

## EXPERIMENT NO: 07

**Aim: To write meta data of your Ecommerce PWA in a Web app manifest file to enable add to homescreen feature**

### Theory :

#### Regular Web App

A regular web app is a website that is designed to be accessible on all mobile devices such that the content gets fit as per the device screen. It is designed using a web technology stack (HTML, CSS, JavaScript, Ruby, etc.) and operates via a browser. They offer various native-device features and functionalities. However, it entirely depends on the browser the user is using. In other words, it might be possible that you can access a native-device feature on Chrome but not on Safari or Mozilla Firefox because the browsers are incompatible with that feature.

#### Progressive Web App

Progressive Web App (PWA) is a regular web app, but some extras enable it to deliver an excellent user experience. It is a perfect blend of desktop and mobile application experience to give both platforms to the end-users.

#### Difference between PWAs vs. Regular Web Apps:

A Progressive Web is different and better than a Regular Web app with features like:

##### 1. Native Experience

Though a PWA runs on web technologies (HTML, CSS, JavaScript) like a Regular web app, it gives user experience like a native mobile application. It can use most native device features, including push notifications, without relying on the browser or any other entity. It offers a seamless and integrated user experience that it is quite tough for one to differentiate between a PWA and a Native application by considering its look and feel.

##### 2. Ease of Access

Unlike other mobile apps, PWAs do not demand longer download time and make memory space available for installing the applications. The PWAs can be shared and installed by a link, which cuts down the number of steps to install and use. These applications can easily keep an app icon on the user's home screen, making the app easily accessible to the users and helps the brands remain in the users' minds, and improving the chances of interaction.

##### 3. Faster Services

PWAs can cache the data and serve the user with text stylesheets, images, and other web content even before the page loads completely. This lowers the waiting time for the end-users and helps the brands improve the user engagement and retention rate, which eventually adds value to their business.

##### 4. Engaging Approach

As already shared, the PWAs can employ push notifications and other native device features more efficiently. Their interaction does not depend on the browser user uses. This eventually improves the chances of notifying the user regarding your services, offers, and other options related to your brand and keeping them hooked to your brand. In simpler words, PWAs let you maintain the user engagement and retention rate.

##### 5. Updated Real-Time Data Access

Another plus point of PWAs is that these apps get updated on their own. They do not demand the end-users to go to the App Store or other such platforms to download the update and wait until installed.

In this app type, the web app developers can push the live update from the server, which reaches the apps residing on the user's devices automatically. Therefore, it is easier for the mobile app developer to provide the best of the updated functionalities and services to the end-users without forcing them to update their app.

#### 6. Discoverable

PWAs reside in web browsers. This implies higher chances of optimizing them as per the Search Engine Optimization (SEO) criteria and improving the Google rankings like that in websites and other web apps.

#### 7. Lower Development Cost

Progressive web apps can be installed on the user device like a native device, but it does not demand submission on an App Store. This makes it far more cost-effective than native mobile applications while offering the same set of functionalities.

#### Pros and cons of the Progressive Web App

The main features are:

**Progressive** — They work for every user, regardless of the browser chosen because they are built at the base with progressive improvement principles.

**Responsive** — They adapt to the various screen sizes: desktop, mobile, tablet, or dimensions that can later become available.

**App-like** — They behave with the user as if they were native apps, in terms of interaction and navigation.

**Updated** — Information is always up-to-date thanks to the data update process offered by service workers.

**Secure** — Exposed over HTTPS protocol to prevent the connection from displaying information or altering the contents.

**Searchable** — They are identified as “applications” and are indexed by search engines.

**Reactivable** — Make it easy to reactivate the application thanks to capabilities such as web notifications.

**Installable** — They allow the user to “save” the apps that he considers most useful with the corresponding icon on the screen of his mobile terminal (home screen) without having to face all the steps and problems related to the use of the app store.

**Linkable** — Easily shared via URL without complex installations.

**Offline** — Once more it is about putting the user before everything, avoiding the usual error message in case of weak or no connection. The PWA are based on two particularities: first of all the ‘skeleton’ of the app, which recalls the page structure, even if its contents do not respond and its elements include the header, the page layout, as well as an illustration that signals that the page is loading.

