# USER INTERFACE AND DESIGN DOCUMENT

# **USER INTERFACE**

#### INTRODUCTION

This website is called Harvest for Free.

Harvest for Free is a website aiming to empower the middle-class to grow healthy vegetables in their own places. The goal is not just to reduce hunger in South Africa but in Africa and eventually expand through out other continents and also add fruits.

This website is free for all but does require individuals to sign in or log in. It is to help reduce hunger for those who cannot provide for their families due to unemployment in South Africa.

# **Target Audience**

The website will provide users with the knowledge needed to start a planting. The users expected to use the website range between the ages of 18-55. They are people who have green fingers, who enjoy gardening, who would like to try new things and who want to help the less fortunate.

In the near future Harvest for free would like the website to be countrywide, where more individuals or even young individuals can garden for themselves and be able to turn the fruits of their labor into a business or even something that will end poverty in their areas or at home

This document focuses on ensuring that users are able to navigate through the website with ease. It also ensures that the user understands the functions of and on the website as well as understanding the thought process behind the design.

## Language:

This makes use of clear and colloquial language to be accommodating to our target audience.

#### **Home Page**

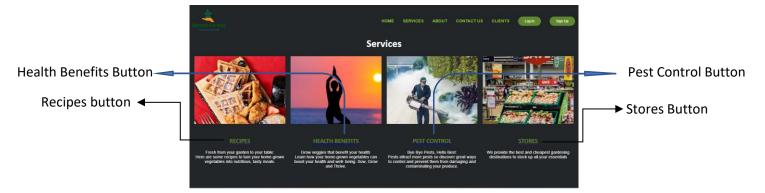
The Home is the first page you will be landing on after you have logged in. This page indicates a clear navigation of the website.

The most important part of the Home page is the nav bar and the slideshow. The navigation bar consists of the logo and the buttons, which are the home button, service button, about us button, clients button and contact us button. These buttons direct you to their section of the page where you can get more information.

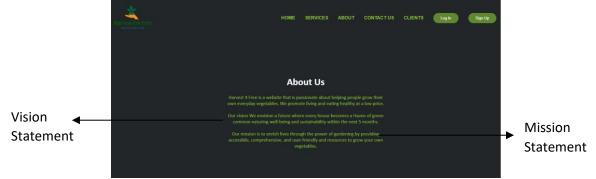
The first section of the page is the slideshow. You are able to scroll through the vegetables and click on the vegetable you would like to know more about and you will be directed to that vegetable page.



As you scroll down, you will come across the second section of the Home page which is the services section. This is where we showcase all the additional information about our vegetables which consists of recipes, where we provide you with all the nutritious meals: health benefits, where you find out all the things you get out of your home grown vegetables: Pest control, where we warn you about the possible pests that may harm or destroy your vegetables and how to keep the vegetables from being infested by pests: stores, where we tell you where to get all your seeds and essentials to start growing vegetables at home.



The third section of the Home page consists of the About Us section. This section communicates what Harvest for Free stands for and its objectives. In this section you get to see what harvest for free stands for and what we plan to achieve in the future.



The Fourth section answers the commonly asked questions that users may want to ask about the different vegetables or while navigating our website. This section aims to engage with the users, making their time on our website easier and more enjoyable. To get the answer to the questions, the user will have to click on the dropdown menu and the answers will appear.

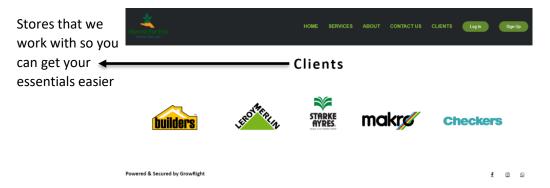


The fifth section of the Home page is the Contact form. This form allows the user to be able to share their thoughts with us or even ask questions that are not answered on the FAQ section. The user will have to enter their name and surname, email, contacts and finally their comment.

This will help us identify the user in need.



The last section of the Home page is the Footer. The footer includes the clients that we are associated with and well as our social media pages which is also another way for our users to interact with us.



