FPT ACADEMY INTERNATIONAL

FPT – APTECH COMPUTER EDUCATION

Centre Name: ACE-HCMC-2-FPT.

Address: 590 Cach Mang Thang 8, District 3, Ho Chi Minh City, Viet Nam.

[METRIC CONVERSION]

Supervisor:	Phạm Thị Lánh	
Term:	1	
Batch No:	T1.2208.M0	
Group No:	3	
Order:	Full name	Roll No.
1.	Lê Thành Đạt	Student1396968
2.	Phan Long Vương	Student1408022
3.	Phạm Đức Quân	Student1405228
4.	Nguyễn Đăng Khoa	Student1405201

Month 10 Year 2022

This is to certify that

Mr. **PHẠM ĐỨC QUÂN**

Mr. **LÊ THÀNH ĐẠT**

Mr. **PHAN LONG VƯƠNG**

Mr. **NGUYỄN ĐĂNG KHOA**

Have successfully Designed & Developed

METRIC CONVERSION

Submitted by: **Ms. PHAM THI LANH**

Date Of Issue: November, 2022

Authorized Signature:

Content

Acknowledge

As we understand that the eProject is a step-by-step learning environment that closely simulates the classroom and Lab based learning environment into actual implementation. It is a project implementation at your fingertips!! An electronic, live juncture on the machine that allows you to.

✓ Practice step by step i.e., laddered approach.

✓ Build a larger, more robust application.

✓ Usage of certain utilities in applications designed by the user.

✓ Single program to unified code leading to a complete application.

✓ Learn implementation of concepts in a phased manner.

✓ Enhance skills and add value.

✓ Work on real life projects.

✓ Give a real-life scenario and help to create applications more complicated and useful.

✓ Mentoring through email support.

We would like to send a great thank to our professor and others student for the adorable support during the time in the project.

Beside several mistakes we had made in the project, we hope to have more opportunities to widen our knowledge in the web developing world.

We also thank you so much for your information and the “demo” project from India APTECH to help us get more reality experience in this project. Since we have gained more experience from this project, we will not stop learning anything as much as we can to be more successful in the future.

Your Sincerely,

Team Group 03.

Synopsis

- The Objective of this program we aim is to give a sample project to work on real life projects. These applications help us build a larger, more robust application.

- The objective is not to teach us HTML/JavaScript but to provide us with a real life scenario and help us create basic applications using the tools.

- Hence, we can revise the chapters before we start with the project.

- This project The Objective of this program is to give a sample project to work on real life projects. These applications help you build a larger, more robust application.

- The objective is not to teach you the software but to provide you with a real-life scenario and help you create basic applications using the tools.

- You can revise the topics before you start with the project.

- This project is meant for students who have completed the module of HTML5.

- These programs should be done in the Lab sessions with assistance of the faculty if required.

- The website (in this project) is a tool that help the company to access the

international market and gain more and more new customers.

- It is very essential that a student has a clear understanding of the subject.

REVIEW 1

Problem Definition

Why does one need metric conversion for? Science projects seem more authoritative when the units used are metric units, such as grams, milliliters, and degrees Celsius.

Anyone can do good backyard science with inches and ounces, but when he shows his work in a science fair, metric conversion will show that he understand the importance of these units to scientists.

There are various units of measurement; one of the earliest types of measurement concerned that of length. Many times we need to convert some data from one unit to other. Hence you are expected to develop a calculator for such metric conversions.

The website is to be developed for the Windows Platform using HTML5, JavaScript and Geolocation. The site should work well in all leading browsers including Chrome, IE, Firefox etc.