Weaknesses refer to:

IOS support from version 11.3 onwards;

Greater use of the device battery;

Not all devices support the full range of PWA features (same speech for iOS and Android operating systems);  
It is not possible to establish a strong re-engagement for iOS users (URL scheme, standard web notifications);  
Support for offline execution is however limited;  
Lack of presence on the stores (there is no possibility to acquire traffic from that channel);  
There is no “body” of control (like the stores) and an approval process;  
Limited access to some hardware components of the devices;  
Little flexibility regarding “special” content for users (eg loyalty programs, loyalty, etc.)

## CODE:

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <meta name="viewport" content="width=device-width, initial-scale=1.0">
  <title>Tour & Travel</title>
  <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.1.1/css/all.min.css">
  <link rel="stylesheet" href="css/style.css">
  <!-- Iconscout Link -->
  <link rel="stylesheet" href="https://unicons.iconscout.com/release/v2.1.6/css/unicons.css">
</head>
<body>
  <header class="header">
    <a href="#" class="logo"><i class="fas fa-hiking"></i> travel.com</a>
    <nav class="navbar">
      <div id="nav-close" class="fas fa-times"></div>
      <a href="#home">home</a>
      <a href="#category">Adventures</a>
      <a href="#packages">packages</a>
      <a href="#contact">contact</a>
    </nav>
    <div class="icons">
      <div id="menu-btn" class="fas fa-bars"></div>
      <div id="search-btn" class="fas fa-search"></div>
    </div>
  </header>

  <div class="search-form">
    <div id="close-search" class="fas fa-times"></div>
    <form action="">
      <input type="search" name="" placeholder="search here..." id="search-box">
      <label for="search-box" class="fas fa-search"></label>
    </form>
  </div>

  <section class="home" id="home">
```

```
<div class="wrapper">

  <div class="box" style="background: url(images/home1.jpg) no-repeat;">
    <div class="content">
      <span>never stop</span>
      <h3>exploring</h3>
      <p>Travel.com offers best deals on India tour packages.</p>
      <a href="#category" class="btn">get started</a>
    </div>
  </div>
</section>
```

## **<!-- Adventure section -->**

```
<section class="category" id="category">

  <h1 class="heading">Adventure Idea!</h1>

  <div class="box-container">

    <div class="box">
      
      <h3>bungee jump</h3>
      <p>Bungee jumping is an activity that involves a person jumping from a great height
while connected to a large elastic cord.</p>
      <a href="https://en.wikipedia.org/wiki/Bungee_jumping" class="btn">read more</a>
    </div>

    <div class="box">
      
      <h3>zip lines</h3>
      <p>A zip-line, zip line, zip-wire, or flying fox is a pulley suspended on a cable, usually
made of stainless steel, mounted on a slope.</p>
      <a href="https://en.wikipedia.org/wiki/Zip_line" class="btn">read more</a>
    </div>

    <div class="box">
      
      <h3>Canoeing</h3>
      <p>Canoeing is an activity which involves paddling a canoe with a single-bladed
paddle.</p>
      <a href="https://en.wikipedia.org/wiki/Canoeing" class="btn">read more</a>
    </div>

  </div>

</section>
<section class="packages" id="packages">
```

```
<h1 class="heading">popular packages</h1>
```

```
<div class="box-container">
```

```
<div class="box">
```

```
<div class="image">
```

```

```

```
</div>
```

```
<div class="content">
```

```
<h3>Manali Package</h3>
```

```
<p>Kullu Manali Shimla has always been a very popular destination for the old, young  
travelers as well as newly married couples who look for cheapest Manali tour packages & Manali Honeymoon Packages to experience the perfect solitude and calmness at its best.</p>
```

