

Aaron Perkel
CS2210
09/29/23
Lab 03



Aaron Perkel's Binary Converter

01111001

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15. Working Converter

```
from flask import Flask, render_template, request
import json

app = Flask(__name__)

@app.route("/", methods=["GET"])
def home():
    return render_template("binaryconverter.html")

@app.route("/convert_binary", methods=["GET"])
def convert_binary():
    binary_string = request.values["binary_string"]
    return json.dumps(to_decimal(binary_string))

def to_decimal(binary_string):
    power = 0
    base_ten = 0
    for digit in reversed(binary_string):
        if digit == '1':
            base_ten += 2 ** power
        power += 1
    return base_ten
```

app.py

```
function convert(binaryString, onSuccess) {
    $.ajax({
        url: "convert_binary",
        data: {
            binary_string: binaryString
        },
        dataType: "json",
        type: "GET",
        success: function(response) {
            onSuccess(response);
        }
    });
}

$("#convert-button").on("click", function() {
    let binaryString = $("#binary-input").val();
    convert(binaryString, function(decimal) {
        $("#decimal").text(decimal);
    });
});
```

binaryconverter.js

```
~ -- aaronperkel@raspberrypi: ~/Desktop/CS2210/lab03
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8">
    <title>Binary Converter</title>
    <link rel="stylesheet" type="text/css" href="{{ url_for('static', filename='stylesheet.css') }}">
  </head>
  <body>
    14. Implement the to_decimal function that takes a string containing a binary number, and returns the corresponding decimal
        number. You should implement this algorithm yourself, rather than using the Python standard library (such as int('110'),
    <h1>Aaron Perkel's Binary Converter</h1>
    <br>
    15. Take a screenshot of the conversion of 01111001 to decimal in your browser.

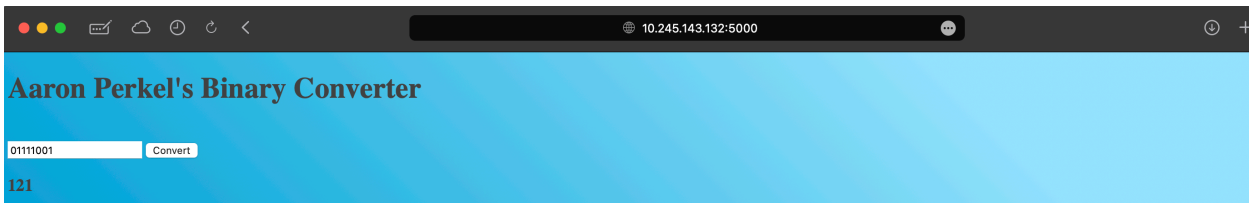
    <form>
      <input id="binary-input" type="text">
      <button id="convert-button" type="button">Convert</button>
    </form>
    10. (+5) Add some style! Include a stylesheet (CSS) that affects the appearance of the UI. Take a screenshot of your UI.

    <h3 id="decimal"></h3>
    11. Use the to_decimal function to process floating point binary too. Take a screenshot of your code, and the
        conversation of 10.101 to decimal in your browser.
    <script src="https://code.jquery.com/jquery-3.5.1.min.js"></script>
    <script src="/static/binaryconverter.js"></script>

  </body>
</html>

~
~
~
• When running flask run --host=0.0.0.0: OSErrors: [Errno 98] Address already in use
~
~
~
If the Flask server is already running on the PI, you will need to kill the process and run it again: kill $(pgrep -f flask) will
```

binaryconverter.html



10(EC). CSS