VIT®

Vellore Institute of Technology

(Deemed to be University under section 3 of UGC Act, 1956)

MINI PROJECT
Geometric shapes its area and applications

Web Programming
(BCSE203E)

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Slot : L45+L46+L51+L52

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Mini Project

Learning Websites with pages describing

a. Company Profile, Introduction page (Display word of the day as scrolling text)
b. Course registration page
c. Interactive Course Learning page
d. Assessment Page
e. Feedback and contact us page.

Learning Topics

1. Traffic Rules
2. Various Games (cricket, Football) – Ground details, player position, Game rules,
3. Plants (Identifying herb, shrub, creeper, climber)
4. Solar system, eclipse
5. Electronic devices (TV, Mobile) internal parts and its working
6. Car internal parts and its working
7. Waste Segregation Reduce, Reuse, Recycle
8. South Asian countries (Map, Flag, Capital, Leaders and tourist spots)
9. Geometric shapes its area and applications.
10. Google search engine options, other google tools uses.

Home Page

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-
scale=1.0" />
    <title>Geometric Shapes: Area and Applications</title>
    <style>
      body {
        font-family: "Gill Sans", "Gill Sans MT", Calibri, "Trebuchet
MS",sans-serif;
        margin: 20px;
        overflow: hidden;
      }
      header {
        text-align: center;
```

```
        background-color: #564caf;
        color: white;
        padding: 10px;
      }
      .introduction {
        margin: 10px 0;
        padding: 10px;
        background-color: #f2f2f2;
        border: 5px solid #ddd;
      }
      .companyProfile {
        margin: 10px 0;
        padding: 10px;
        background-color: #f2f2f2;
        border: 5px solid #ddd;
      }
      .scrollingword {
        position: absolute;
        bottom: 0;
        right: 100%;
        white-space: nowrap;
        font-size: 18px;
        color: red;
        animation: scrollText 15s linear infinite;
      }
      @keyframes scrollText {
        0% {
          right: 100%;
        }
        100% {
          right: 0;
        }
      }
    </style>
  </head>
  <body>
    <header>
      <h1>Geometric Shapes: Area and Applications</h1>
      <a href="./registrationpage1.html" style="color: yellow;">Click
Here to Know more</a>
    </header>
    <article id="CompanyProfile">
      <h2>Company Profile</h2>
      <p>
        Math Marvels is an innovative online mathematics teaching
platform
        dedicated to unlocking the magic within numbers. We believe that
every
        learner can become a mathematical marvel with the right
guidance. Our
        platform offers engaging and personalized lessons, designed to
make math
```

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        fun, accessible, and empowering. From foundational concepts to
advanced
        problem-solving skills, Math Marvels is here to inspire a love
for
        mathematics and foster a community of confident and capable
learners.
        Join us on a journey where numbers transform into marvels, and
learning
        becomes an exciting adventure. Welcome to the world of Math
Marvels
        where math meets magic!
      </p>
    </article>
    <article id="introduction">
      <h2>Introduction</h2>
      <p>
        Welcome to the MathMarvels to enter into the fascinating world
of
        geometric shapes, where lines, angles, and curves come together
to
        create the building blocks of our visual reality. Geometric
shapes are
        fundamental elements that play a crucial role in both
mathematics and
        the world around us. From the simplicity of circles and squares
to the
        complexity of polygons and polyhedra, these shapes provide the
framework
        for understanding and describing our environment.
      </p>
      <p>
        Beyond the classroom, geometric shapes find practical
applications in
        various fields. Architects use them to design structures that
stand as
        feats of engineering and aesthetics. Artists incorporate
geometric
        shapes into their creations, evoking harmony and balance.
Engineers rely
        on geometric principles to design everything from machinery to
        electronic circuits. Even nature itself follows geometric
patterns, from
        the hexagonal symmetry of honeycombs to the spirals of
seashells.
      </p>
      <p>
        Join us on this journey as we unravel the secrets of geometric
shapes,
        exploring their mathematical elegance and real-world
significance.
        Whether you're a student embarking on a mathematical adventure
or a
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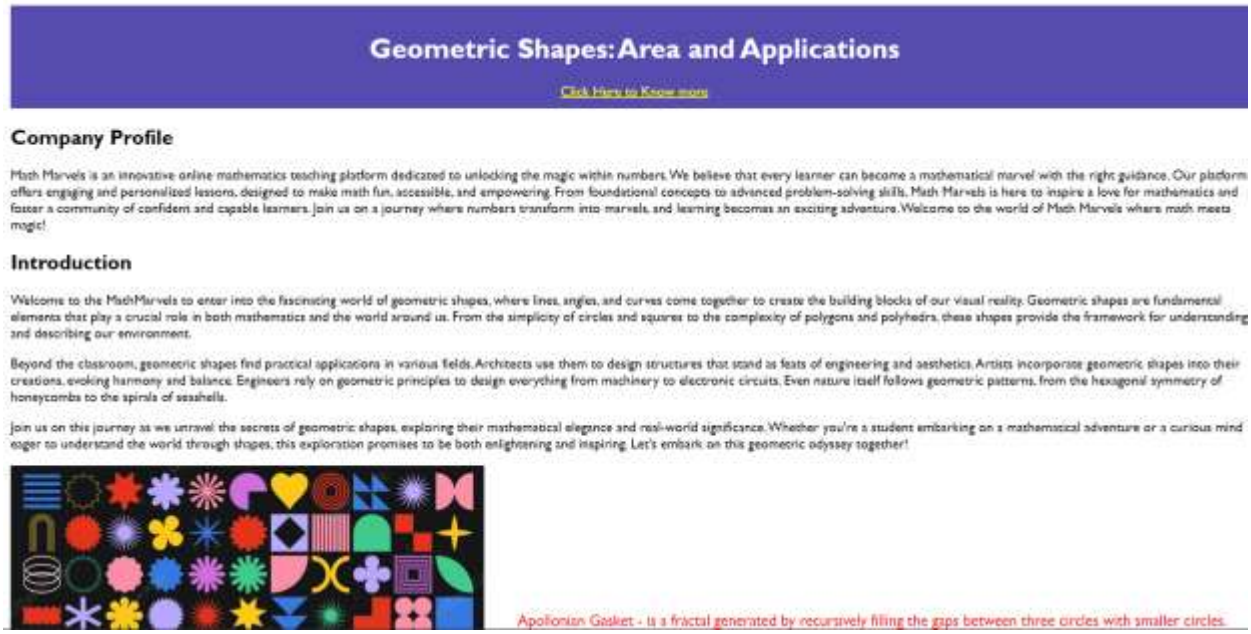
        curious mind eager to understand the world through shapes, this
        exploration promises to be both enlightening and inspiring.
Let's embark
        on this geometric odyssey together!
      </p>
    </article>
    <img src="./geoimahe2.png" height="300" alt="List of geometric
shapes" />
    <div class="scrollingword">
      Apollonian Gasket - is a fractal generated by recursively filling
the gaps
      between three circles with smaller circles.
    </div>
  </body>
</html>
```