```
<div class="price">Rs 5,999 - Rs 8,999</div>
```

```
<a href="#contact" class="btn">explore now</a>
```

```
</div>
```

```
</div>
```

```
<div class="box">
```

```
<div class="image">
```

```

```

```
</div>
```

```
<div class="content">
```

```
<h3>Goa Package</h3>
```

```
<p>The most popular beach of Goa, Baga is located close to Calangute beach, around  
30 Km North of Panaji. Baga is popular for its nightlife with some very famous clubs such as  
Brittos, Titos and Mambos. There is also a range of water sports that you can try your hands at.</p>
```

```
<div class="price">Rs 7,999 - Rs 12,999</div>
```

```
<a href="#contact" class="btn">explore now</a>
```

```
</div>
```

```
</div>
```

```
<div class="box">
```

```
<div class="image">
```

```

```

```
</div>
```

```
<div class="content">
```

```
<h3>Delhi Package</h3>
```

```
<p>Boasting cultural diversity and rich heritage, Delhi is home to several temples,  
tombs, gardens, forts, museums, markets and more. We take you to some of the best spots in the  
city. Pick the best packages from here and enjoy the tour of Delhi with guide.</p>
```

```
<div class="price">Rs 2,999 - Rs 8,999</div>
```

```
<a href="#contact" class="btn">explore now</a>
```

```
</div>
```

```
</div>
```

```
<div class="box">
```

```
<div class="image">
```

```

```

```
</div>
```

```
<div class="content">
```

### Jaipur Package

We organise Jaipur & Rajasthan tours that offer incredible attractions like Forts and Palaces, Deserts, Traditional Villages, colorful cattle fairs, sacred places, camel safaris, beautiful lakes, hill stations and the people.

Rs 11,999 - Rs15,999

We organise Jaipur & Rajasthan tours that offer incredible attractions like Forts and Palaces, Deserts, Traditional Villages, colorful cattle fairs, sacred places, camel safaris, beautiful lakes, hill stations and the people.

Rs 11,999 - Rs 15,999

[explore now](#contact)

### Kerala Package

A trip to Kerala is always an experience through greenery to the hills and its climate. Browse through our hand-picked Kerala tour packages prepared for you. Our experts are also available to prepare customised tourism packages

Rs 4,999 - Rs 9,999

[explore now](#contact)

### Darjeeling Package

A trip to Darjeeling will include a ride on the famous Himalayan Railway, a visit to Tiger Hill, or a tour of the stunning landscaped gardens here. Activities like hiking and boating. Do not miss out on a trip to Darjeeling Is famous Mall Road

Rs 20,000 - Rs 25,000

[explore now](#contact)

```

    <h1>Contact us</h1>
</div>
<div class="contact-form">
    <form method = "post" action = "contact_us.php">
    <div class="input-fields">

        <input type="text" class="input" placeholder="Name" name="name">
        <input type="email" class="input" placeholder="Email Address" name="email"
pattern=".+@gmail\.com">
        <input type="phone" class="input" placeholder="Phone" name="phone">
        <input type="text" class="input" placeholder="Subject" name="subject">
    </div>
    <div class="msg">
        <textarea placeholder="Message" name="message"></textarea> <br>
        <div class="btn1"><button type="submit">send <i class="uil uil-message"></i></div>
    </div>
    </form>
</div>
</div>

</section>
<section class="footer">

    <div class="box-container">

        <div class="box">
            <h3>Quick links</h3>
            <a href="#home">home</a>
            <a href="#packages">packages</a>
            <a href="#query">query</a>
        </div>

        <div class="box">
            <h3>extra links</h3>
            <a href="#contact">ask questions</a>
            <a href="#">terms of use</a>
            <a href="#">privacy policy</a>
        </div>

        <div class="box">
            <h3>contact info</h3>
            <a href="tel:+918115585868"> <i class="fas fa-phone"></i> +91 8115585868 </a>
            <a href="mailto:yashsrivastav8115@gmail.com"> <i class="fas fa-envelope"></i>
yashsrivastav8115@gmail.com </a>
            <a href="#"> <i class="fas fa-map"></i> Lucknow, india - 226010 </a>
        </div>

        <div class="box">
            <h3>follow us</h3>
            <a href="https://www.facebook.com/yash.srivastav0"> <i class="fab fa-facebook-
f"></i> facebook </a>

```

