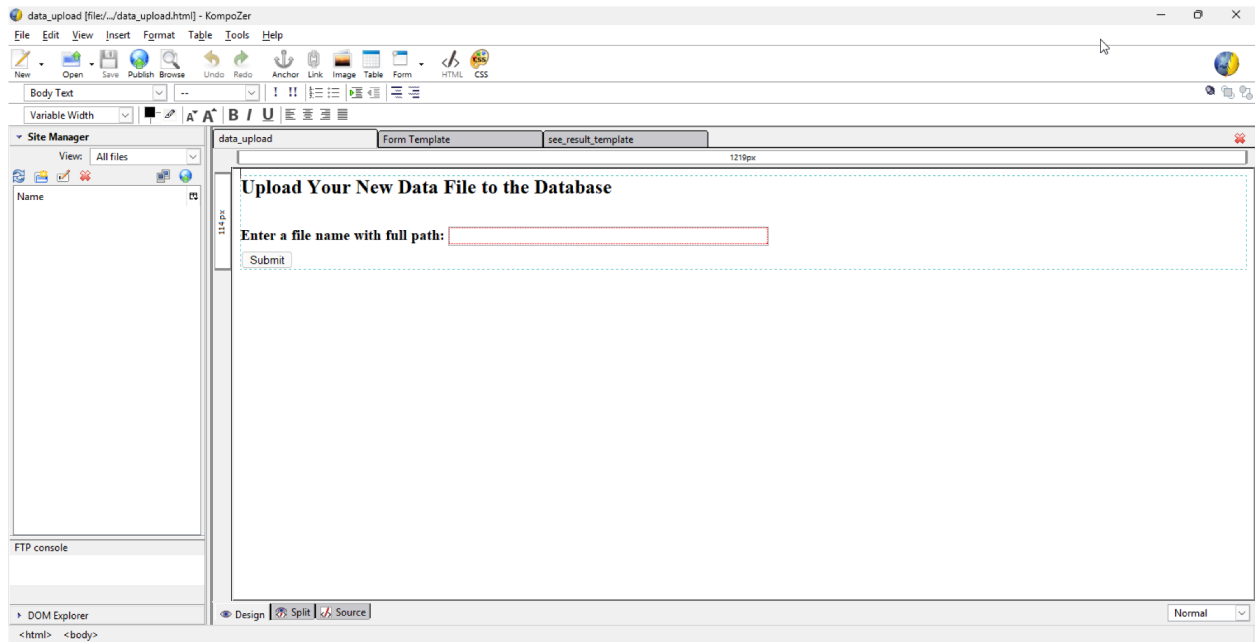


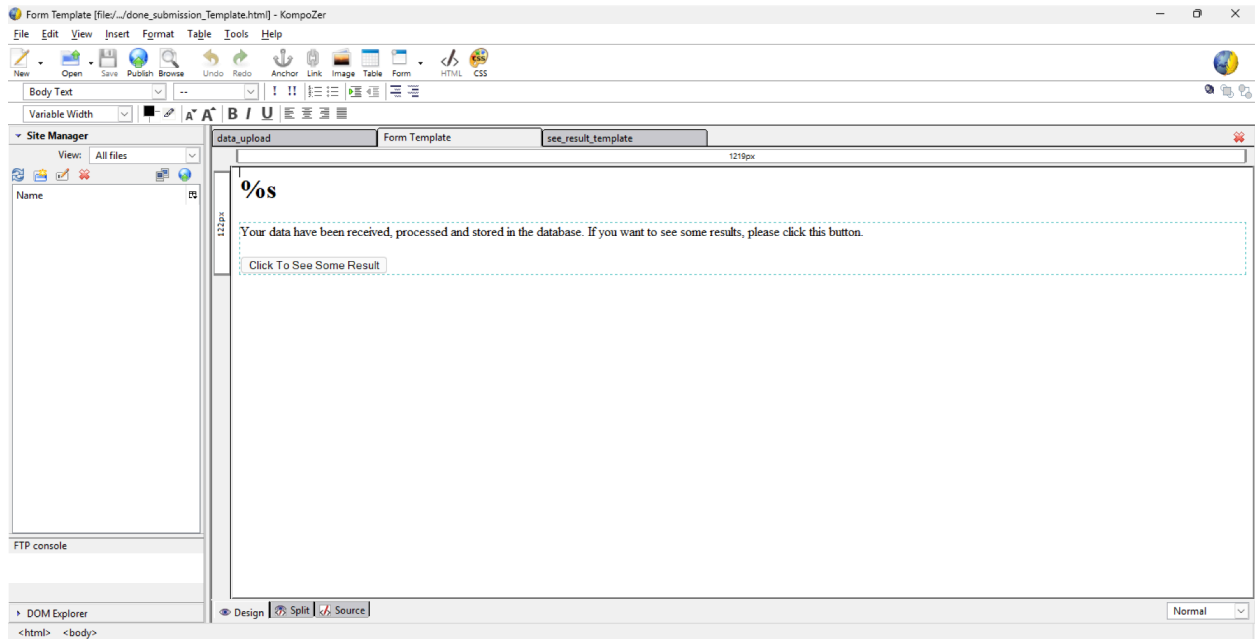
STSCI 4060 Final Project