Output

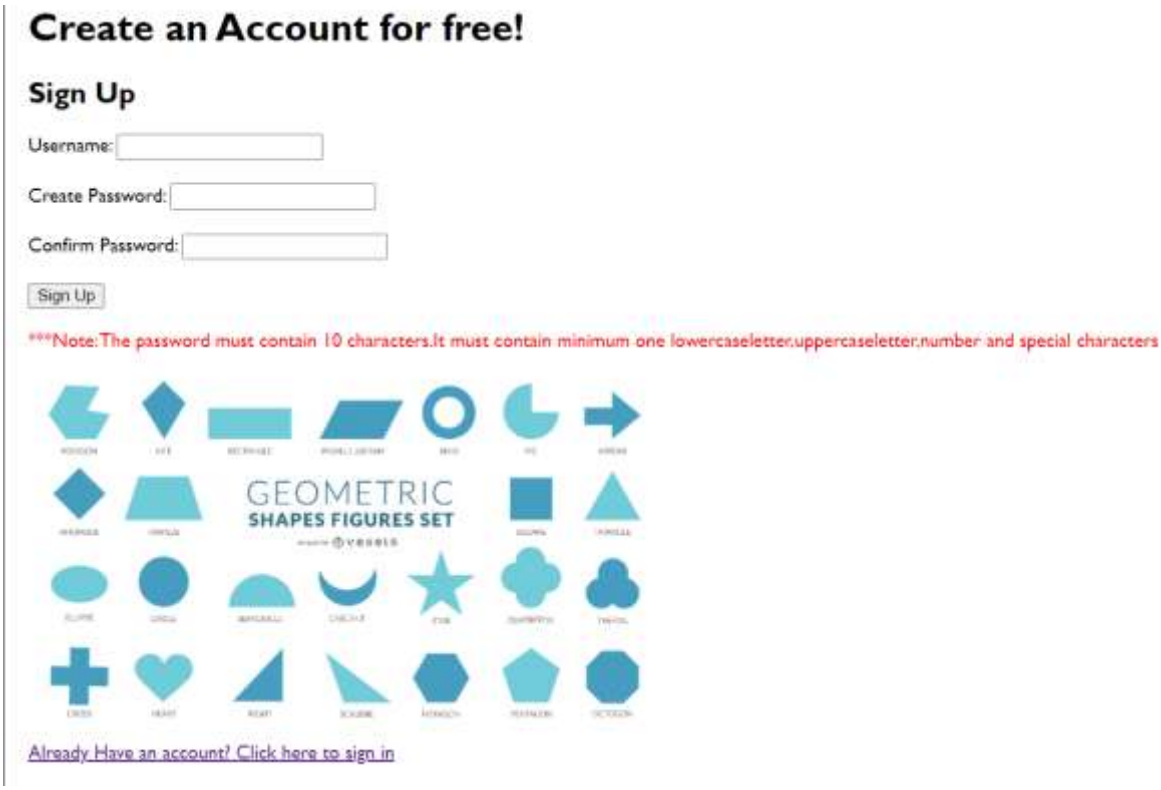


Sign-in, Sign-up and Registration forms

Sign-up :

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width, initial-
scale=1.0" />
    <title>Sign up Page</title>
  </head>
  <body>
    <h1> Create an Account for free!</h1>
    <form id="signUpForm">
      <h2>Sign Up</h2>
      <label for="usernameSignUp">Username:</label>
      <input type="text" id="usernameSignUp" name="usernameSignUp"
required />
      <br />
      <br />
      <label for="passwordSignUp">Create Password:</label>
      <input type="password" id="passwordSignUp" name="passwordSignUp"
required />
      <br />
      <br />
      <label for="passwordSignUp">Confirm Password:</label>
      <input type="password" id="passwordSignUp" name="passwordSignUp"
required />
      <br />
      <br />
      <button type="submit">Sign Up</button>
      <p style="color: red;">***Note: The password must contain 10
characters.It must contain minimum one
lowercaseletter,uppercaseletter,number and special characters</p>
      <img src="./geoimage1.jpg" height="300"  alt="shapes">
      <br>
    <a href="./registrationpage2.html">Already Have an account? Click