```

        <a href="https://www.instagram.com/yash_srivastav_"> <i class="fab fa-
instagram"></i> instagram </a>
        <a href="https://www.linkedin.com/in/yash-srivastav/"> <i class="fab fa-linkedin"></i>
linkedin </a>
        <a href="https://github.com/Yash-srivastav16"> <i class="fab fa-github"></i> github
</a>
    </div>
</div>
<div class="credit">created by <span>yash srivastav</span> | all rights reserved!</div>
</section>
<!-- footer section ends -->
<script src="js/script.js"></script>
</body>
</html>

```

## OUTPUT:

Open folder in VS code and click go live at bottom right corner

```

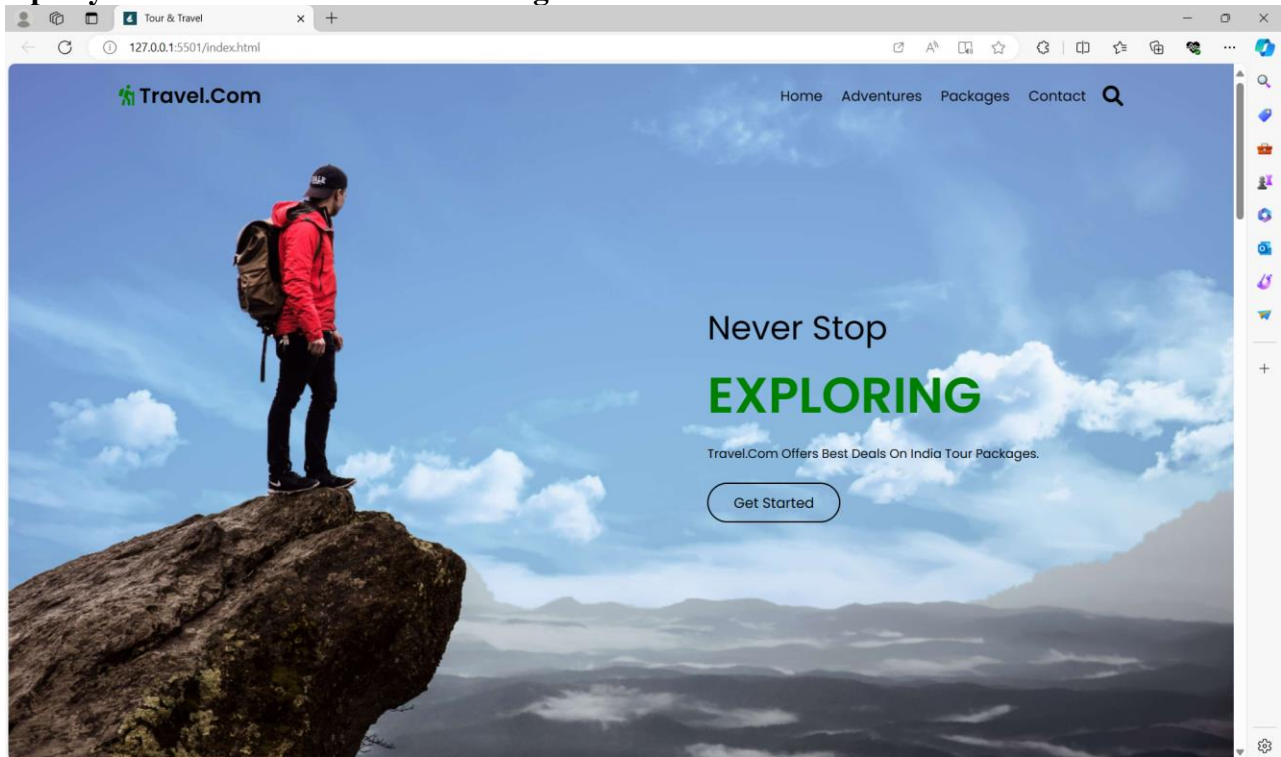