Henry Tan (ht492)

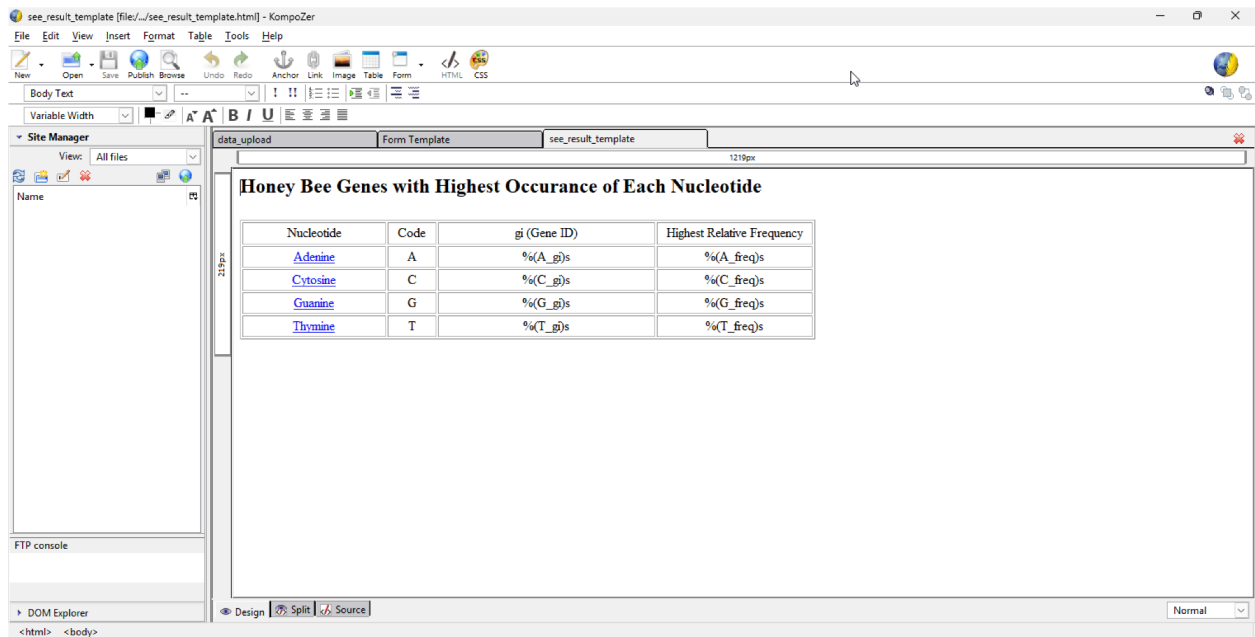
1. The design window of input web page – data_upload.html