here to sign in</a>
    </form>
  </body>
</html>
```

Output :

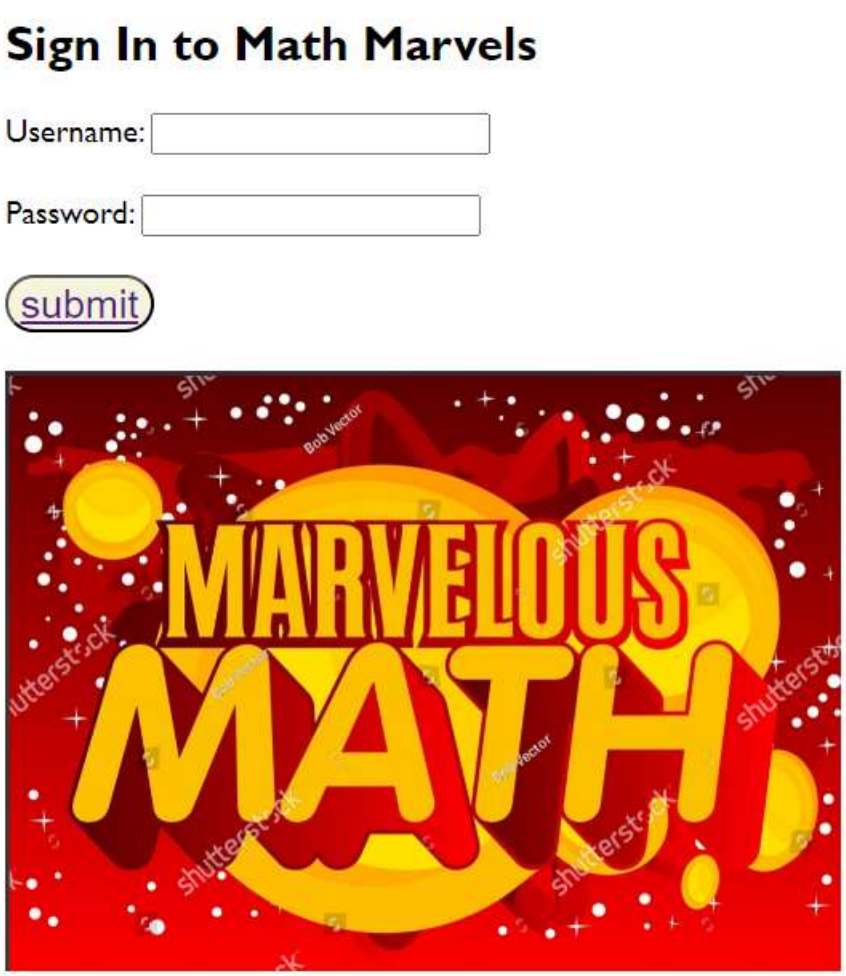


Sign-in :

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>Sign in Page</title>
    <style>
        body {
    font-family: "Gill Sans", "Gill Sans MT", Calibri, "Trebuchet
MS",sans-serif;
    margin: 20px;
    overflow: hidden;
  }
</style>
</head>
<body>
    <form id="signInForm">
        <h2>Sign In to Math Marvels</h2>
        <label for="usernameSignIn">Username:</label>
```

```
        <input type="text" id="usernameSignIn" name="usernameSignIn"
required />
        <br />
        <br />
        <label  for="passwordSignIn">Password:</label>
        <input
          type="password" id="passwordSignIn" name="passwordSignIn"
required />
        <br />
        <br />
        <button style="background-color: beige; border-radius: 20px;
font-size: 20px; border-color: black
        ;"><a href="./registrationpage3.html" title="open
        ">submit</button></a>
        <br />
        <br />
        <img src="./marvels.png" height=300 alt="math marvels">
      </form>
</body>
</html>
```