index.html x
index.html > html > body > div.search-form > form
1  <!DOCTYPE html>
2  <html lang="en">
3  <head>
4      <meta charset="UTF-8">
5      <meta name="viewport" content="width=device-width, initial-scale=1.0">
6      <title>Tour & Travel</title>
7      <link rel="stylesheet" href="https://cdnjs.cloudflare.com/ajax/libs/font-awesome/6.1.1/css/all
8      <link rel="stylesheet" href="css/style.css">
9      <!-- Iconscout Link -->
10     <link rel="stylesheet" href="https://unicons.iconscout.com/release/v2.1.6/css/unicons.css">
11
12 </head>
13 <body>
14     <header class="header">
15         <a href="#" class="logo"><i class="fas fa-hiking"></i> travel.com</a>
16         <nav class="navbar">
17             <div id="nav-close" class="fas fa-times"></div>
18             <a href="#home">home</a>
19             <a href="#category">Adventures</a>
20             <a href="#packages">packages</a>
21             <a href="#contact">contact</a>
22         </nav>
23         <div class="icons">
24             <div id="menu-btn" class="fas fa-bars"></div>
25             <div id="search-btn" class="fas fa-search"></div>
26         </div>
27     </header>
28
29     <div class="search-form">
30

```

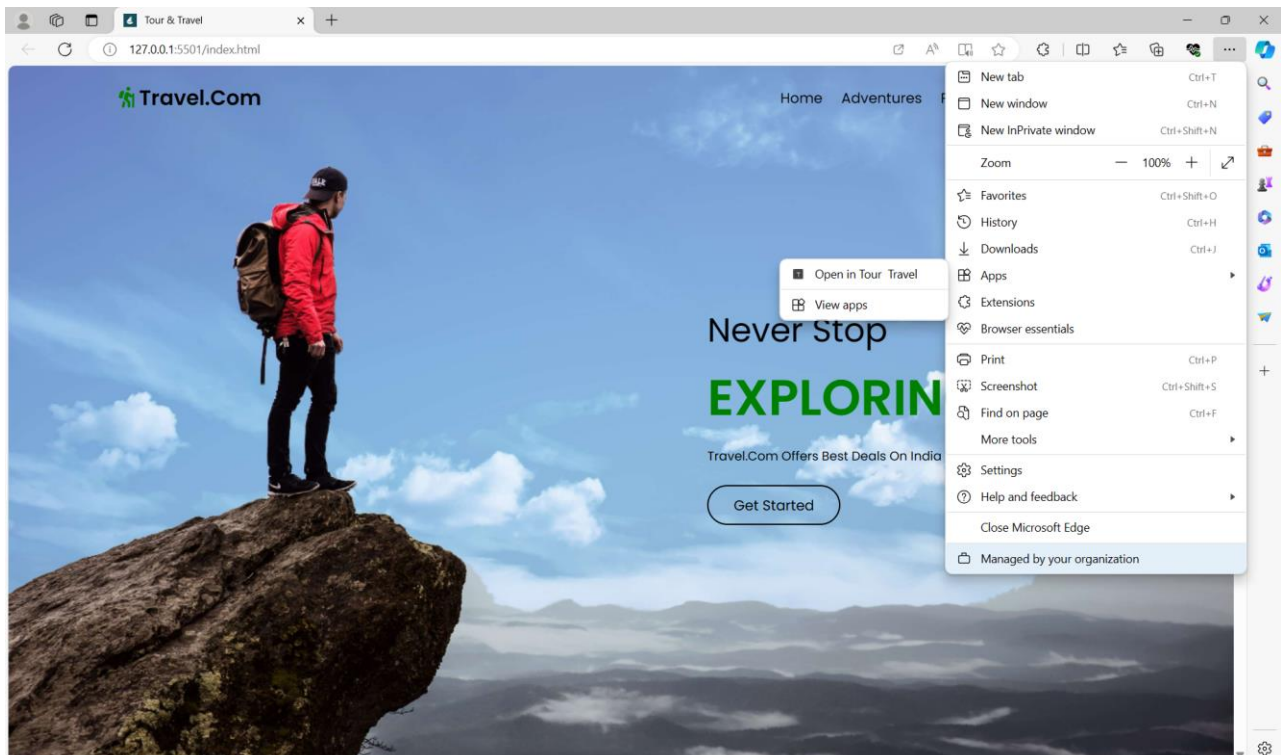
Ln 32, Col 25 Spaces: 4 UTF-8 CRLF HTML Port: 5501 Prettier



