configured.



Figure 1 - KEIL Tool

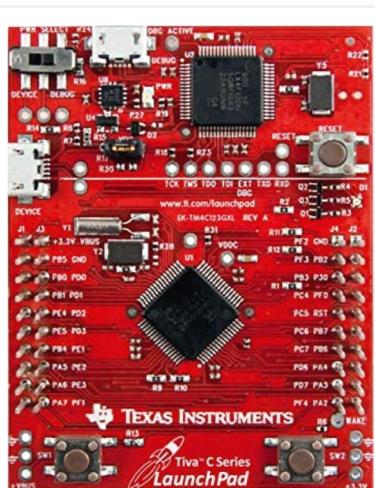


Figure 2 - TivaC TM4C123G

ACKNOWLEDGMENTS

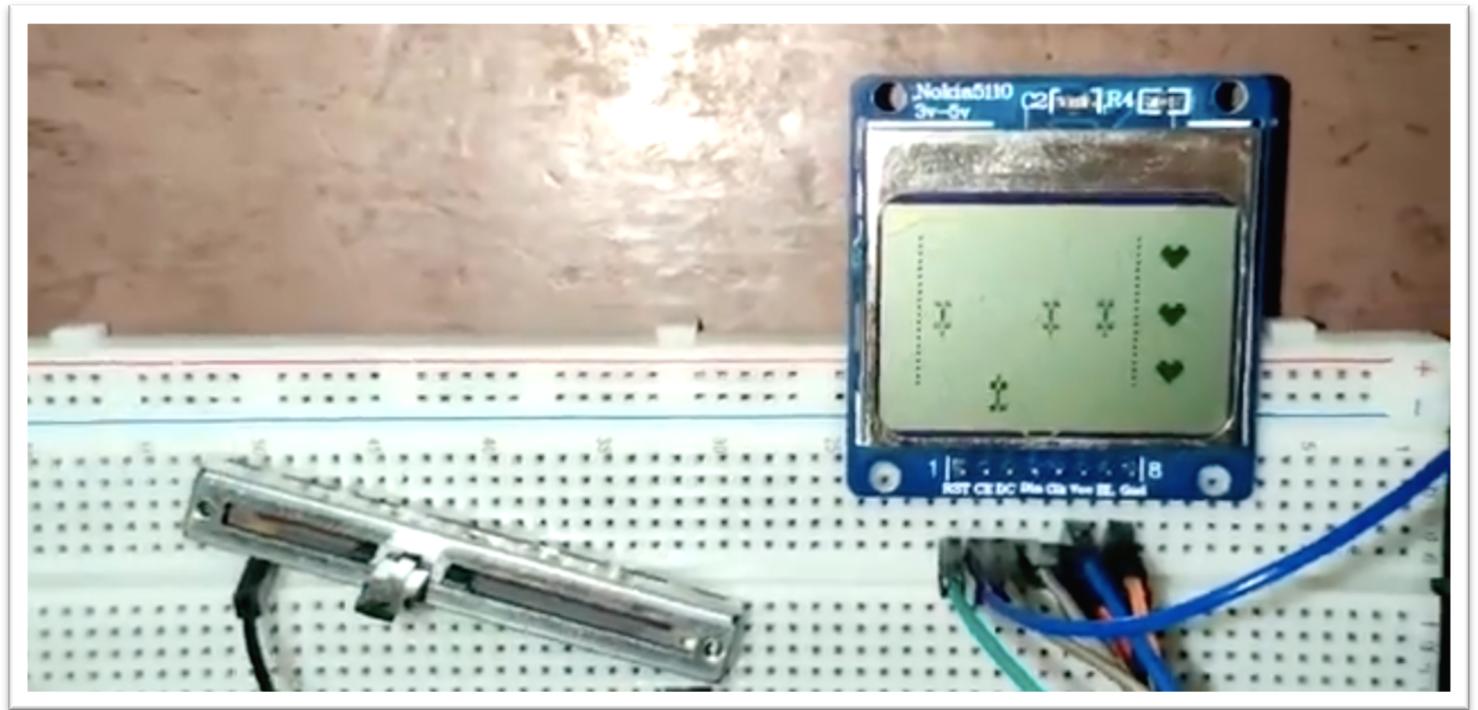
This is a space where we list resources we found helpful and would like to give credit to:

- [Keil Product Manuals] (<https://www.keil.com/support/man/docs/uv4/>)
- [Tiva™ TM4C123GH6PM Microcontroller DATA SHEET] (<chrome-extension://efaidnbmnnibpcajpcglclefindmkaj/https://www.ti.com/lit/ds/spms376e/spms376e.pdf?ts=1652959781573>)
- [A playlist of our weekly lab tutorial videos] (https://www.youtube.com/playlist?list=PL8QllvvGlfWB-Q_3aRYP_fuhROhXuZ6Ck)



Figure 3 - Nokia 5110 LCD

▪ Hardware Connection



▪ Debug Mode Screenshot Samples