Output :



Registration Page :

```
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>Registration form</title>
    <style>
        body {
    font-family: "Gill Sans", "Gill Sans MT", Calibri, "Trebuchet
MS",sans-serif;
    margin: 20px;
    overflow: hidden;
  }
</style>
</head>
<body>
    <form id="registrationForm">
        <h2>Register our Course PLAYwithMATH for free!</h2>
        <label for="fullName">Full Name:</label>
        <input type="text" id="fullName" name="fullName" required />
        <br />
        <br />
        <label for="email">Email:</label>
        <input type="email" id="email" name="email" required />
        <br />
        <br />
        <label for="passwordRegistration">Password:</label>
        <input type="password" id="passwordRegistration"
name="passwordRegistration" required />
        <br />
        <br />
        <button style="background-color: beige; border-radius: 20px;
font-size: 20px; border-color: black
        ;"><a href="./learningpage.html" title="open
        ">submit</button></a>
        <br>
        <br>
        <img src="./geoimage3.png" alt="shapes">
</body>
</html>
```

Output :

Register our Course PLAYwithMATH for free!

Full Name:

Email:

Password:

submit

Learning Page

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta http-equiv="X-UA-Compatible" content="IE=edge" />
    <meta name="viewport" content="width=device-width, initial-
scale=1.0" />
    <title>learningpage</title>
    <style>
      * {
        padding: 0;
        margin: 0;
      }
      body
      {
        font-family: "Gill Sans", "Gill Sans MT", Calibri, "Trebuchet
MS",sans-serif;
      }
      .heading {
        color: darkblue;
        font-size: 2.5rem;
      }
      header {
        display: flex;
        flex-direction: column;
        justify-content: center;
        text-align: center;
        background-color: lightskyblue;
        height: 15vh;
      }
      nav {
        display: flex;
        height: 5vh;
        background-color: black;
      }
      a:hover {
        background-color: white;
        color: black;
      }
      a {
        display: flex;
        flex-direction: column;
        justify-content: center;
        color: white;
        text-decoration: none;
        max-height: 100%;
      }
```

```
      .navbar {
        display: flex;
        gap: 20px;
        padding-left: 2%;
      }
      .box {
        float: left;
        width: 31.94%;
        padding: 10px;
        height: 500vh;
      }
      #box1 {
        background-color: silver;
      }
      #box2 {
        background-color: yellowgreen;
      }
      #box3 {
        background-color: teal;
      }
      .subheading {
        font-size: 2.5rem;
        padding-top: 10px;
        padding-bottom: 15px;
        display: flex;
        justify-content: center;
      }
      .para {
        display: flex;
        flex-direction: column;
        gap: 8px;
      }
    </style>
  </head>
  <body>
    <header>
      <div class="heading">Geometric shapes its areas and
applications</div>
    </header>
    <nav>
      <div class="navbar">
        <a href="#">Basics about common shapes</a>
        <a href="#">Fun Facts</a>
        <a href="#">Applications</a>
        <a href="./quiz.html">It's Quiz Time</a>
      </div>
    </nav>
    <content>
      <div class="box" id="box1">
        <div class="subheading"><h5 style="color: green">Basics about
common shapes</h5></div>
        <div class="para">
```

