

BIOCOMPUTING II

GROUP PROJECT

CODE

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Link to the browser:

student.cryst.bbk.ac.uk/~sm004/wb.html

The whole code

```
<!-- @author: Mohammad Faizan

html for intiial view of webpage
-->
<!DOCTYPE html>
<html lang="en">
<head>
<meta charset="UTF-8">
<meta name="viewport" content="width=device-width, initial-scale=1">
<meta http-equiv="X-UA-Compatible" content="ie=edge">
<style>
[data-tab-content] {
    display: none;
}

/* display selected/active tab contents*/
.active[data-tab-content] {
    display: block;
}

body {
    padding: 0;
    margin: 0;
}

/* change tabs from a list to headers on page */
.tabs {
    display: flex;
    justify-content: space-around;
    list-style-type: none;
    margin: 0;
    padding: 0;
    border-bottom: 1px solid black;
}

/* cursor hover and tab spacing*/
.tab {
    cursor: pointer;
    padding: 10px;
}
```

```

.tab.active {
    background-color: #CCC;
}

.tab:hover {
    background-color: #AAA;
}

.tab-content {
    margin-left: 20px;
    margin-right: 20px;
}
body {
    font: 15pt Helvetica, Arial, serif;
    background: #DADFF1;
    margin: 0px;
    padding: 5px;
}

/* header logo and image */
#header {display: flex;
    flex-direction: row;
    background: #333366;
}

h1.site_name {text-align:center;
    font: bold italic 80pt Helvetica, Arial, serif;
    color: #1E90FF;
    padding: 0px;
    margin-top: 0;
    position: relative;
    bottom:-100px;
}

span.site_number {color:#B22222;
}

.ch22{background:#333366;
    margin: 0;
    float: left;
}

/* formats restriction search box with */
.eor1 {width: 40%;

```

```
height: 190px;
float: right;
position: relative;
top: -30px;
left: -20px;
}
```

```
#re_search_format {width: 45%;
height: 280px;
padding: 5px;
background: #87CEEB;
border: 5px solid #333366;
float: right;}
```

```
/* Styles navigation bar */
```

```
.topnav {overflow: hidden;
background-color: #333333;
}
```

```
.topnav a {float: left;
color: #F2F2F2;
text-align: center;
padding: 14px 16px;
text-decoration: none;
font-size: 17px;
}
```

```
.topnav a:hover {background-color: #DDDDDD;
color: black;
}
```

```
.topnav a.active {background-color: #CD5C5C;
color: white;
}
```

```
/* Styles page */
```

```
#maincontent {clear: both;
width: 60%;
height: 50%;
margin: 0px;
padding: 0px;
}
```

```
/* Styles tables */
```

```
table {border-collapse: collapse;
```

```

        width:40%
    }

    th, td {text-align:left;
        padding: 8px;
        color:#333366;
    }
    tr:nth-child(even){background-color:#F2F2F2;
    }

    th {background-color:#333366;
        color:#1E90FF;
    }
    body { clear:both;
        width: 100%;
        height: 50%;
        background: #DADFF1;
        margin: auto;
        padding: 5px;
    }

/* Styles main heading in all tab on navigation bar*/
.main_heads {
    text-align:center;
    font: bold 30pt Helvetica, Arial, serif;
    color: #1E90FF;
    background: #333366;
    padding: 14px 16px;
    margin-top: 0px;
}

/* Styles all sub-headings in all tabs on navigation bar*/
.subheads {text-align:left;
    font: bold italic 15pt Helvetica, Arial, serif;
    color: #333366;
}

/* Styles table in glossary*/
table {border-collapse:collapse;
    width:100%;
}

th, td {text-align:left;
    padding: 8px;
    color:#333366;
}

