

Coding for Beginners: Helping the Community with Simple Programs



A Problem to Solve and a Curious girl

Arya was a seventh-grader with an unstoppable curiosity about how things worked. Every day after school, she tinkered with her computer, learning pieces of coding and thinking about creating something valuable for her community.

One sunny afternoon, her neighbour Mrs. Kapoor dropped by with a perplexing problem.

"Arya, I need to measure my garden area for some new plants, but all my measurements are in metres, and the catalogue lists sizes in feet. I don't know how to convert them quickly," Mrs. Kapoor sighed.

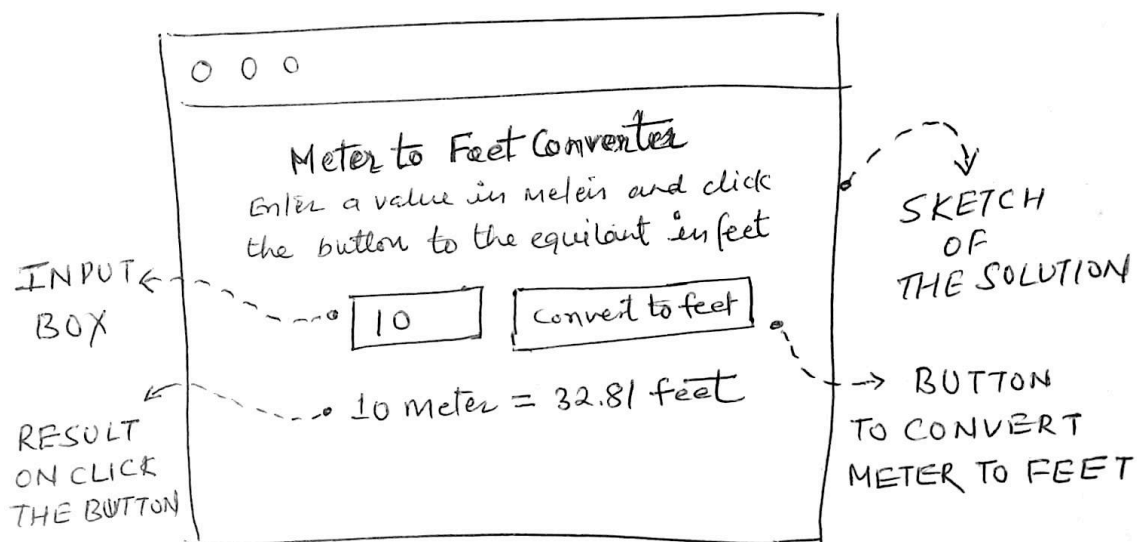
Arya's eyes lit up. "Kapoor Aunty, why don't I create something for you? A simple tool you can use to convert meters to feet!"

Mrs. Kapoor smiled warmly. "You think you can do that?"

Arya grinned. "Absolutely. Give me one day!"

The idea to solve the problem

That evening, Arya sat at her desk with a notebook. She sketched out her idea: a webpage that could take a value in meters, convert it to feet, and display the result.



She started coding right away. "I'll use HTML to design the webpage and JavaScript to do the math. This way, it'll be easy to use for anyone!" she thought.

Building the Converter

Arya began with the foundation of her project: the HTML code. She wanted the page to look simple but appealing. She did the coding according to the sketch she drawn as a solution with an input box to insert meters value and button to convert it too feet.