```
          <h3>Triangle:</h3>
          <img src="./Triangle.png" sizes="10" width="300"
alt="Triangle">
          <p>
            <h4>Area of a Triangle (A):</h4> The area of a triangle is
given by the
            formula A = (1/2) * base * height, where the base and height
are
            perpendicular to each other.
            <br />
            <h4>Perimeter of a Triangle (P):</h4> The
            perimeter is the sum of the lengths of all three sides of
the
            triangle, given by P = side1 + side2 + side3.
          </p>
          <hr />
          <h3>Rectangle:</h3>
          <img src="./rectangle.png" sizes="10" width="300"
alt="Rectangle">
          <p>
            <h4>Area of a Rectangle (A):</h4> The area of a rectangle is
given by the formula A = length * width, where length is the longer
side, and width is the shorter side.
            <h4>Perimeter of a Rectangle (P):</h4> The perimeter is the
sum of the lengths of all four sides, given by P = 2 * (length + width).
          </p>
          <hr />
          <h3>Square:</h3>
          <img src="./square.png" sizes="10" width="300"alt="square">
          <p>
            <h4>Area of a Square (A):</h4> The area of a square is given
by the formula A = side * side, where side is the length of one side of
the square.
            <h4>Perimeter of a Square (P):</h4> The perimeter is the sum
of the lengths of all four sides, given by P = 4 * side.
          </p>
        </div>
      </div>
      <div class="box" id="box2">
        <div class="subheading"><h5 style="color: blue">Fun
Facts</h5></div>
        <div class="para">
          <p>
            <h3>Pi Day Celebration:</h3>
            <img src="./pi.png" sizes="10" width="300"alt="pi">
            Pi (π) is an irrational number that represents the ratio of
the circumference of a circle to its diameter. Pi Day is celebrated on
March 14th (3/14), reflecting the first three digits of pi.
          </p>
          <hr />
          <p>
            <h3>Tetrahedron in Ancient Egypt:</h3>
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```
            <img src="./pyramid.png"sizes="10" width="300"
alt="pyramid">
            The ancient Egyptians considered the tetrahedron, a pyramid
with a triangular base, as a symbol of the elemental substance of fire.
They associated it with the concept of transformation and regeneration.
          </p>
          <p>
            <h3>Sierpinski Triangle:</h3>