# **UI Components Used**

#### Slideshow section:

- Buttons
- Sliders
- Images
- > Text

#### Services section:

- Button
- Description
- Images

## About Us section:

- Text
- Button

#### FAQ section:

- > Drop-down menu
- > Text

## Contact Us section:

- > Form
- Input-boxes
- > Text and integer
- Check-box
- Button

#### Clients:

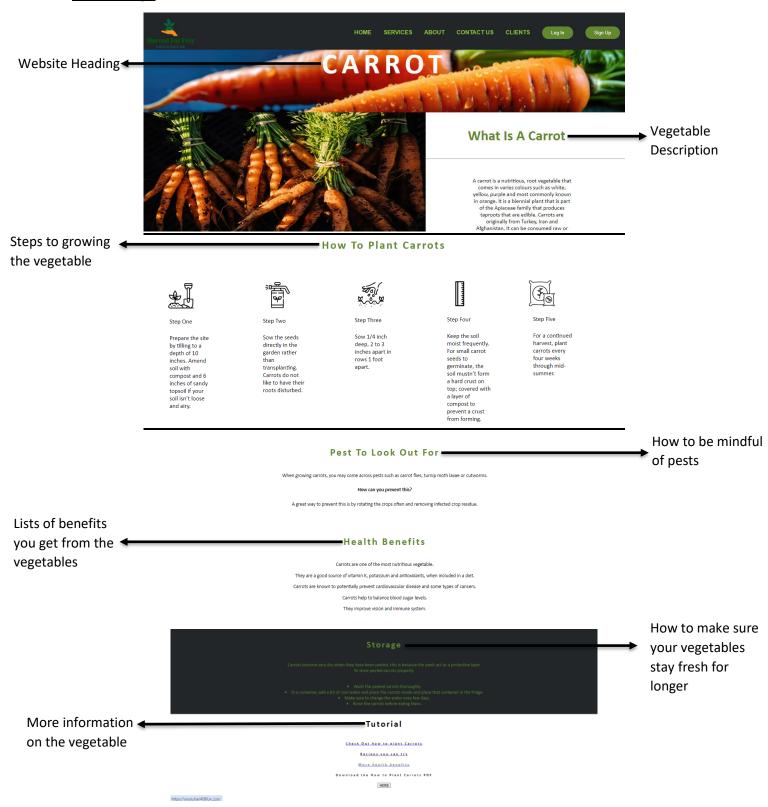
- Images
- Button

The sign-up page is for first-time users of the page which is a form that requires the user's personal information. The login page is where the user will be authenticated for when they want to be granted access to the website. These pages consist of buttons, input boxes and a check box.

Sign Up	
First Name	
Surname	
Username	
Email Address	
Contact	
New Password	
Confirm Password	
Remember me Sign Up	
I have an account? <u>Login</u>	



# **Carrot Page**



\*NB! All vegetable pages have the same layout.

# Potato Page





#### What Is A Potato?

The potato is a starchy root vegetable native to the Americas that is consumed as a staple food in many parts of the world. Potatoes are tubers of the plant Solanum tuberosum, a perennial in the nightshade family Solan

#### **How To Plant Potatoes**



Step One

Dig a hole about 6 inches deep.



Step Two

Set the seeds i the ground and space one another.



Step Three

Cover the potatoes with adequate soil.



Step Four

Water the ootatoes well



Step Five

Add a 5-10-10 fertiliser or Bone meal or fish meal to the top.

#### Pest To Look Out For

Potato tuber moth, most commonly Phthorimaea operculella, is the most damaging pest of planted and stored potatoes in warm, dry areas.

#### How can you prevent this?

Powder the potato plants with food-grade diatomaceous earth. The bag of diatomaceous earth comes with a tool to blow it on the leaves.

# **Health Benefits**

- Disease prevention & is packed with anit-oxidants.
  - Lower blood pressu
- A potassium-rich diet can help decrease blood pressure.
  - Decrease the chances of heart problems
  - Can improve digestion

#### Storage

Store potatoes at a temperature between 43–50°F (6–10°C)1. This range is slightly warmer than a refrigerator and can be found in places like a root cellar

# Tutorial

Check Out how to Plant Patotes

Recipes you can try

More health benefits

#### Clients











# **Beetroot Page**



#### **How To Grow Beetroot**



#### A. Plantin

Select a suitable space for growing.
 Beetroot likes neutral, moist, fertile soil at the correct PH level. Sow beetroot seeds



# Nurturing

Water daily until the leaves begin to sprout.2.
Fertilise your plants.3. Watch out for birds and weeds.



#### c. Harvest

Set cloves/seeds in the ground with the root side facing down.



#### D. Preparing

Wash the beets gently, don't tear the skins, then place in the pan of warm water, boil, reduce the heat and simmer until tender around 20-30

#### Pest To Look Out For

Aphids, red spi- der, leaf-eating insects, and cutworms.