## Open your hosted site on Microsoft Edge



Click on 3 dots  
Click on Apps  
Select install app option

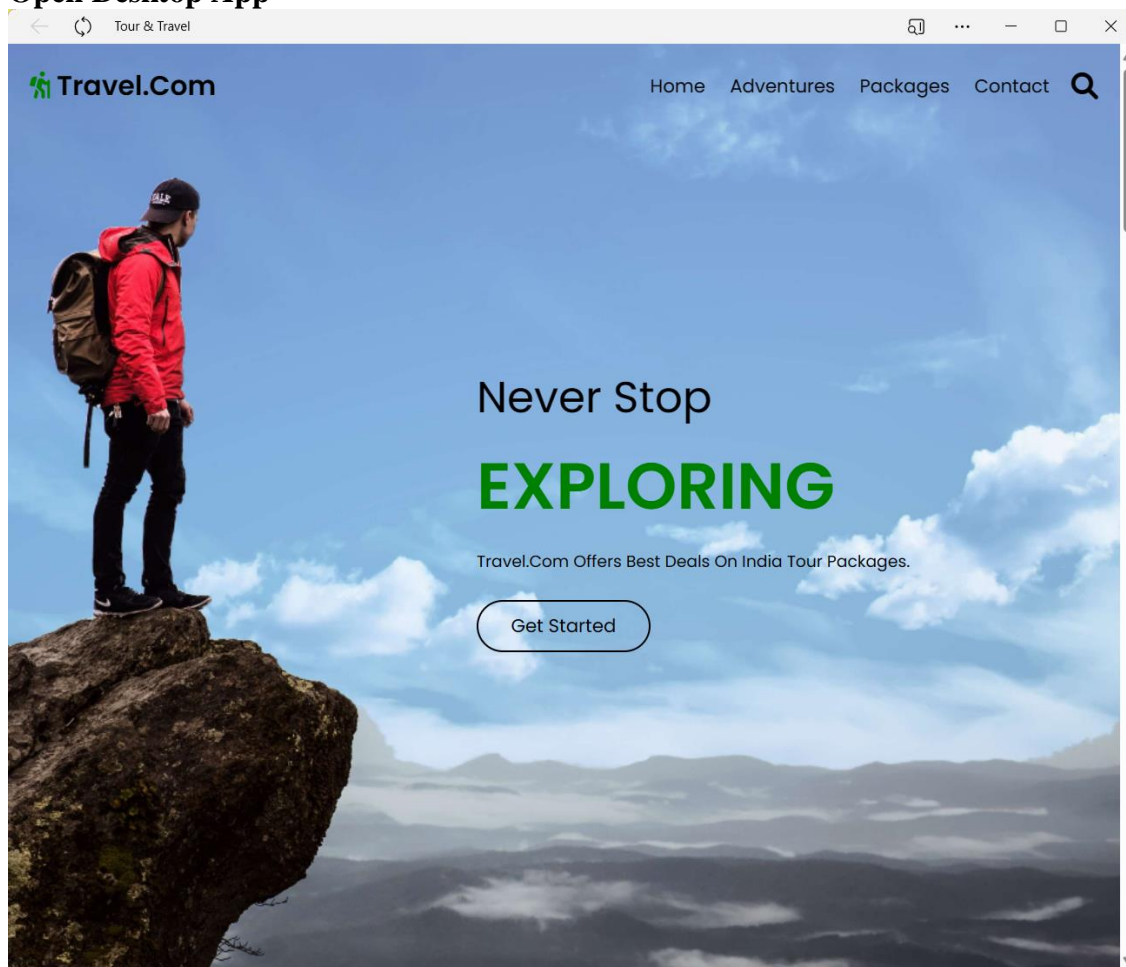


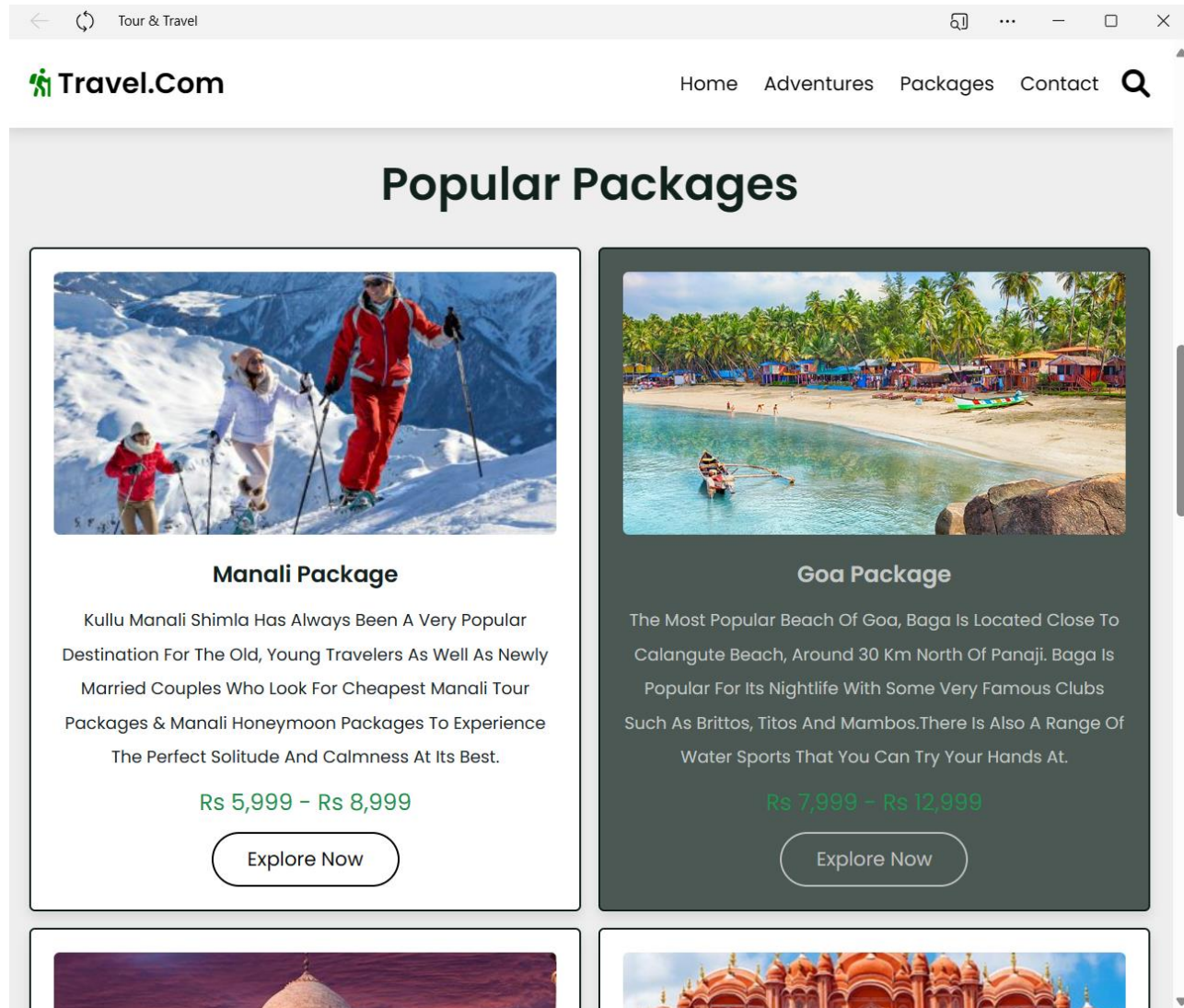
**App icon will appear at the bottom**

**Desktop App created Successfully**



**Open Desktop App**





## Conclusion:

Here, We have Successfully created a basic progressive web app of our web page and installed it in our desktop successfully.

**Conclusion:** By understanding and implementing these theoretical concepts, you can create robust and user-friendly forms in Flutter that provide a seamless experience for your users.