Here are some problems need to be resolved:

1. There should be a separate web page that displays the metric conversion chart. The chart should include the multiplying factors for the conversion
    - Length conversion:
        - Should include the multiplying factors for following:
            - Inches millimeters
            - Feet Meters
            - Yards - Meters
            - Miles Kilometers
    - Area conversion:
        - Should include the multiplying factors for following:
            - Square inches Square millimeters
            - Square feet Square meters

        - Square yards Square meters
        - Acres Hectares
        - Square miles Square kilometers
    - Volume conversion:
        - Should include the multiplying factors for following:
            - fluid ounces milliliters
            - gallons liters
            - cubic feet - cubic meters
            - cubic yards - cubic meters
    - Mass conversion:
        - Should include the multiplying factors for following:
            - Ounces grams
            - Pounds kilograms
            - short tons (2000 lb) - mega grams (or "metric ton")
    - Temperature conversion:
        - Fahrenheit Celsius
        - Celsius Fahrenheit
2. There should be separate web pages for the various conversions, you need to include the conversions of:
    a. Area
    b. Length
    c. Volume
    d. Mass
    e. Temperature
    f. Currency
3. Along with the above conversion techniques, there should also be information related to all the measurement units as how / who invented them. A brief history about these units should be provided under the separate section as history of measurement units

4. Provide some articles e.g.
    a. The SI System: An article describing what the SI system of units is
    b. Metric System: An article describing the differences between the various metric systems.
    c. The meter: An article defining the meter as used in the metric system, both past and present.
    d. Traditional U.S. Units: An article describing the traditional units of measurement used throughout the United States.

    You can include any related articles to the topic.
5. Also provide the frequently asked questions (FAQs) like
    a. How do I enter numbers in Scientific Notation?
    b. What is a knot? What is a nautical mile?
    c. What about rainfall? How do I convert between inches of rain, and millimeters of rain?
    d. What is the difference between the long ton, short ton, and metric ton?
    e. At what temperature are Celsius and Fahrenheit the same?

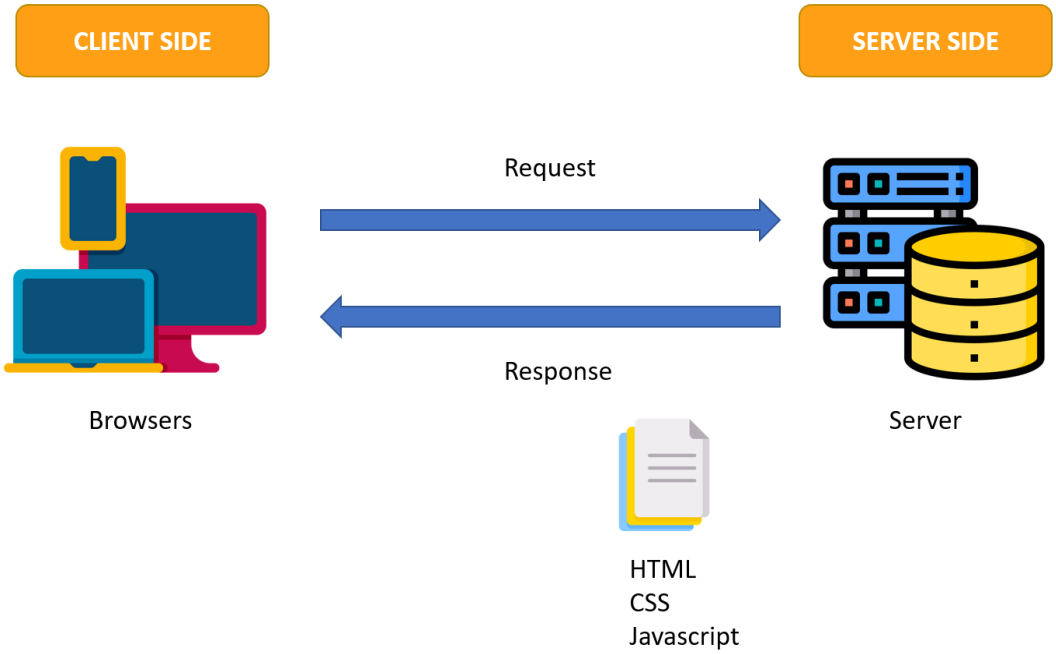
Customer Requirements Specifications

USER:
Input: ● Input measurement unit and quantity that need to convert ● Send questions/ requests to the web owner
Process: ● Process user's input data ● Collect questions/ requests sent by users
Output: ● Display the required measurement units ● Reply to the user's requests/ questions

