

## Database Articles, phase 2

First of all, when you go to this server, you are met by the start page (1.1) with a choice: or to register if you are a new user, or you can enter, if you already have an account on the server.



1.1 - Main page

For this page have been created index.html file.

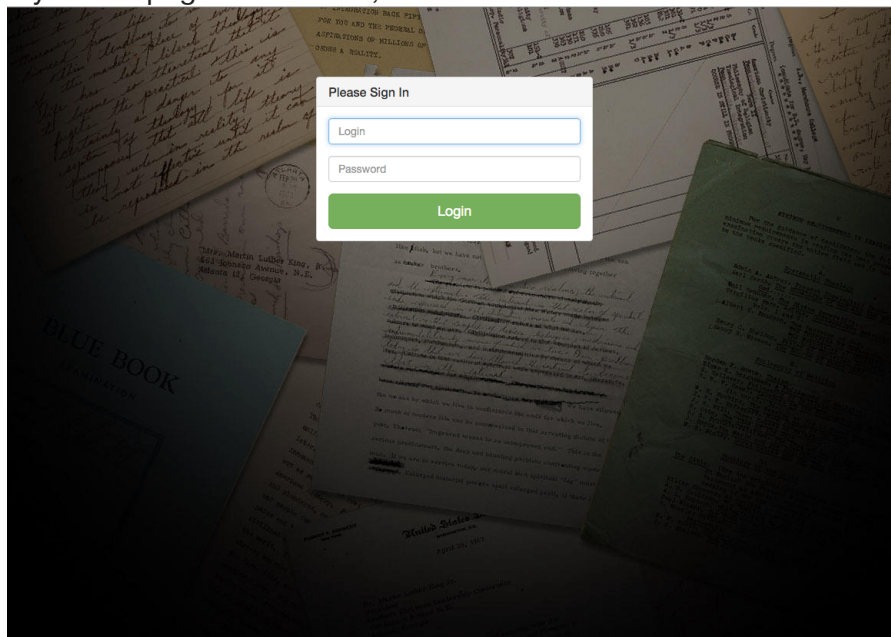
When you press one of the buttons, you redirect to the page 2.1 or 2.2, respectively.



2.1 - Page of registration

For this page have been created registration.html file

2.1 page consists of a standard form "Registration" with the fields Login, Password and Confirm Password. After successful registration, your data is saved to the database server and redirects you to a page with a table, which holds the article.



2.2 - Login page

For this page have been created login.html file.

In 2.2 includes a standard form with fields Login, Password and button Login, respectively. After a successful login, you will also get a page with a table.

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## Publications

title	year	doi	abstract
A self-terminating low-voltage swing CMOS output driver	1988	10.1109/4.1007	A CMOS output pad driver circuit is described that automatically series-terminates a driven line in the line's characteristic impedance. The circuit has advantages in speed, power, and size over conventional designs. The key idea is the use of emitter-coupled logic (ECL) compatible low-voltage swings for signaling, combined with the use of the driver transistor as both a switch and as a termination resistor. An on-chip measurement circuit dynamically adjusts the impedance of the driver to match the impedance of an external reference impedance standard, allowing the circuit to compensate for both chip and board level fabrication variations
A subnanosecond Josephson 16-bit ALU	1988	10.1109/4.1026	The design and characteristics of a Nb based Josephson 16-bit arithmetic logic unit (ALU) for use as a major component of a practical Josephson microprocessor are discussed. The ALU has 900 gates and uses dual-rail logic to perform 12 functions. One of the simplest algorithms, the ripple-carry method, is used. Experiments confirmed that ALU functions operated correctly. The critical path delay time was 860 ps for a 10.1-mW power dissipation. Average values estimated from experiments are 9.2 ps for the gate delay and 113 $\mu$ W for the gate power dissipation. The results demonstrate that development of a Josephson microprocessor is feasible
A deterministic algorithm for automatic CMOS transistor sizing	1988	10.1109/4.1017	A model which offers a closed-form equation for determining device size, based on speed and load, has been developed. The need for circuit simulation is eliminated in most cases. This model is used in a system for automatically producing performance-tuned cell layouts
A monolithic power op amp	1988	10.1109/4.1018	The standard junction-isolated power process has been modified by the addition of polycrystalline-film resistors to solve the topological problems encountered in making 90-W, 80-V, 10-A power transistors and connecting them together for a push-pull output. An all n-p-n output stage that holds crossover distortion to 0.01% while driving a 4- $\Omega$ load, even with the quiescent current below 20 mA, has been developed. It is stable with all reactive loads and does not have the spurious-oscillation problems observed with the familiar quasicomplementary amplifier. These innovations are described along with the design of a complete power op amp, the LM12. The prevention of failures from substrate currents which occur when the output is driven outside the supply by inductive loads is discussed
A switched-capacitor realization of multiple FIR filters on a single	1988	10.1109/4.1019	Design techniques for realizing eight 32-tap transversal filters on a single-CMOS IC are discussed. The IC is capable of processing signals at a rate of 500 million multiplications and accumulations per second, while achieving a high dynamic range. The IC contains 32 sample-and-holds, a 32x32 analog multiplexer, eight 32-input summing amplifiers, and all of

### 3.1 - page with a table of articles

For this page have been created tables.html file.

3.1 consists of a search box, drop-down menus an advanced search where you can select the desired field and set the data, which will make your search more accurate and convenient, table with data of the articles and the user interface, where you can logout from your account.

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### 3.2 - result of search

3.2 - example of search by title «A self-terminating low-voltage swing CMOS output driver».

How to run the server:

To start this server you need to open «backend.py» file and run it. For this you should install Python 2.7. After that the server will be started.

Program languages which was used for completely second phase: Python, Tornado(web framework), Psycpg2 (database), HTML5, CSS, JS.