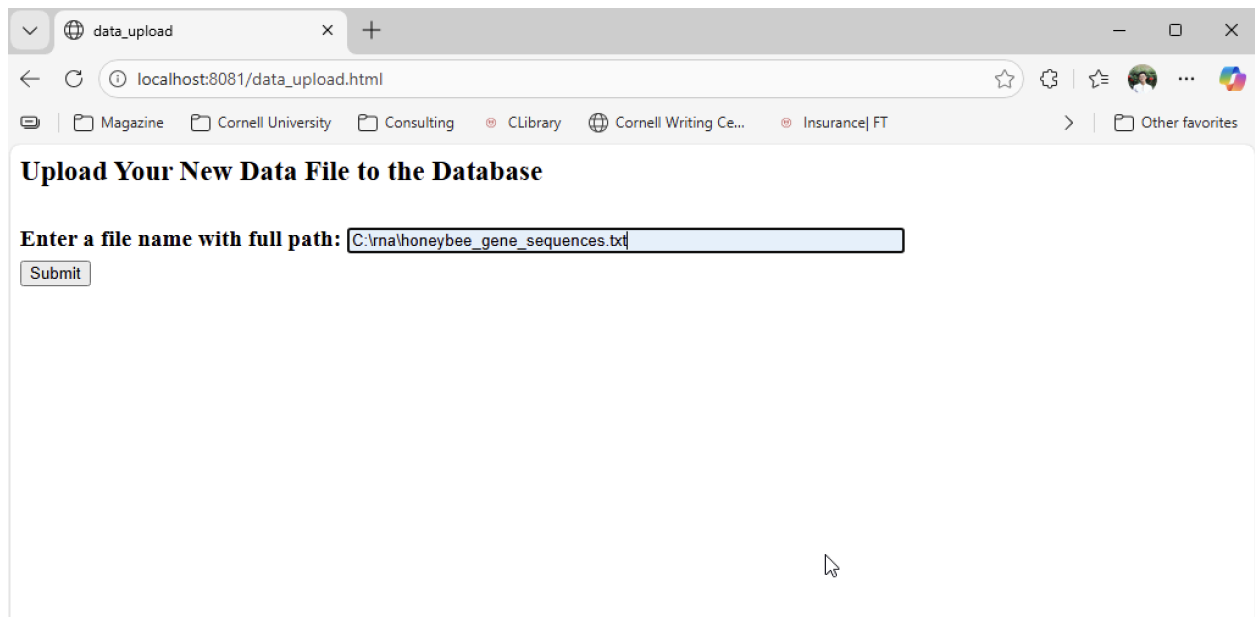
2. The design window of template web page – done_submission_Template.html



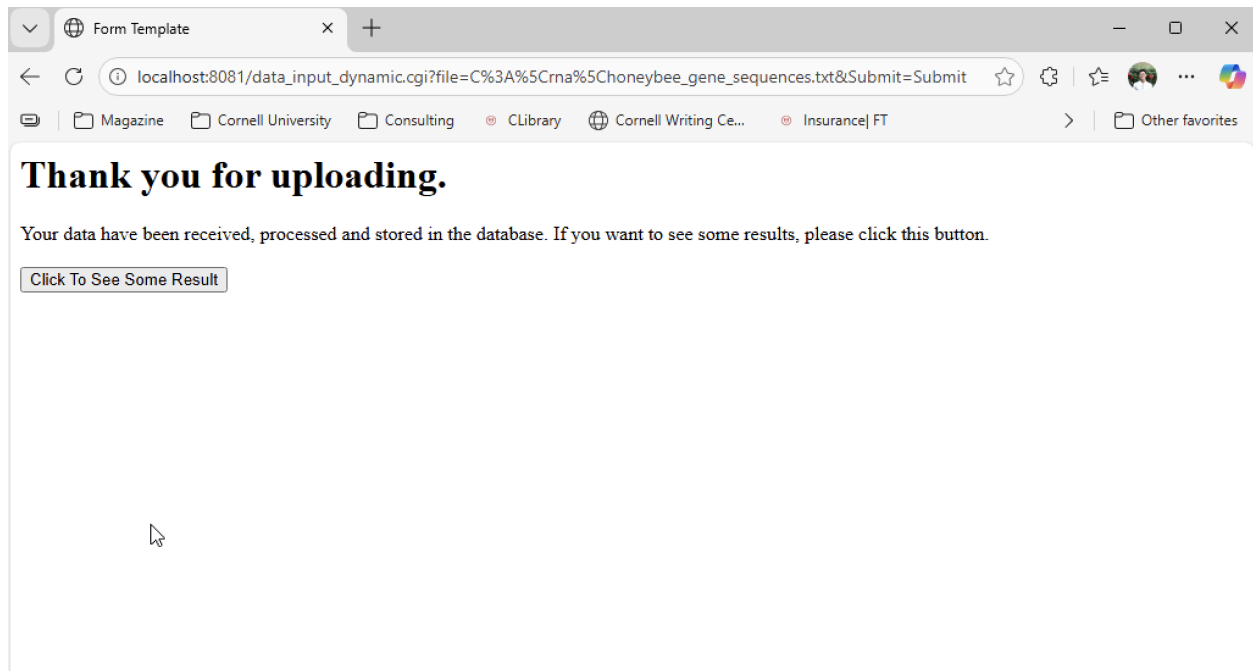
3. The design window of template web page – see_result_template.html



4. A screenshot of input web page with input value entered



5. A screenshot of confirmation web page that displays successfully submitted the data



6. A screenshot of final web page that displays the results of database query

The screenshot shows a web browser window with the address bar displaying `localhost:8081/data_output_from_db.cgi?view+result=Click+To+See+Some+Result`. The page content includes the heading "Honey Bee Genes with Highest Occurance of Each Nucleotide" followed by a table.