            <img src="./sierpisnki.png" sizes="10"
width="300"alt="sierpisnki triangle">
            The Sierpinski Triangle is a fractal named after the Polish
mathematician Wacław Sierpiński. It is created by repeatedly removing
smaller equilateral triangles from a larger one.
          </p>
        </div>
      </div>
      <div class="box" id="box3">
        <div class="subheading"><h5 style="color:
white">Applications</h5></div>
        <div class="para">
          <p>
            <h3>Architecture and Design:</h3>
            <img src="./arc.png" sizes="10"
width="300"alt="architecture">
            Architects and designers extensively use geometric shapes in
their designs. Circles, squares, rectangles, triangles, and other shapes
help create aesthetically pleasing and structurally sound buildings.
            Geometric shapes are employed in the design of floor plans,
facades, and interior spaces. For example, circular windows, rectangular
doors, and triangular roof structures are common design elements.
          </p>
          <p>
            <h3>Computer Graphics and Animation:</h3>
            <img src="./grahp.png" sizes="10" width="300"alt="graphics
and animation">
            In the field of computer graphics and animation, geometric
shapes are fundamental components for creating visual elements. 3D
models, which form the basis of many digital animations and video games,
are often constructed using geometric shapes.
            Algorithms for rendering and shading rely on geometric
primitives like triangles and polygons to create realistic images on
computer screens.
          </p>
          <p>
            <h3>Engineering and Manufacturing:</h3>
            <img src="./cad.png" sizes="10" width="300"alt="CAD">
            Engineers use geometric shapes in the design and analysis of
mechanical components and structures. Circles, cylinders, and spheres
are common shapes found in mechanical engineering designs.
            Computer-Aided Design (CAD) software facilitates the
creation and manipulation of geometric shapes, aiding engineers in the
design process. Geometric modeling is crucial in manufacturing for
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creating precise specifications for the production of parts and
products.
          </p>
        </div>
      </div>
    </content>
  </body>
</html>
```
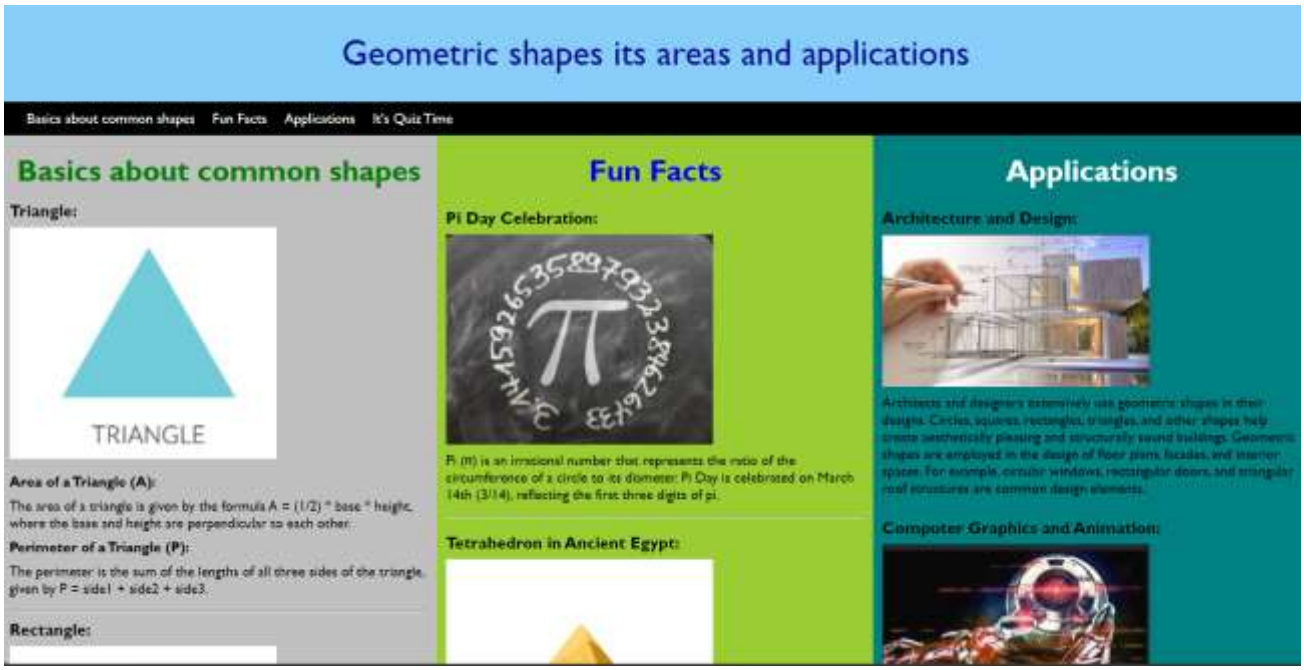

Output :

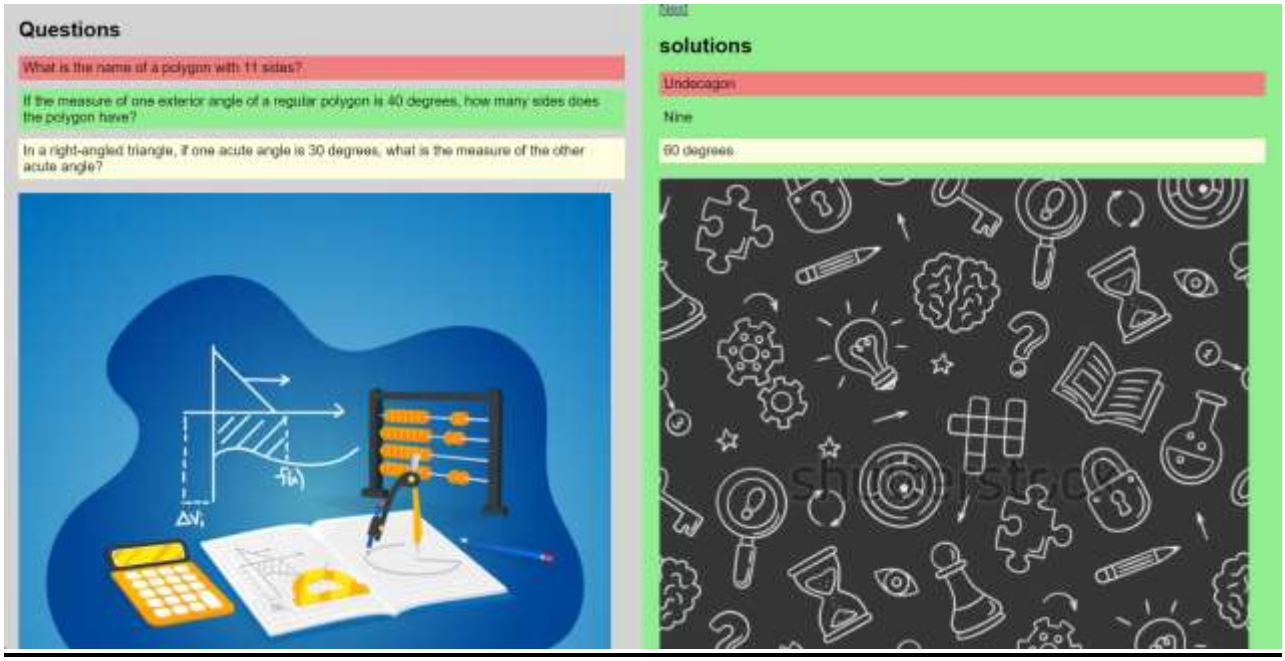


Assessment Page

