BIOSTOCK

Bioinformatics Website

A Bioserver Project

Our team

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AGENDA

01 • • **About BIOSTACK**

02 • • **Database (Schema)**

03 • • **Website component**

04 • • **Login System**

05 • • **Biological Functions**

06 • • **PHP Functions**

"In order to be irreplaceable, one must always be different."
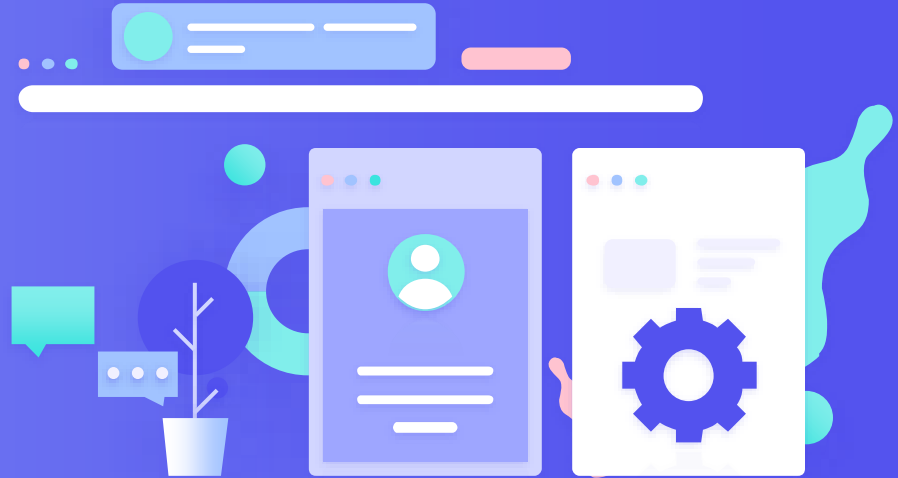
—SOMEONE FAMOUS

About
BIOSTOCK

BioStock!

A biological webserver that provides a Biological database and bioinformatics functions.

Database

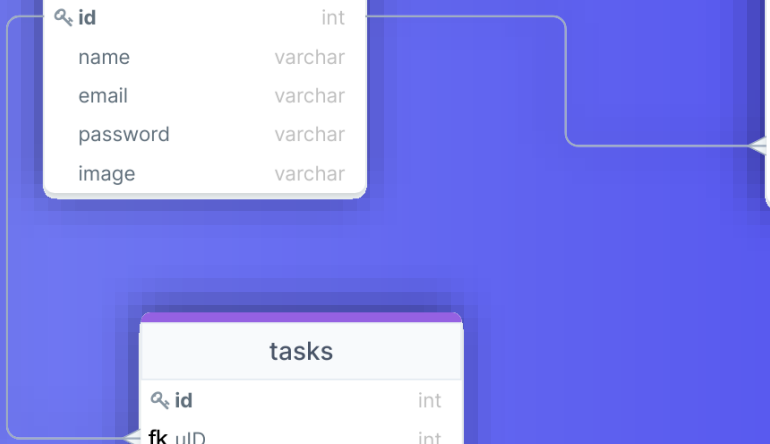Our database consist of :

biostock_db

user_form   seq   tasks

Schema

user_form

🔑 **id**	int
name	varchar
email	varchar
password	varchar
image	varchar

seq

🔑 **id**	int
seqID	varchar
seqName	varchar
sequance	text
description	varchar
fk userID	int
status	tinyint

tasks

🔑 **id**	int
fk uID	int
function	varchar
seq	text
result	text
type	int

Our Webserver consist of

Login System
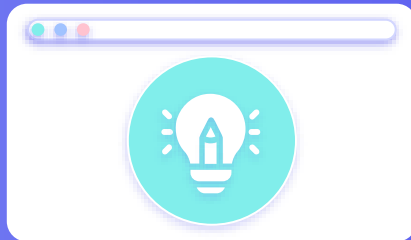
Services
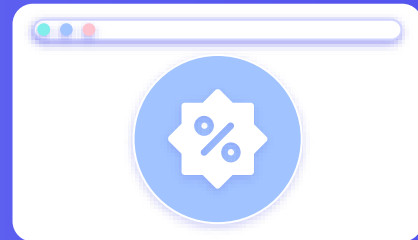
Biological Database