Nucleotide	Code	gi (Gene ID)	Highest Relative Frequency
Adenine	A	197245430	0.5141843971631206
Cytosine	C	292494906	0.3838951310861423
Guanine	G	292494901	0.35705045278137126
Thymine	T	343410563 334725204 334725205 334725203 334725196	0.4424498416050686

7. A screenshot of local CGI server log

```
C:\Users\Henry Tan\AppData\Local\Microsoft\WindowsApps\PythonSoftwareFoundation.Python.3.13_qbz5n2kfra8p0\python.exe
Localhost CGI server started
127.0.0.1 - - [11/Dec/2025 10:03:38] "GET /data_upload.html HTTP/1.1" 200 -
127.0.0.1 - - [11/Dec/2025 10:03:38] code 404, message File not found
127.0.0.1 - - [11/Dec/2025 10:03:38] "GET /favicon.ico HTTP/1.1" 404 -
127.0.0.1 - - [11/Dec/2025 10:03:59] "GET /data_input_dynamic.cgi?file=C%3A%5C%r\na%5C%honeybee_gene_sequences.txt&Submit=Submit HTTP/1.1" 200 -
127.0.0.1 - - [11/Dec/2025 10:03:59] command: "C:\\Users\\Henry Tan\\AppData\\Local\\Microsoft\\WindowsApps\\PythonSoftwareFoundation.Python.3.13_qbz5n2kfra8p0\\python.exe" -u C:\\r\na\\data_input_dynamic.cgi
127.0.0.1 - - [11/Dec/2025 10:04:00] CGI script exited OK
127.0.0.1 - - [11/Dec/2025 10:04:14] "GET /data_output_from_db.cgi?view+result=Click+To+See+Some+Result HTTP/1.1" 200 -
127.0.0.1 - - [11/Dec/2025 10:04:14] command: "C:\\Users\\Henry Tan\\AppData\\Local\\Microsoft\\WindowsApps\\PythonSoftwareFoundation.Python.3.13_qbz5n2kfra8p0\\python.exe" -u C:\\r\na\\data_output_from_db.cgi
127.0.0.1 - - [11/Dec/2025 10:04:14] CGI script exited OK
```