# How can you prevent this?

Applying registered chemicals and using baits when the roots reach maturity.

#### **Health Benefits**

Prevent heart disease and stroke

Boost your immune system

Is an anti-oxidant

Increase stamina Lower blood pressure

Is an anti-oxidant

It improves skin health

Can help with diabetes

#### Storage

Store beets in a plastic bag in the refrigerator at or below 41 °F for 7 to 10 days. Beets may be frozen for up to ten month

#### Tutorial

Check Out how to plant Beetroot

Recipes you can try

More health benefits

# **Garlic Page**



#### **How To Plant Garlic**



Step One

Space rows 30cm apart.



Step Two

Put a bit of fertiliser over before setting the cloves/seeds in place.



Step Three

Set cloves/seeds in the ground with the root side facing down.



Step Four

Set cloves/seeds 2.5cm to 10cm deep and 15cm to 20cm apart.



Step Five

Add a 5-10-10 fertiliser or Bone meal or fish meal to the top.

#### Pest To Look Out For

Bulb mites are the most common pests found in garlic plants.

How can you prevent this?

Hot water (54 degrees celsius) or soak the clove in an oil solution before planting.

#### **Health Benefits**

Is an anti-oxidant

Can reduce heart disease
Can improve digestion

It improves skin health

Balances your blood sugar Can reduce inflammation

Can help with diabetes

#### Storage

Store whole heads of garlic, or unpeeled garlic cloves, in a cool, dry place in a vessel with good airflow. Keep it in your pantry or in a basket on your counter out of the sun. T fridge is a great place for whole peeled cloves, sliced or minced garlic. Finely chop, grate or press raw garlic cloves into ice cube trays, cover with oil and freeze.

#### Tutorial

Check Out how to plant Garlic

Recipes you can try

More health benefits

# **Asparagus**



#### **How To Plant Aparagus**



Dig 30cm deep in trenches or furrows spaced 30-45cm apart



Keep the soil consistently moist but not waterlogged, especially during the establishment phase



Step Three

Keep the asparagus bed free from weeds, as they can compete for nutrients and water. Apply a layer of organic mulch such as straw or shredded leaves to suppress weeds and retain soil moisture.



Step Four

Asparagus grows best in temperate climates with cool winters and mild summers Gauteng's climate, characterized by hot summers and mild winters, may require additional watering and shading during hot periods.



Step Five

Asparagus crowns should not be harvested in the first year to allow the plants to establish.Begin harvesting spears when they reach about 15-20cm in length

#### Pest To Look Out For

Monitor for common pests such as asparagus beetles and aphids, and manage them with organic methods or insecticides if necessary.

#### How can you prevent this?

Practice crop rotation to minimize the risk of soil-borne diseases such as fusarium wilt.



#### **Health Benefits**

Can reduce heart disease

Is Full of Vitamin K Brightens Your Mood

Is Rich in Folic Acid Helps Prevent UTIs Can help with diabetes

#### Tutorial

Check Out how to plant Garlic

Recipes you can try More health benefits

# **Chillies**



#### **How To Plant Chillies**









#### Pest To Look Out For

Chili plants are affected by several common posts, including aphids, spider mitte, whiteflies, thrips, fice beetles, leafininers, cutworms, frust borers, scale insects, and slugs 'snails'. These pests damage plants by sucking usp, chewing leaves, or boring into fruits, leading to stunted growth, discontrol leaves, and reduced yields.

Infestation prevention can be done using natural predators, insecticidal scaps, neem cell, sticky traps, and barriers, along with regular monitoring, healthy cultivation practices, and crop rotation to reduce pest impact and ensure a successful chili harvest.

#### **Health Benefits**

Is an anti-oxidant

Can reduce heart disease

Can improve digestion

Can help with diabetes

#### Tutorial

How to germinate chilli seeds

Which types of pots to use

Possible mistakes to avoid

# **Bell Pepper**



#### How To Plant Bell peppers











#### Pest To Look Out For

How can you prevent this?

#### **Health Benefits**

Balances Mood

Beautiful Skin Lowers Cholesterol

# **Spinach**



#### How To Plant Spinach



Step One

Sow seeds 1-2 inches apart and 1/8 inch deep in early spring



Step Two

Cover seeds with a thin layer of soil and water gently.



Step Three

Keep soil moist and water daily.