Setting the Stage with HTML

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width,
initial-scale=1.0">
  <title>Meter to Feet Converter</title>
  <style>
    body {
      font-family: Arial, sans-serif;
      text-align: center;
      background-color: #f4f4f4;
      padding: 20px;
    }
    h1 {
      color: #333;
    }
    input, button {
      padding: 10px;
      margin: 10px;
    }
    #result {
      font-size: 18px;
      font-weight: bold;
      margin-top: 15px;
    }
  </style>
</head>
<body>
  <h1>Meter to Feet Converter</h1>
  <p>Enter a value in meters to convert it to feet:</p>
  <input type="number" id="metersInput" placeholder="Enter
meters">
  <button onclick="convertToFeet()">Convert</button>
  <div id="result"></div>
  <script src="converter.js"></script>
</body>
</html>
```

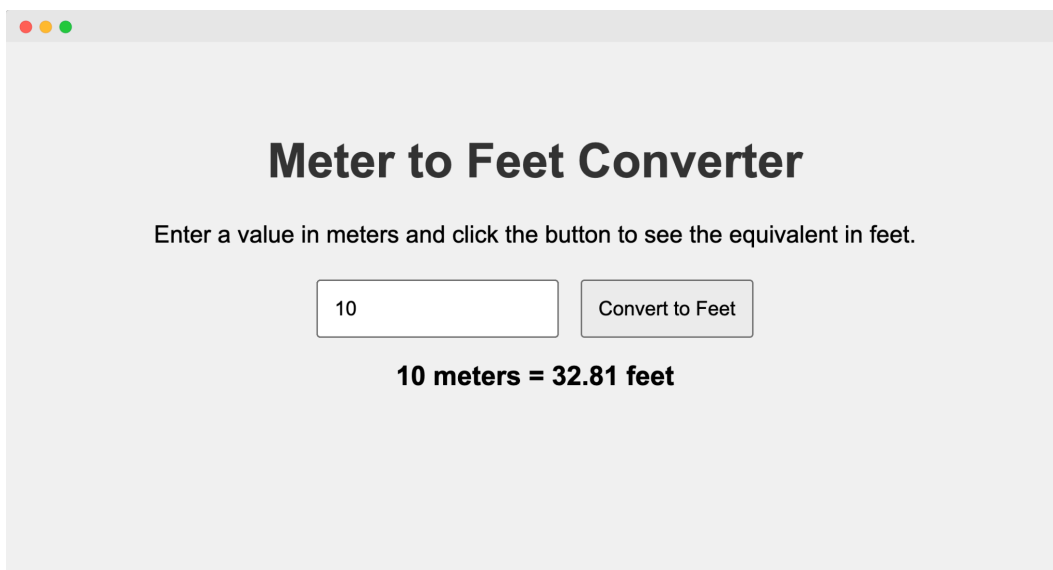
Adding the Brains with JavaScript

Once the structure was complete, Arya added logic to her webpage with **JavaScript**. She created a file named `converter.js` to handle the conversion.

Note: Javascript can be added to an HTML page or created as a separate file linked to the HTML page with the `script` tag.

```
function convertToFeet() {  
  // Retrieve user input  
  const meters = document.getElementById("metersInput").value;  
  
  // Check if the input is valid  
  if (!meters || isNaN(meters)) {  
    document.getElementById("result").innerText = "Please enter a  
valid number.";  
    return;  
  }  
  
  // Perform the conversion  
  const feet = (meters * 3.28084).toFixed(2);  
  
  // Display the result  
  document.getElementById("result").innerText = `${meters} meters  
= ${feet} feet`;  
}
```

The Test



Meter to Feet Converter

Enter a value in meters and click the button to see the equivalent in feet.

10

10 meters = 32.81 feet

With her code written, Arya saved the files and opened the `index.html` file in her browser. She typed `10` into the input box and clicked "Convert." The result appeared almost instantly:

10 metres = 32.81 feet

Arya clapped her hands in delight. It worked perfectly!

A Tool for the Community

The next day, Arya demonstrated the tool to Mrs. Kapoor. "Look, Kapoor Aunty! Just type the number of metres here, click this button, and the answer shows up in feet," she explained.

Mrs. Kapoor tried it herself, entering `5` metres. The result popped up:

5 metres = 16.40 feet

"This is fantastic, Arya! You've made my work so much easier," said Mrs. Kapoor. "I can't wait to tell others about this!"

Arya felt a warm glow of pride. She had used her coding skills to solve a real problem, helping someone in her community.

The Bigger Picture

Arya's project was a small step, but it sparked an idea: coding isn't just for games or apps. It's a way to solve problems and make life easier for people around you.

She began imagining other tools she could create: maybe a grocery calculator for her mom or a weather tracker for her school.

And as Arya dreamed, she knew one thing for sure—coding was her way of making a difference.

Challenge for You

Now it's your turn! Think of a simple problem in your community. How can you solve it using coding? Start small, just like Arya did. You might be surprised at the big difference your small project can make!

Happy coding!