We used

01		HTML
CSS	02	
	03	PHP
Java Script	04	
	05	MySQL

To build BIOSTOCK

BioStock

Home   Products   About   Login   Sign Up

Welcome to BioSto _

Login System

Login

Register

Profile

Login Page

BioStack

Home

LOGIN NOW

enter email

enter password

login now

don't have an account? regiser now

Register Page

REGISTER NOW

enter username

enter email

enter password

confirm password

Choose File No file chosen

register now

already have an account? login now

User Profile Page

Home   Services   update profile   logout

Timeline

admin

My Tasks

ADD SEQUANCE   VIEW SEQUANCES

- Fuction: GC Content
  Sequance :

  ACGTGC   Copy

  Result :
  44.4%

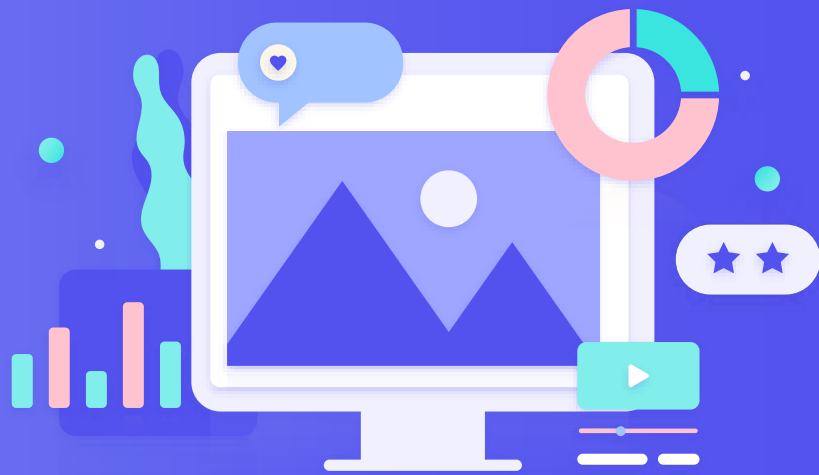 Delete

- Fuction: DNA to Protein
  Sequance Name: Homo sapiens mitochondrion, complete
  genome

Biological Functions

We Implemented Biological functions that can work on:

- Users own sequence (sequence or fasta file).
- Our database sequence

Users result can be saved or deleted!.

Biological Functions

NormalizeSequence

Check sequence validate.

complementDnaSequence

Take a sequence and return its complement.

countNucleotides

Take a sequence and return its length.

Filter nbases

Take a sequence and return sequence without n bases.

readFasta

Read fasta file and return a sequence as a string.

reverseComplement

Take a sequence and return its reverse complement.

gcContent

Take a sequence and return the gc percentage of it.

isValid

Take a sequence and return the validity.

reverseTranscribe

Take a sequence and convert RNA to DNA.

dnaTranscribe

Take a sequence and convert DNA to RNA.

translateDNA

Take a sequence and convert DNA to amino acids.

translateRNA

Take a sequence and convert RNA to amino acids.

Services Page

GC-content (or guanine-cytosine content) is the percentage of nitrogenous bases in a DNA or RNA

Reverse Complement converts a DNA sequence into its reverse, complement, or reverse-complement counterpart

COUNT NUCLEOTIDES

count the number of nucleotides in the sequence which may be A | C | T | G

Takes a seq and returns the counts of the nucleotides

Fasta or String

Count Nucleotides

For Example input:ACGT output:4

Reverse Transcribe wich will generate a complementary DNA (cDNA) form RNA templet.