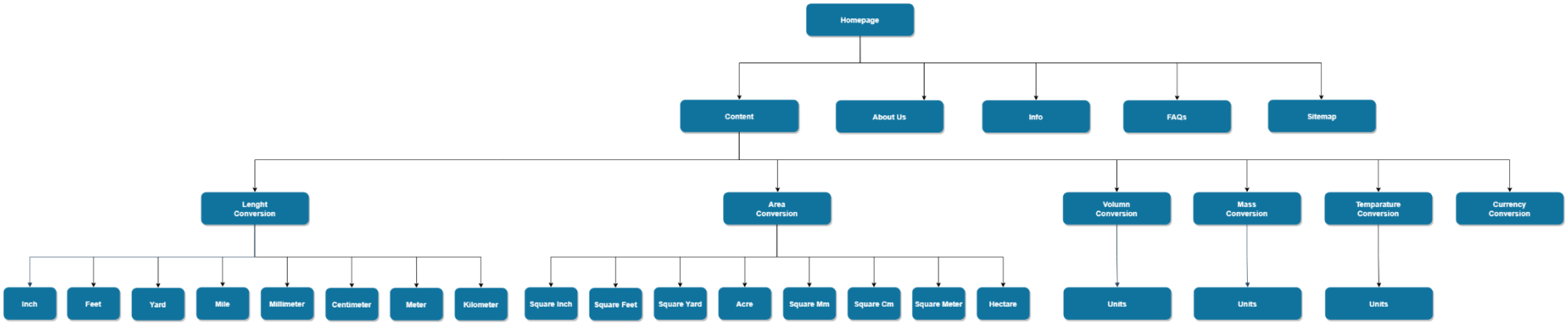
WEBMASTER:
Input: ● Control website database, input product information,…
Process: ● Analyse website
Output: ● Website interface, images, forms,… ● Giving interaction

HARDWARE / SOFTWARE REQUIREMENT:
Software: ● Notepad/HTML editor ● Dreamweaver/Javascript
Hardware: ● A minimum computer system that will help you access all the tools in the courses is a Pentium 166 or better ● 64 Megabytes of RAM or better