Step Four

Harvest leaves when large enough to eat, usually in 20-30 days

#### Pest To Look Out For

1. Aphids: Spray with water or insecticidal soap. 2. Slugs and snalls: Use copper tape, crushed eggshells, or beer traps 3. Leafminers: Spray with neem oil or insecticidal soap. 4. Spinach leaf sport: Use fungicides or remove infected leaves. 5. Cutwoms: Hand-jeck or use & [Baellius thringinesis] spray, 6. Flae beetles: Use row covers or spray with neem oil. 7. Spider mites: Spray with water or insecticidal soap. 8. Caterpillars: Hand-pick or use Bt spray.

#### Health Benefits

Is an anti-oxidant

Can reduce risk of cancer and low iron

Can improve digestion
Improves skin appearance

Balances your gut health

Can reduce inflammation

Can help with lower blood pressure.

#### Storage

To store spinuch and keep if fresh for a longer period, follow these stores: I. Befrigerate: Store fresh spinuch leaves: in a sealed container or platic lags in the refrigerator at a temperature of 27 EV/CD 10 SOF (10°C), 2. Keep dry Makes use the spinach is dry as excess motiture can cause spoilige. 3. Use within a few days: Fresh spinuch hypically lasts for 1.3 days. 4. Freeze: To store spinuch for a longer period, blanch and freeze it. Frezen spinuch can last for 8.12 months: 5. Store in a cod, dark place for its power storing spinuch for an extended period, keep it in a cod, dark place for prevent spoiliges.

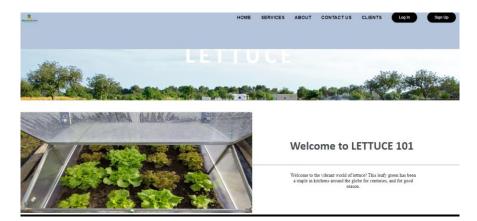
#### Tutorial

Check Out how to plant Spinach

Recipes you can try

More health benefits

# **Lettuce**



#### Some of the health benefits include:

Rich in Vitamin I

Good source of Folate

Contains antioxidants

#### Lettuce Have Some Fun: Fun Facts and Jokes

Lettuce Entertain You! - Did you know that lettuce was once considered a luxury food in ancient Rome? It was even believed to have medicinal properties. Today, it's still a superstar, but thankfu and easier to find—no toga required!



#### Tutorial

Check Out how to plant Lettuce Veg

Recipes you can try

More health benefits

# **Health Benefits**





#### **CARROTS**

Carrots are one of the most nutritious vegetable. They are a good source of vitamin K, potassium and antioxidants, when included in a diet. Carrots are known to potentially prevent cardiovascular disease and some types of cancers. Carrots help to balance bloo survey levels. They improve vision and improve postern

#### **POTATOES**

Disease prevention and is packed with anti-oxidants Lowers blood pressure A potassium-rich dietcan help decrease blood



#### BEETROOT

"I increase attimina" – Sectional and is splick help your heart and lungs work better during exector. Notice code from these horsesses blood flow your woulder. Some effectives exhibited the splick with exempting in surpace the prevaitment. I invest the states and stroke it is a splick of the spl

#### GARLIC

Balances your blood sugar is an anti-oxidant Can reduce inflammation Can reduce heart disease Can help with disbetes Can improve digestion it improves skin health





#### ASPARAGUS

Can Help With Weight Loss. Helps Prevent UTIs. Is Full of Antioxidants. Contains Vitamin E. Promotes Reproductive Health. Is Great for Gut Health. Is Rich in Fol-April. In Full of Vitamin K.

#### CHILLI

proves Cardiovascular health. Is an arth-oxidant Can reduce inflammation. Can reduce heart disease, Can help with diabetes. Can improve digestion it improves





#### BELLPEPPERS

Peppers are especially rich in anticoldant vitamins including vitamins C, E and beta-carotene. They also supply bountful amounts of polyphenois, these protective pla

#### SPINACH

Spinach is a nutrient-dense food that offers several health benefits, - Rich in anticoldents, vitamins A, C and E, and minerals like potassium and calcium. - Helps fight premature skin aging and prevent cardiovascular diseases. - Supports eye health, bone health and immune function. - May help lower blood pressure, reduce cance





#### LETTUCE

Lettuce is more than just a crunchy addition to your salad—it's a powerhouse of nutrition? Packed with essential vitamins, minerals, and antioxidants, lettuce augusts have health, based immunity, and promote healthy digestion. With its line caline centers, fix the perfect ordice for ineight management, while is high water content league you hydroid and inference found on the health benefit include (Rich in Highmann & Good source of Potass, Contain and Armstondorts