Input From Biostock database

The user own input

Choose Sequence

Homo sapiens mitochondrion, complet ⌄

SUBMIT

The way of sequence choice:-

YOUR

The way of sequence choice:-

MINE

Please input your sequence

You can only add sequence or fasta format sequence

CHANGE INPUT

Input only a fasta file

Choose File | No file chosen

If the file is multi fasta discard all fasta sequances and accept only the first one

SUBMIT

Result Page

Home   Services   Profile   update profile   logout

Count Nucleotides

ATTAAAGGTTTATACCTT(

Copy Sequence

29903

Copy result

Save Result

Close

Database manipulation in PHP

SELECT

INSERT

UPDATE

DELETE

SELECT

BioStack

Welcome

Let's View Your Sequances!

Choose Sequance

Homo sapiens mitochondrion, complete genor ⌄

View ME!

Sequance Id

NC_012920.1

Sequance Name

Homo sapiens mitochondrion, complete genome

Sequance

GATCACAGGTCTATCACCCTATTAACCACTCACGGGA

Description

SOURCE: mitochondrion
Homo sapiens (human)

INSERT

Home   Services   Profile   update profile   logout

Welcome

Let's Add Your Sequance!

Sequance Id

Sequance Name

Sequance

Description

How do You Want to share your Sequance?

○ Private   ○ Public

submit

UPDATE

Home   Services   Profile   logout

username :
admin

your email :
admin@biostock.com

update your pic :
Choose File No file chosen

old password :
enter previous password

new password :
enter new password

confirm password :
confirm new password

update profile

go back

DELETE

BioStack

Home   Services   update profile   logout

Timeline

admin

My Tasks   ADD SEQUANCE   VIEW SEQUANCES

- Fuction: GC Content
Sequance :

ACGTGC   Copy
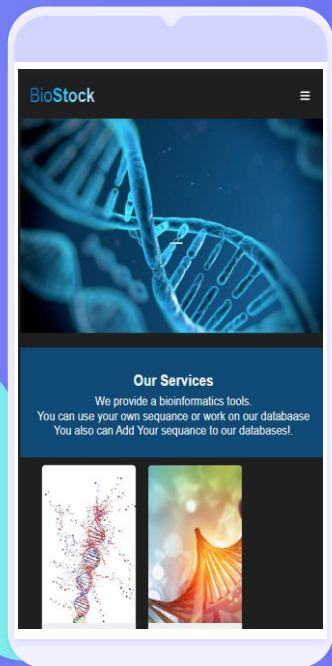
Result :
44.4%

Delete

- Fuction: DNA to Protein
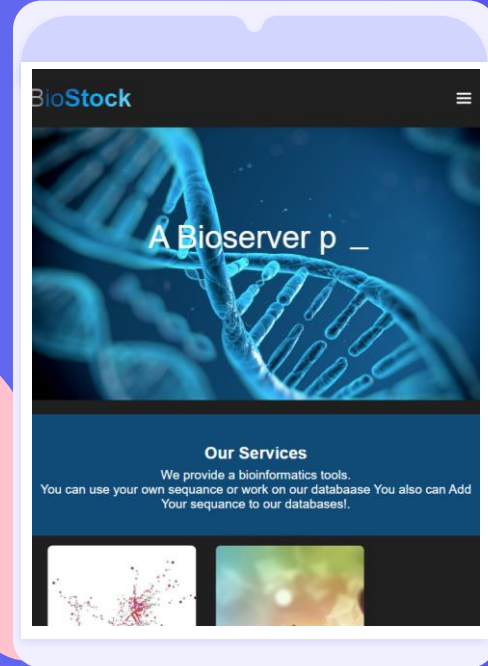Sequance Name: Homo sapiens mitochondrion, complete
genome

Mobile web View

BioStock

Our Services
We provide a bioinformatics tools.
You can use your own sequance or work on our databaase
You also can Add Your sequance to our databases!.

Tablet web View

Desktop web View

Thanks!

Do you have any questions?