Architecture and Design of the project

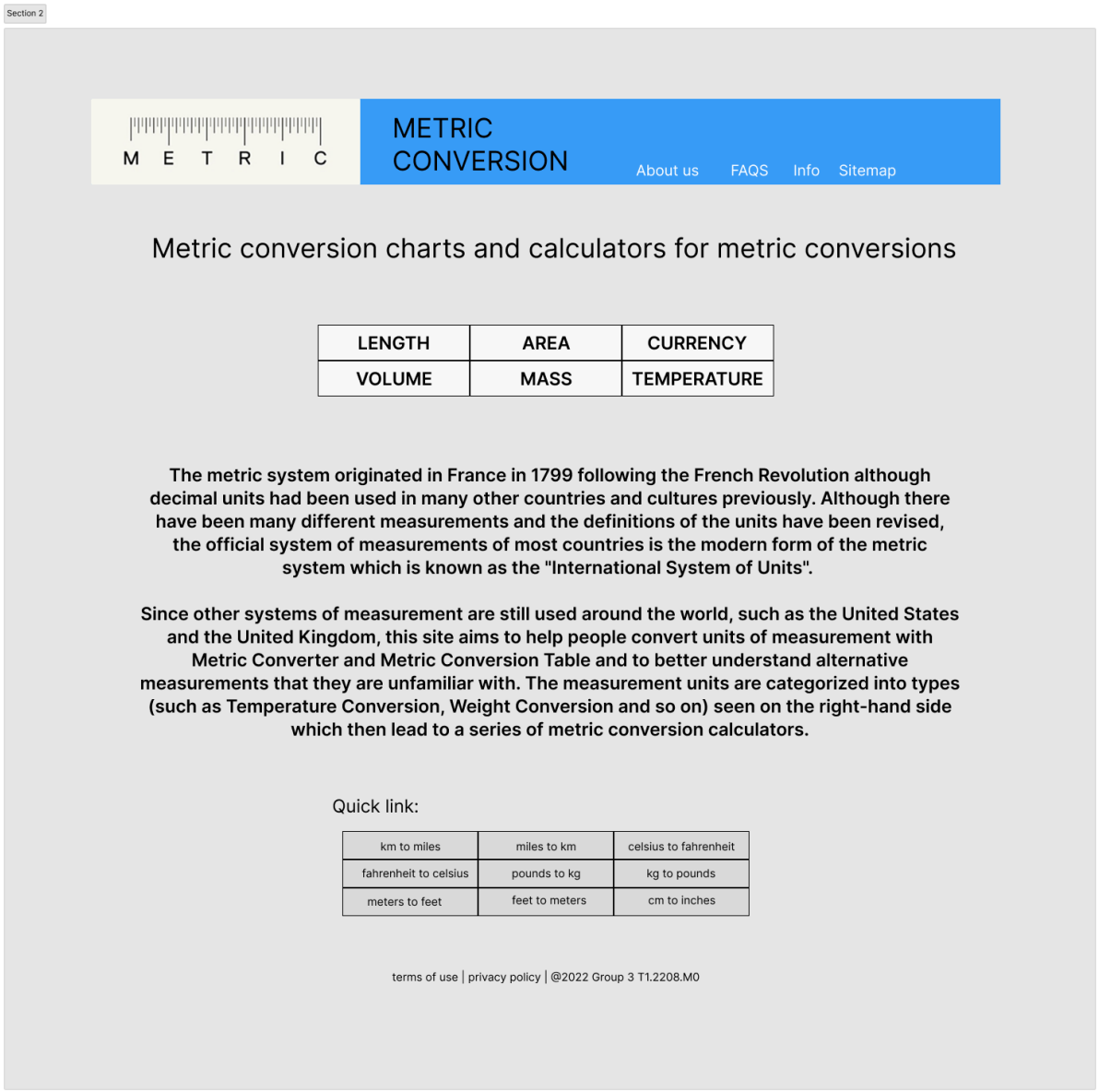


Site map


Homepage
Content
About Us
Info
FAQs
Sitemap
Lenght Conversion
Area Conversion
Volumn Conversion
Mass Conversion
Temparature Conversion
Currency Conversion
Inch
Feet
Yard
Mile
Millimeter
Centimeter
Meter
Kilometer
Square Inch
Square Feet
Square Yard
Acre
Square Mm
Square Cm
Square Meter
Hectare
Units
Units
Units