8. The result of Oracle table query for the gene sequence of the last entry

```
PS C:\Users\Henry Tan> cd C:\r\na
PS C:\r\na> python checkLast.py
GTGACGGCGGGGACATCGGGGGGGGGGACGGTTCGACGCACATTACGGGGACCAAGCTTCGTGATGGAGCGCCCTCGAGGGTCGAATTTTCGAATTCGAGCGGGCGCTGGCTGGATTGCACCGGCACAGGAAGCCCCCGCTCAACATCGATTGG
TCGACCGCGGACGGACATCCGGTCAACGACGTACCGGAGTGAAGGGGGTCTCAGGAACCGCACGCTAGTCTTTTTCGGTTTCGGGTCGCCGCTTCGGTCAGGATGTGCACAGCGCGGCTTATAGATGCGTGGCGAGCAATTCGTCCGACAGAGTTAAAG
CGTGCAGCTCGAGTTAGGGCAGTGGTGGTCAAGATACAAAGTCGACGTGGAGGTGATCGGAGGTGGTTCAGGGGTTGCACGCGGGTGTTCGATGCGCTGTTCTAGCTTCGTGAAAGATTTCGGTGGCGCTGCTGCTGGTTGCAAGAACATCTCTTC
ATATTTTATCTTCGTCAAGAGATGGCAAAATTCATCTTTTACCAACCGGTGAACCTCTGGTCCACAGTTTGAATTCAGCAGTCAAAATACACGGTTACAGGTGCGAAGATGCATCGCTCACAAGACAAGTGGTCTGGATTCCGTGGCCCAACGTAAAG
ATAGCAGATCATAGAGGGGTGATGCCACCGGTGATATGAAAACTCTGGAGTTGTTTCATGTCGCTCAAGATGAATCAACGCTTTAGTGTGTGGCGGCGAGGCTTGCCCTACTCCCGAATATCGATGGTATGCACAAACCGGTTCCGAGCCAATGCTGGTACT
TTCTGGACCAAGGACCAAGTACTCGGATCTGCTTAGCTCTCGAAAGTGTGACGTTAGAGGATAATGGTATTTATCGTTGTTCCGATCGAATCTCGGTGGCGAAGCTAGTGGCGAAATTCGGCTCATCGTAACGGCTCCATTGCTGATGTCGAAGTAAACGCTC
CGTGAATTCGACATGATCTTCGACAAAAGTGTCTTCAGACGTTACCTTGGTCTACGAGCGTGCAGAGAAGAAAGCGGATGCGAGCGGTATACAGCTGTTCCAGCGAGGAATAACAGGACACAGCGCGAGAAGATCAGAGAGAGCTCGCAGTAATCGTCTCC
CAAAATAGCACTACTGATGATTGAACATTATCTCCAGATCACACCGGCAACTACTCGTGGTGGCCGTAATCTAGCCGAGAGGTATCACACACGCGAGCGGCTTGTGGTTCACTGCTCCAGATGGATCTGAGAGCGTACGAGATGTTAGCGTTGAAGAAAC
AAGCAGCTCGCTTGACATGTCAGCGCAAGGCGTGGCCACCCCTACAATTTGATGGAAAAAGCCACGGGAAGCAATTCGGGGAGTACGAGGAGTTACGAGAGAAGCGGTACACGAAAACTCCGTAATGGTACGCTGCTATGCAACACGTTGAAGGAAGA
CAGAGAAGGATTTTACCTCTGTCAGCGAGTAAAGGATTGGAAGTGGCAAGTAACTTCAGTTAAAGTAACTCTTCATATTTTCGGGCTCCATCGAGACTTGTCACTGTGAAGAAAGGTGACATGCAACTTTGATTGCGAGGTACACGGCG
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GGCAGCAATTTTATGTTGGTGAATCAATCTGTCGACAGTCTCTGTCAGAGGACGACACAAACCGCGAAATCTTTAGAGAAAGCAATGGTTCGACGAGATTAATGTAATAGGCAAGATAAATCCAGAGACACACGAGTGAATGAATGATCAATTT
ACAATACAAAGAGCGGATGCTGGAAATATGGCAACAAAGAAATTTACTGGGCACTCTGCCATATGCTCTTAATAGATGAATGAAGCGGCACTAGATACACTATACCGGTAATAGCTGAGAGGACAGCAGGTAGATCAGTACCTCGGCGGAATGTA
TTGTGACAGACAGAGCCAAAGACAGCTGGACCCCGGATTAATCTTGAAGCTAGGGCTTGTCTCTCGAAATTTTAACTACTTGGTACCACCAATGCTGAACTCCGACACGCGTACATTCAGGATCAATGTTGGCTATAGAGAAACAGCTCGTCA
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GGAAGATGTTCCAGTATACCACTCGAAGATGAAGATGCGCTGCTTAACTTCAAACTCCCTCAAGTTTCTGGCAACACCGGCTAACACACATAGCAATGGTATTTTCAGGGGATAAAATACATATGAGCTATCTTGGCTGACATGTTGGCTAGCG
TCGATGAAATGGAGGTTCTGAAGACTAGCGCTTAAACCACTGTTCTCAGGGGTTGAGAAAAATACGAACTACACTTCAAGTATAGCTTTTCAAGATTTGGGATGGAGTACCTACGACTGTAACATTTGCCAAACGGAAGAAGATGTGCGAGGTAGC
CCAGCAGATATAAAGTGGTGGTTAGTTTACCACAGCGCGCTTTTATCTCTGGCTTCCACCTTTAGAGCAAAATGGAATTTATACAAATATAAATTTATATACAGAGTCTGGATGGTCTGAGAAGAAATGGAATCATGTTAAAGAAACATGCCAGCAAGAA
TACCTACTTTGAAGCGACTGATTACAGCAACAGTGAAGATATCAATTTTGGGTGACGGTAGCACCCGTTAGGCGAAGGTCAAAGTCCAAAGTAGCTGCACAAGTACCAACCAATCGAGTACCAGCGAGAATACGCTTTTGGTGGCCAGGTAGTGGTGC
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GAAGAGAAG
PS C:\r\na> |
```