# Assignment 7: Explore the microformats.org website

Explore the microformats.org website and investigate the product and organization microformats

Explore the microformats.org website and investigate the product and organization microformats. Use this information to create semantic descriptors for an e-commerce website's product and organization APIs.

## Solution:

Product API Semantic Descriptors:

* name: The name of the product.
* description: A detailed description of the product.
* brand: The brand or manufacturer of the product.
* image: An image of the product.
* price: The price of the product.
* currency: The currency used for the product's price.
* availability: The current availability of the product.
* rating: The rating of the product, based on customer reviews.
* reviews: A list of customer reviews for the product.
* category: The category or categories that the product belongs to.
* identifier: The unique identifier for the product.

Organization API Semantic Descriptors:

* name: The name of the organization.
* description: A description of the organization.
* url: The organization's website URL.
* logo: The logo or icon of the organization.
* contact: Contact information for the organization, such as email address or phone number.
* address: The physical address of the organization.
* identifier: The unique identifier for the organization.
* products: A list of the products offered by the organization.
* reviews: A list of customer reviews for the organization.

## Objective:

The objective of this assignment is to explore the use of microformats.org to extract structured data for products and organizations in order to design APIs for an e-commerce website.

Instructions:

1. Visit microformats.org and navigate to the "h-product" section for products and the "h-card" section for organizations.
2. Review the documentation and identify the key properties for each section that can be used to create APIs for an e-commerce website.
3. Create a list of at least 5 properties for each section and provide a brief description of what each property represents.
4. Using the properties identified in step 3, create a sample API response for a product and an organization.
5. Finally, explain how the use of microformats.org can benefit the design of APIs for an e-commerce website.

## Solution:

1. Visit microformats.org and navigate to the "h-product" section for products and the "h-card" section for organizations.
2. Review the documentation and identify the key properties for each section that can be used to create APIs for an e-commerce website.

* h-product section:
  + name: The name or title of the product.
  + brand: The brand or manufacturer of the product.
  + price: The price of the product.
  + description: A short description of the product.
  + image: An image of the product.
* h-card section:
  + name: The name of the organization.
  + url: The URL of the organization's website.
  + email: The email address of the organization.
  + phone: The phone number of the organization.
  + address: The physical address of the organization.

1. Create a list of at least 5 properties for each section and provide a brief description of what each property represents.

* h-product section:
  + sku: The stock keeping unit of the product.
  + category: The category or type of product.
  + weight: The weight of the product.
  + dimensions: The dimensions of the product.
  + rating: The rating of the product.
* h-card section:
  + logo: The logo of the organization.
  + contactPerson: The name of the contact person for the organization.
  + foundingDate: The date the organization was founded.
  + numberOfEmployees: The number of employees in the organization.
  + description: A short description of the organization.

1. Using the properties identified in step 3, create a sample API response for a product and an organization.

Sample API response for a product:

{

"name": "Apple iPhone 13",

"brand": "Apple",

"price": "$999",

"description": "The latest iPhone from Apple",

"image": "<https://example.com/images/iphone13.jpg>",

"sku": "IPH13",

"category": "Smartphones",

"weight": "150g",

"dimensions": "146.7 x 71.5 x 7.65 mm",

"rating": "4.8"

}

Sample API response for an organization:

{

"name": "Apple Inc.",

"url": "<https://www.apple.com/>",

"email": "info@apple.com",

"phone": "+1-800-692-7753",

"address": "1 Apple Park Way, Cupertino, CA 95014",

"logo": "<https://example.com/images/apple-logo.png>",

"contactPerson": "Tim Cook",

"foundingDate": "April 1, 1976

"address": {

"@type": "PostalAddress",

"streetAddress": "1 Apple Park Way",

"addressLocality": "Cupertino",

"addressRegion": "CA",

"postalCode": "95014",

"addressCountry": "US"

},

"telephone": "+1-408-996-1010",

"email": "info@apple.com",

"logo": "https://www.apple.com/ac/structured-data/images/open\_graph\_logo.png",

"url": "https://www.apple.com",

"sameAs": [

"https://www.facebook.com/apple",

"https://www.twitter.com/apple",

"https://www.instagram.com/apple",

"https://www.youtube.com/user/Apple"

]

In the above JSON-LD code, we have added the following key-value pairs:

* "address": This key represents the physical address of the organization. We have used the "PostalAddress" type from schema.org to provide a structured representation of the address. We have included the street address, locality, region, postal code, and country for Apple's headquarters in Cupertino, California.
* "telephone": This key represents the contact telephone number for the organization.
* "email": This key represents the contact email address for the organization.
* "logo": This key represents the URL for the organization's logo. We have used the URL for Apple's official logo.
* "url": This key represents the URL for the organization's website. We have used the URL for Apple's official website.
* "sameAs": This key represents the URLs for the organization's social media profiles on Facebook, Twitter, Instagram, and YouTube. We have used the URLs for Apple's official social media profiles.