# **Recipes**





**CARROTS** 

Healthy Mashed Carrot
Healthy Carrot

#### **POTATOES**

Crispy Potatoes

15 Potato Recipes





**BEETROOT** 

Pickled Beetroot

3 Beetroot salads



How to make Garlic Butter

Garlic Bread





## **ASPARAGUS**

How to cook Asparagus

Bacon Asparagus

CHILLI

Homemade Chilli

Style Chilli Chicken





## BELLPEPPERS

Stuffed Bellpeppers

6 Bellpepper Recipes

#### **SPINACH**

Creamy Spinach

Spinach Muffins





## LETTUCE

Lettuce Wrap

Chinese lettuce Recipe

# Clients











Powered & Secured by GrowRight

f 🛭 🖺

## **Pests**





#### **CARROTS**

When growing carrots, you may come across pests such as carrot flies, turnip moth lavae or cutworms. A great way to prevent this is by rotating the crops often and removing infected crop residue.

## **POTATOES**

Potato tuber mothm most commonly Phthorimaea operculella, is the nost damaging pest of planted and stoed potatoes in warm, dry areas. How can you prevent this?

Powder the patotato plants with food-grade diatomacous earth.

The bag of diatomaceous earth comes with a tool to blow on the leaves.





#### **BEETROOT**

#### GARLIC

Garlic is a natural pest controller, Bulb mites are the most common pests found in garlic plants, Hot water (54 degrees celsius) or soak,the clove in an oil solution before planting.





#### **ASPARAGUS**

"Cutevorms cause damage by eating off the part of the spear underground.
As a result, the damaged spear develops with a crooked the and cannot be marketed doot the adults and larvae talks spears and ferms. The beetle eats the tips of the spears as soon as they emerge from the ground
and as a result, the product cannotbe marketed.
The larvae also secrete a dark fluid, which starm the plants.
Adult beetles like it impossible to wash off the eggs.
Control Proper santation Parkets or or or otation-Plant resistant cultivar-apply or use registered chemicals only.Asparagus fly (Zacherata asparagi).

#### CHILLI

Keep an eye out for common pests like aphids, whitefiles, and caterpillars, as well as diseases like powdery mildew and biossom end rot. Regular inspection and proper sanitation can help prevent infestations and infections,





#### **BELLPEPPERS**

Pests of greenhouse sweet bell peppers: Handling biocontrol agents. Aphids. Two-spotted spider mite, Thrips. Loopers and caterpillars Whitefly. Fungus gnats.

#### **SPINACH**

Here are some common pests that can affect spinach plants and ways to control them:

1. Aphibs: Spary with water or insecticidal soip.
2. Singuist sparses of the sparses o



#### **LETTUCE**

Corn earworms, Crickets, Darkling beetles, Flea beetles, Aphids, Snails and slugs, Thrips You can prevent these pest by using neem tree, is effective against aphids. If insecticides do not work the you can resort to chemical controls

# **Interactions and Behaviours**

- Click and hover
- > Scroll
- > Slide

# <u>Design</u>

# **Current Marketing**

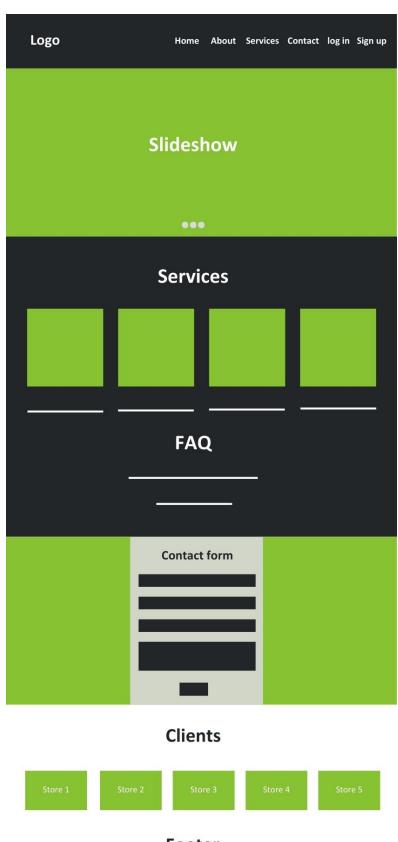
The types of media that will be used for marketing purposes include:

- > Instagram
- WhatsApp
- > Facebook
- > Flyers
- Word of mouth

# Web design requirements

- > Font: Calibri San-serif
- > Images: High resolution images that are related to each section of the website
- Colours used & codes: #222629, #61892f, #86c232, #fff, #00000020, #ffffff85, colour-gray.