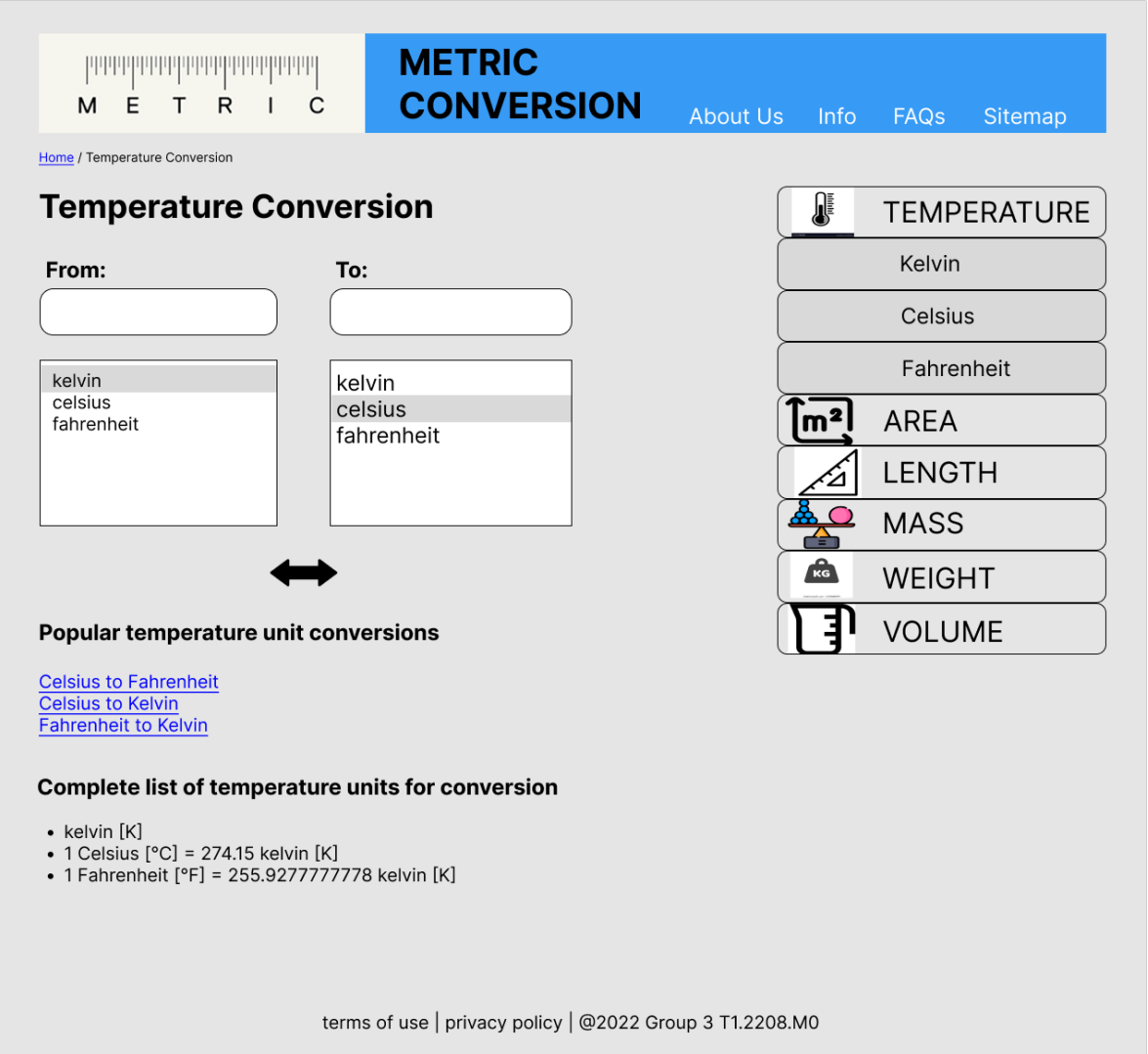
Screen shots

I. Homepage



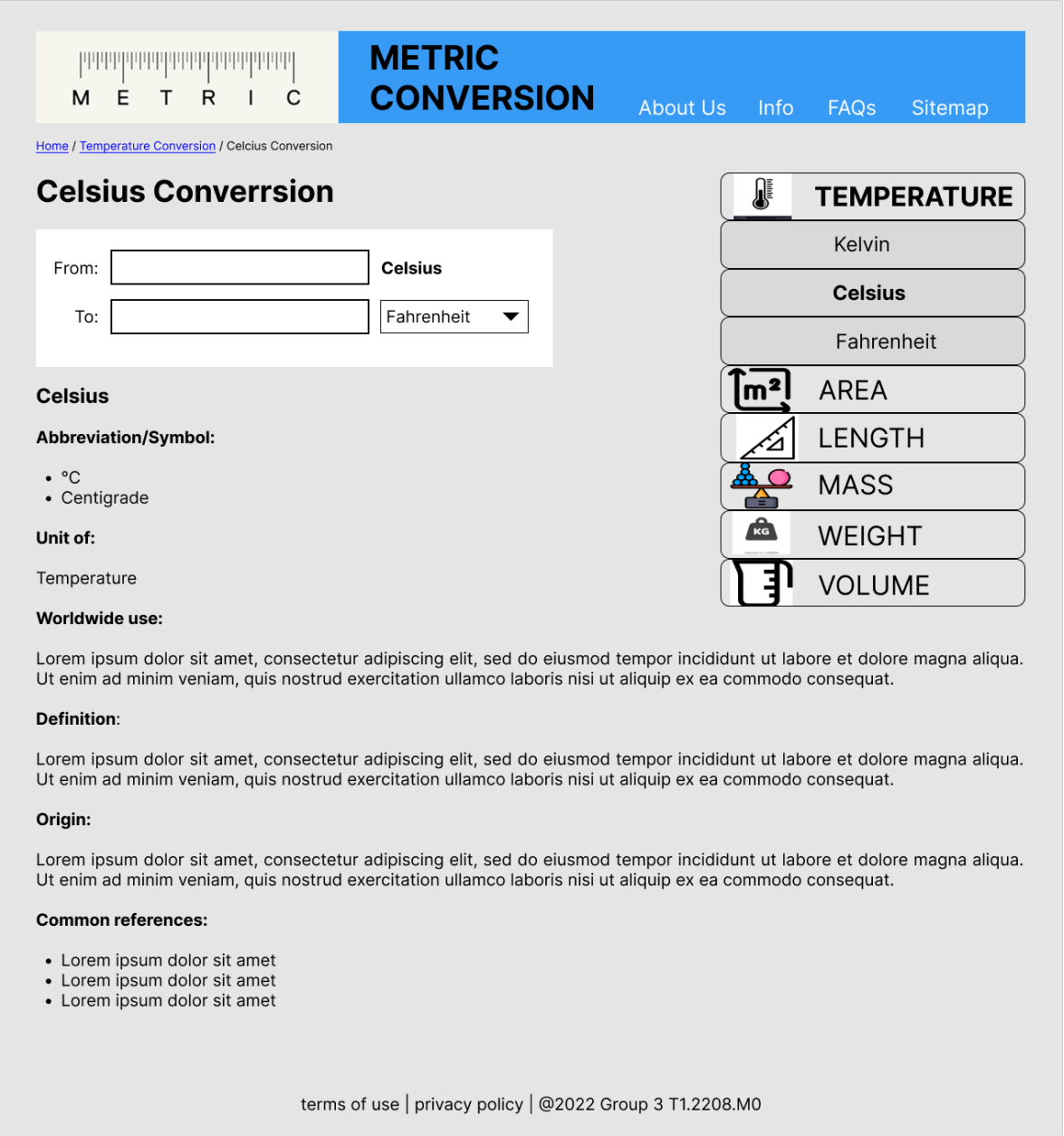
Description: This is a homepage of Metric Conversion, the top of this page is a header, after that is a navigation bar. The main part of a homepage includes 3 sections: 06 conversion categorys, measurement systems information and common conversions. The footer of a homepage has 2 sections: Term of use and Privacy policy.

II. Conversion Category



Description: When user clicks on a specific conversion category such as Temperature in the homepage, it will lead to Temperature Conversion page. User can chooses the unit need to convert (below the From box) and the unit to convert to (below the To box), then type a number in the From box, a converted number will be automatic appear in the To box.

