

Alternate front-end code documentation

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The website can be accessed from the following address:

<https://student.cryst.bbk.ac.uk/~kk004/biocomp2demo/>

First the index page is shown:

Chromosome 10 Genome Browser
Birkbeck Biocomputing II Group 8

List of all entries

Search by:

Genbank accession Gene identifier

Protein product name Chromosomal location

Search.. Submit

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Clicking on the “List of all entries” link calls the listall.cgi script to produce a list of all entries

Alternatively, you can search for a specific entry. This is done by first selecting one of the four search options. Then enter the search text and press the enter-key or click on “Submit”. This sends the form data to the search.cgi script.

Here is the “list of entries” page produced by the listall.cgi:

Chromosome 10 Genome Browser Birkbeck Biocomputing II Group 8			
Genbank accession	Gene identifier	Protein product name	Chromosomal location
AB032150	7328949	20 alph-hydroxysteroid dehydrogenase	10
AB032153	60391440	bile acid-binding protein	10
AB032157	60391441	prostaglandin F synthase	10
AB032163	60391442	dihydrodiol dehydrogenase 4	10
AB033920	60391447	fatty acid coenzyme A ligase 5	10q25.1-q25.2

Clicking on the header to return to the index page.

Click on the link in the genbank accession to call the search.cgi script and view the details page for the entry.

Link to
return to
the index
page.

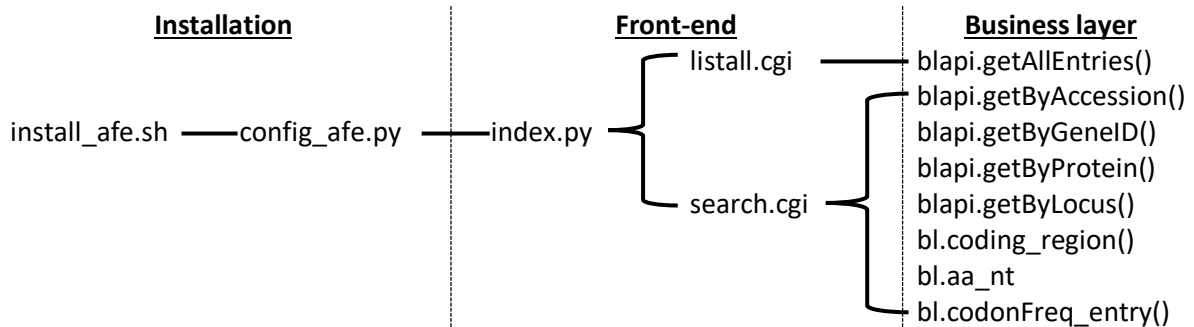
Here is an example entry detail page:

Chromosome 10 Genome Browser Birkbeck Biocomputing II Group 8																																															
Genbank accession		Gene Identifier		Protein product name																Chromosomal location																											
AB032150		7328949		20 alpha-hydroxysteroid dehydrogenase																10																											
DNA sequence with highlighted coding regions				Coding DNA sequence				Amino acid sequence								Restriction Enzymes																															
ATTAAGGATATACGCTACATATCTCCTAATTTGTCGAGCCCAAGTTGACATATTAAGAACTCTGTTGCTTCTCAGTTTCATACCCACAAAGATCTAGTCTTGCCCATTCGCTGAATAGATGAAATAATTACACTACTAACATGAGTTGTAAAACCTACCAAGATAATTCAGATAATGGGTATGCTTATGATTTGATAACAACTTTACCTTTTGGTAATTTCACTCTTTTCATTCAATATATGTACTAATATATCCAACATATTATAAGTTTCATCATGATATGGCAGAACAAAAGGCATCACAAGAGAGAGAATAATTTGCCTGTGGTCATTAGTTTGAAGTAGTAGAAATGTCTAAATATTAGGTGGAGCAAACTAGTAAATTTGGCTCAAGTTTTCATTACACAACTTCCTTTCTCTAACCTCTGCAGCTTTGGTGAATTTCCCATC GACCAGAGTTGGTCCGACCAGCCTTGGAAAGGTCAGTGAAAAATCTTCAATTGGATTATGTTGACCTCTACCTTATTCAATTTCCAGTGTCTGTAAAGGTAGGCAGCTTGTGTGATCAAAATTAATTTCACTTTTGTCTCAGCATAAATATTGTTTTATGGATATTTGAACCTAAGCATTTCTTAGGAGGACATAGGGATTATAACATAGAAAGAAATCCTAAACCTAACTCCTAATTCCTTTCTATGGGATACATTTGAATCCATACTCCGTGATTGCATGCTCTATAAGAAAAGAAAGTGCAGAACTCTCAAAGCCTCTGCCTCAAAAACCTTGAGGAAATGATAGTCATCTCCTTGAAGGCACAAGGCTTAGTTATGATTCTGCTGATTTCACCTCTTGGGATGTTCCAGACACAGAGTTTCATGAAGCTGTGGTGTCCAGAAAACCTGCTGCACATAGGGTGCACAATGAGTTTCCATCTTCTGCCTCTTTTAAGGGGCGAGAACTCAGTCCGGGAGTGTCTTAAACTACAGACCTTCATGGGAAACCTTGTGCTTCTGCTTCC TCTCTTTTCACTGAGGTTTATTTTGTCTAGCCATGAATCTTGTGTCTTCACTAATCTTTGTCTTAAAGTACTGAAAACCTAGTCAGGCTAGTAAATGCAAAAGGGTATATTA																								GATATGATAATGGGAAATCAAAGCCAGGGCTACATTAAGAATTTGATAAAAACTCTAAAAATATATCTTTCTCCACCCTTATCTCTGCTTTATTACAAAAGGCTTTTAAAGTATTG																							
Codon frequency table																																															
Codon	AUG	GAU	UCG	AAA	UAU	CAG	UGU	GUG	AAG	CUG	AAU	GGU	CAC	UUC	CCU	GUC	GGA	UUU	GGC	ACC	GCG	GCA	G																								
AA	M	D	S	K	Y	Q	C	V	K	L	N	G	H	F	P	V	G	F	G	T	A	A	E																								
Frequency per entry	1.235	3.704	0.309	3.704	2.16	3.395	1.543	4.321	4.321	3.704	2.778	0.617	0.926	2.16	1.852	1.543	1.543	1.852	1.543	1.235	0.309	1.543	4.																								
Frequency per chromosome	1.918	1.921	0.703	1.992	1.038	3.295	1.024	3.133	3.112	4.356	1.482	0.956	1.598	2.177	1.623	1.568	1.541	1.465	2.922	2.102	1.349	1.394	3.																								
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Click on
tabs to
view the
different
sequences.

Scroll horizontally through the codon
frequency table to scan over all the
columns.

Call routine:



- install_afe.sh - This program is run in the command-line to create the directories for the website to be run.
- config_afe.py - Contains information on the website url and cgi script locations.
- index.py - Prints the index.html page
- search.cgi - Takes the form data from the index page and uses the business layer to produce a details page for an entry. Or creates a table list of entries if there are multiple results.
- listall.cgi - Formats output from the business layer into an html table of all the entries.