```
<!DOCTYPE html>
<html lang="en">
  <head>
    <meta charset="UTF-8" />
    <meta name="viewport" content="width=device-width,
initial scale=1.0" />
    <style>
        body {
        font-family: "Gill Sans", "Gill Sans MT", Calibri, "Trebuchet
MS",sans-serif;
        margin: 20px;
        overflow: hidden;
      }

      .container {
        display: flex;
        width: 100%;
      }
      .left-column {
        width: 50%;
        background-color: lightgray;
        padding: 20px;
      }
      .right-column {
        width: 50%;
        background-color: lightgreen;
        padding: 20px;
      }
      ul {
        list-style: none;
        padding: 0;
      }
      li {
        margin-bottom: 10px;
        padding: 5px;
      }
      .digital-assignment {
        background-color: lightcoral;
      }
      .written-exam {
        background-color: lightgreen;
      }
      .quiz {
        background-color: lightyellow;
      }
```

```
      h2 {
        margin-bottom: 10px;
      }
      h3 {
        font-style: italic;
      }
    </style>
    <title>Assessment Page</title>
  </head>
  <body>
    <div class="container">
      <div class="left-column">
        <h2>Questions</h2>
        <ul>
          <li class="digital-assignment">What is the name of a polygon
with 11 sides?</li>
          <li class="written-exam"> If the measure of one exterior angle
of a regular polygon is 40 degrees, how many sides does the polygon
have?</li>
          <li class="quiz">In a right-angled triangle, if one acute
angle is 30 degrees, what is the measure of the other acute angle?</li>
        </ul>
        <img src="./quizimggg.png" alt="haha">
      </div>
      <div class="right-column">
        <a href="./Feedback.html">Next</a>
        <h2>solutions</h2>
        <ul>
          <li class="digital-assignment">Undecagon</li>
          <li class="written-exam">Nine</li>
          <li class="quiz">60 degrees</li>
        </ul>
        <img src="./quizimg.png" alt="funquiz">
      </div>
    </div>
  </body>
</html>
```

Output :

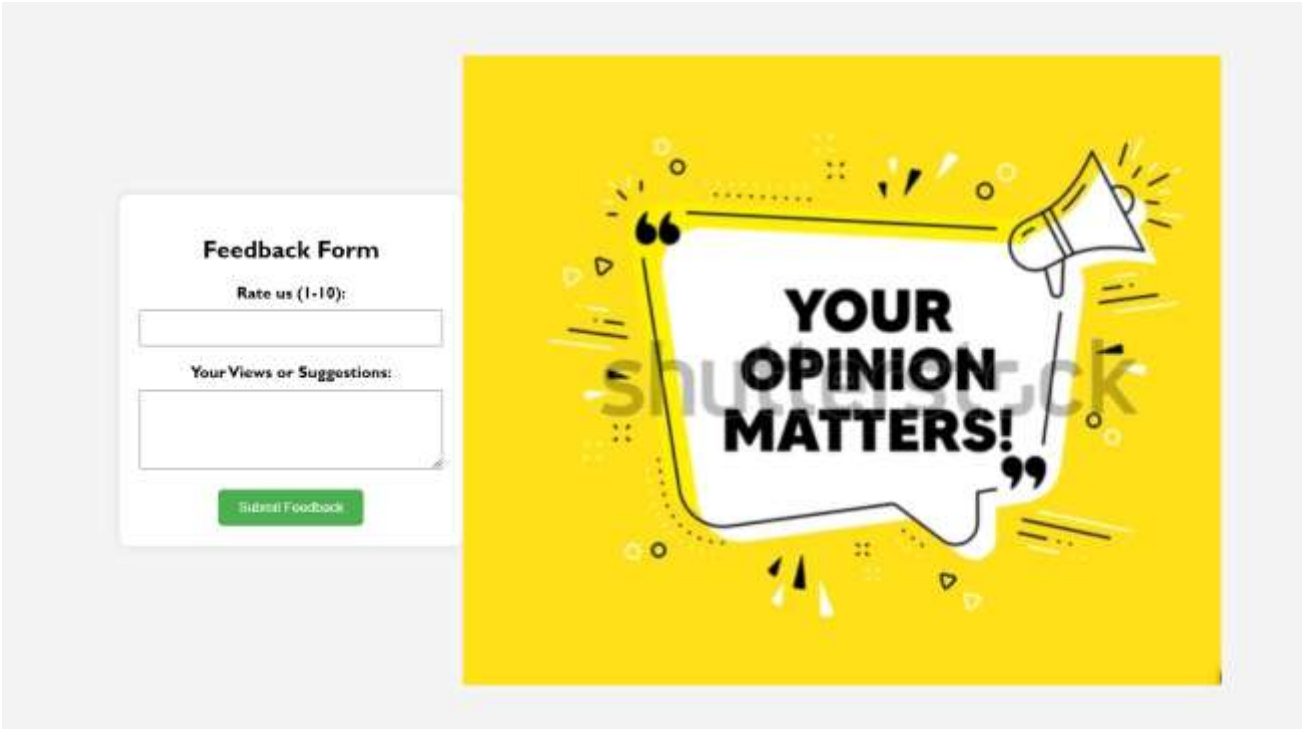

Questions
What is the name of a polygon with 11 sides?
If the measure of one exterior angle of a regular polygon is 40 degrees, how many sides does the polygon have?