# **Website Wireframe**



# **Website format**

- Landing page
- Navigation bar containing the logo, home, services, about, contact us, login and sign in buttons
- Slideshow containing the vegetables the team selected
  - Carrots
  - Potato
  - Beetroot
  - Garlic
  - Asparagus
  - ➤ Chilli
  - Bell peppers
  - Spinach
  - Lettice

# **Services**

- Recipes
- Health Benefits
- Pest Control
- Stores

## **About Us**

- Mission Statement
- Vision Statement

# Frequently Asked Questions (FAQ)

- What vegetables can I grow in the shade?
- ➤ How do I fertilize my plants?
- How do I protect my vegetable garden from pests?
- How can I start a vegetable garden on a budget?

# **Contact Form**

Allows one to contact Harvest for Free if one has a query or question by typing down their Full Name, Email, Phone Number and query or question.

## **Clients/Stores**

- Hardware stores
- Retail stores
- Garden Stores

# Website features/content

- Content style: Fun, Colourful, interactive and informative
- Social media posts: Will happen weekly, more tips and trick for planting the desired vegetables.

# **Functionality**

- Navigation Bar options
- Services linked to relevant pages
- > FAQ drop-down
- Contact form with autofill
- Social media icons

## **Hosting Requirements**

Server: Windows and IOSDatabase: PostgreSQL

Programming Language: Java

# **Website Timeline**

> Total duration: 16 weeks

o Wireframe: 1 week

o Website design and alterations: 4 weeks

o Individual designs: 2 weeks

o Documentations: 2 weeks

# **Updates and Posts**

- > Website updates: Updates will happen on a weekly to monthly basis to check if there are any patches or bugs.
- > Social media posts will happen on a weekly basis.

What each tag in the website mean:

<head></head>	Has the metadata title, scripts, style etc.	<div></div>	Creates blocks or containers.
<title>&lt;/td&gt;&lt;td&gt;Creates the document title.&lt;/td&gt;&lt;td&gt;&lt;img&gt;&lt;/td&gt;&lt;td&gt;Insert an image.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;meta&gt;&lt;/td&gt;&lt;td&gt;Metadata.&lt;/td&gt;&lt;td&gt;&lt;nav&gt;&lt;/td&gt;&lt;td&gt;Represents the navigation bar.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;style&gt;&lt;/td&gt;&lt;td&gt;Decoration or styling information.&lt;/td&gt;&lt;td&gt;&lt;li&gt;&lt;li&gt;&lt;&lt;/td&gt;&lt;td&gt;Creates a list.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;ul&gt;&lt;li&gt;&lt;ul&gt;&lt;/li&gt;&lt;/ul&gt;&lt;/td&gt;&lt;td&gt;Lists in order.&lt;/td&gt;&lt;td&gt;&lt;button&gt;&lt;/td&gt;&lt;td&gt;Button to click.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;a&gt;&gt;&lt;/td&gt;&lt;td&gt;Creates hyperlinks.&lt;/td&gt;&lt;td&gt;&lt;section&gt;&lt;/td&gt;&lt;td&gt;Section of content.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;input&gt;&lt;/td&gt;&lt;td&gt;Field to input content.&lt;/td&gt;&lt;td&gt;&lt;body&gt;&lt;/td&gt;&lt;td&gt;Main content area.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;/td&gt;&lt;td&gt;Paragraph tag&lt;/td&gt;&lt;td&gt;&lt;summary&gt;&lt;/td&gt;&lt;td&gt;Caption for &lt;details&gt;.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;h1 – h6&gt;&lt;/td&gt;&lt;td&gt;Headings tag&lt;/td&gt;&lt;td&gt;&lt;details&gt;&lt;/td&gt;&lt;td&gt;Widget to hide or reveal content.&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;&lt;form&gt;&lt;/td&gt;&lt;td&gt;Wraps form to input data.&lt;/td&gt;&lt;td&gt;&lt;textarea&gt;&lt;/td&gt;&lt;td&gt;Multiline input section.&lt;/td&gt;&lt;/tr&gt;&lt;/tbody&gt;&lt;/table&gt;</title>			

<label></label>	Describes an input.	class	Used in CSS to style a specific section.
href	To input the URL.	rel	Specifies between the URL(href) and tags.
id	Identifier for images or documents.	Src (Source)	Extract media from.
alt	If an image is broken or cannot be displayed "alt" tag will appear.	for	For is the same as id.