

Project Name: Embedded Calculator

Team members:

احمد عبد المعطي محمد

كريم عصام الدين سيد

محمد مصطفى ثابت

Main components:

- Atmega32 with Keypad &LCD

Description:

- Embedded Calculator is a simple calculator that performs the main mathematical operations, the expression is entered using the keypad and displayed on the LCD then the result is written on the LCD after pressing "=" on keypad.

features:

- Support binary operators +, -, *, /, %, and ^ (on integers only).
- It can deal with integers and float numbers.
- Support complex expressions
- Support nested parentheses
- Support unary operators -, +

Operation:

- Expression is entered character by character using keypad and stored as a string, the LCD prints the inputs until "=" button is pressed, when "=" is pressed the input expression -infix exp- is converted to postfix one and calculations are made on it then the result is converted back to string by ftoa function and printed on screen.