In a right-angled triangle, if one acute angle is 30 degrees, what is the measure of the other acute angle?
Next
solutions
Undecagon
Nine
60 degrees

Feedback Page

```
<!DOCTYPE html>
<html lang="en">

<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-
scale=1.0">
    <title>Feedback Form</title>
    <style>
        body {
            font-family: "Gill Sans", "Gill Sans MT", Calibri,
"Trebuchet MS",sans-serif;
            background-color: #f4f4f4;
            margin: 0;
            padding: 0;
            display: flex;
            justify-content: center;
            align-items: center;
            height: 100vh;
        }

        .feedback-form {
            background-color: #fff;
            padding: 20px;
            border-radius: 10px;
            box-shadow: 0 0 10px rgba(0, 0, 0, 0.1);
            width: 300px;
            text-align: center;
        }

        label {
            display: block;
            margin-bottom: 8px;
            font-weight: bold;
        }

        input[type="number"] {
            width: 100%;
            padding: 8px;
            margin-bottom: 16px;
            box-sizing: border-box;
        }

        textarea {
            width: 100%;
            padding: 8px;
            margin-bottom: 16px;
            box-sizing: border-box;
```

```
        }

        button {
            background-color: #4caf50;
            color: #fff;
            padding: 10px 20px;
            border: none;
            border-radius: 5px;
            cursor: pointer;
        }

        button:hover {
            background-color: #45a049;
        }
    </style>
</head>

<body>
    <div class="feedback-form">
        <h2>Feedback Form</h2>
        <form action="#">
            <label for="rating">Rate us (1-10):</label>
            <input type="number" id="rating" name="rating" min="1"
max="10" required>

            <label for="comment">Your Views or Suggestions:</label>
            <textarea id="comment" name="comment" rows="4"
required></textarea>

            <button type="submit">Submit Feedback</button>
        </form>
    </div>
    <img src="./feedback.png" alt="give feedback">
</body>

</html>
```

Output


Feedback Form
Rate us (1-10):
Your Views or Suggestions:
Submit Feedback
YOUR
OPINION
MATTERS!