```

```
tr:nth-child(even){background-color:#F2F2F2;
    }
```

```
th {background-color:#333366;
    color:#1E90FF;
    }
```

```
/* Styles any sentence in the body*/
.body_text {text-align:left;
    font: 15pt Helvetica, Arial, serif;
    color: #333366;
    padding: 10px;
    }
```

```
</style>
```

```
<title>Genome Browser</title>
<script src="javascript.js" defer></script> <!--javascript deferred so it happens after html is
loaded-->
</head>
<body>
<div id='header'>
<h1 class='site_name'>ChromAwesome<span class='site_number'>22</span></h1>
</div>
```

```
<ul class="tabs"> <!--class for tabs and individual tab on webpage-->
<!--create selector that selects specific tab div ids-->
<li data-tab-target="#home" class="tab">Home</li> <!--default tab-->
<li data-tab-target="#about" class="tab">About</li>
<li data-tab-target="#search" class="tab">Search</li>
<li data-tab-target="#RE" class="tab">Restriction Enzymes</li>
<li data-tab-target="#analysis" class="tab">Analysis</li>
<li data-tab-target="#codon" class="tab">The Codons</li>
<a href='glossary.html'>Glossary</a>
<a href='document.html'>Documentation</a>
<a href='Team.html'>Team</a>
</ul>
```

```
<!-- class for webpage tabs and data attributes to be formatted with javascript and css-->
<div id="home" data-tab-content class="main_heads"> <!--default tab-->
<h2>Home</h2>
<p>A genome browser looking at genes in human chromosome 22. </p>
</div>
```

```
<div id="about" data-tab-content>
```

About

ChromAweosome 22 is a genomic browser developed as part of a collaborative project between MSc Bioinformatics and Systems Biology students at Birkbeck, University of London. This platform provides information on human chromosome 22 based on GRCh38 data from GenBank.

Search Chromosome 22 for information about Genes using Gene Identifiers.

Search by:

```

<p><input type ='submit' value= 'Search'/></p> <p><input type ='reset' value= 'Clear'/></p>
</form>
</div>
<div id="analysis" data-tab-content>
<h2>CDS analysis.</h2>
<p> To view marked up sequence that identifies CdS sites </p>
  <!--form calls searchdb.py, a cgi script which search for genes using the gene identifiers-->
  <form method = "get" action ="/cgi-bin/cgiwrap/sm004/searchmarkup.py" >
    <!-- label for text box where user enters identifier-->
    <input name="data" type="text" placeholder="Enter Accession number e.g. AB002059"
    size="52" required />
    <p><input type ='submit' value= 'Search'/></p> <p><input type ='reset' value= 'Clear'/></p>
  </form>
  <p> For CDS information </p>
  <!--form calls searchdb.py, a cgi script which search for genes using the gene identifiers-->
  <form method = "get" action ="/cgi-bin/cgiwrap/sm004/searchWmarkup.py" >
    <!-- label for text box where user enters identifier-->
    <input name="data" type="text" placeholder="Enter Accession number e.g. AB002059"
    size="52" required />

<p><input type ='submit' value= 'Search'/></p>
<p><input type ='reset' value= 'Clear'/></p>
</form>
<p> To produce translated protein sequence</p>
  <!--form calls searchdb.py, a cgi script which search for genes using the gene identifiers-->
  <form method = "get" action ="/cgi-bin/cgiwrap/sm004/searchPro.py">
    <!-- label for text box where user enters identifier-->
    <input name="data" type="text" placeholder="Enter Accession number e.g. AB002059"
    size="52" required />
    <p><input type ='submit' value= 'Search'/></p> <p><input type ='reset' value= 'Clear'/></p>
  </form>
  <p> To match translated protein CDS sequence with original CDS sequence</p>
  <!--form calls searchdb.py, a cgi script which search for genes using the gene identifiers-->
  <form method = "get" action ="/cgi-bin/cgiwrap/sm004/searchmatch.py" >
    <!-- label for text box where user enters identifier-->
    <input name="data" type="text" placeholder="Enter Accession number e.g. AB002059"
    size="52" required />
    <p><input type ='submit' value= 'Search'/></p> <p><input type ='reset' value= 'Clear'/></p>
  </form>
</div>
<div id="codon" data-tab-content>
<h2>The Codon in Chromosome 22</h2>>>>
<p> To view codon usage frequencies </p>
  <!--form calls searchdb.py, a cgi script which search for genes using the gene identifiers-->
  <form method = "get" action ="/cgi-bin/cgiwrap/sm004/searchcodon.py" >
    <!-- label for text box where user enters identifier-->

```



```

<input name="data" type="text" placeholder="Enter Accession number e.g. AB002059"
size="52" required />
<p><input type='submit' value= 'Search'/></p> <p><input type='reset' value= 'Clear'/></p>
</form>
<p> Calculate codon usage frequencies in whole chromosome</p>
<!--form calls searchdb.py, a cgi script which search for genes using the gene identifiers-->
<form method= "get" action= "/cgi-bin/cgiwrap/sm004/searchDNAcodon.py" >
<!-- label for text box where user enters identifier-->
<p><input type='submit' value= 'Click to submit chromosome data'/></p>
</form>
</div>

```

The code is validated using validatorw3.org