III. Unit Conversion

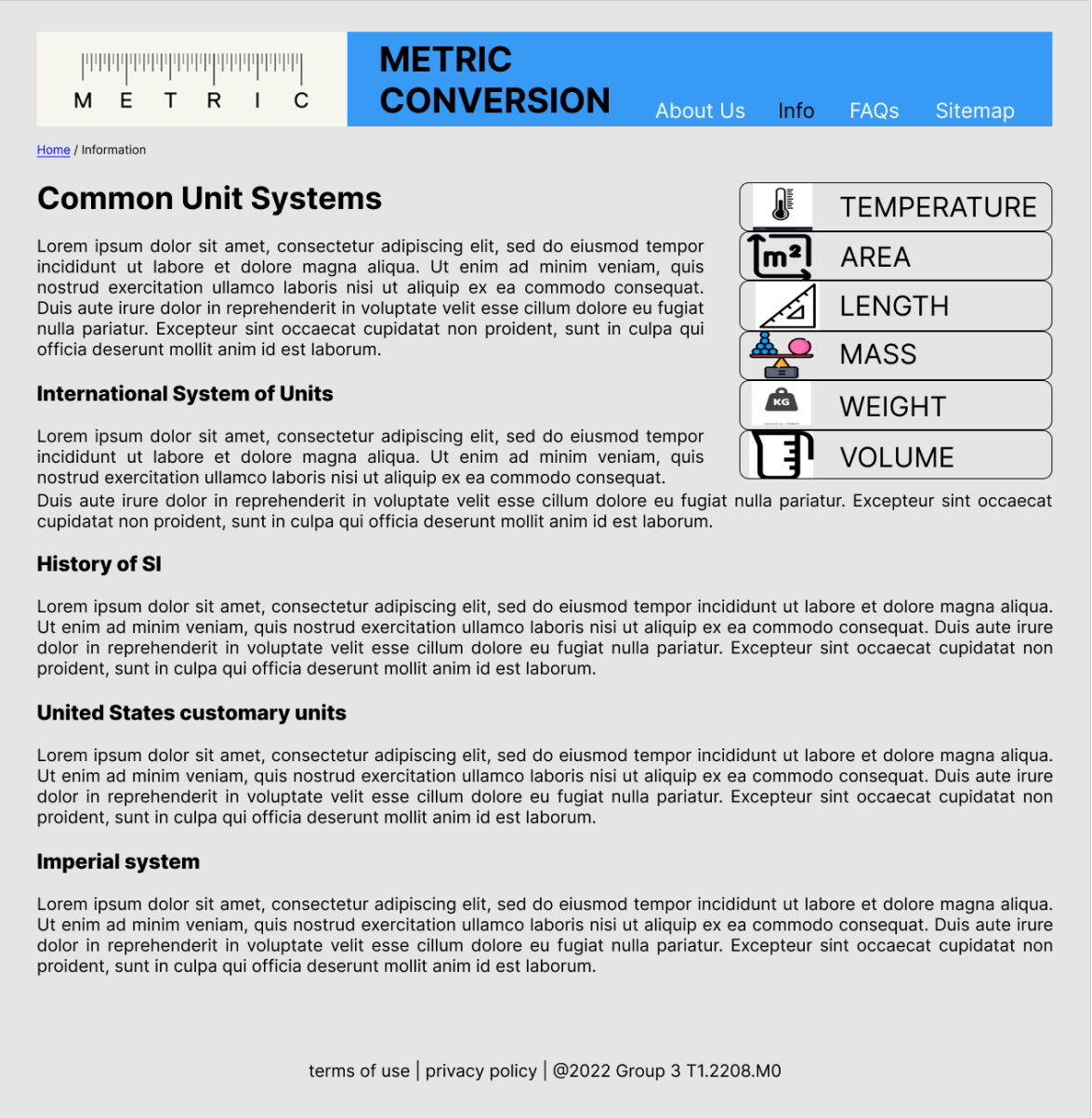


Description: When user clicks on measurement unit such as Celcius in Temperature menu, user will be redirected to Celcius conversion page. This page purpose is to convert Celcius to relate units (like Fahrenheit and Kelvin, user can change this by click on the right box) and provide detailed information about Celcius. When user clicks on Celcius box and type a number, a converted number will be automatic appear in Fahrenheit box.

IV. About Us

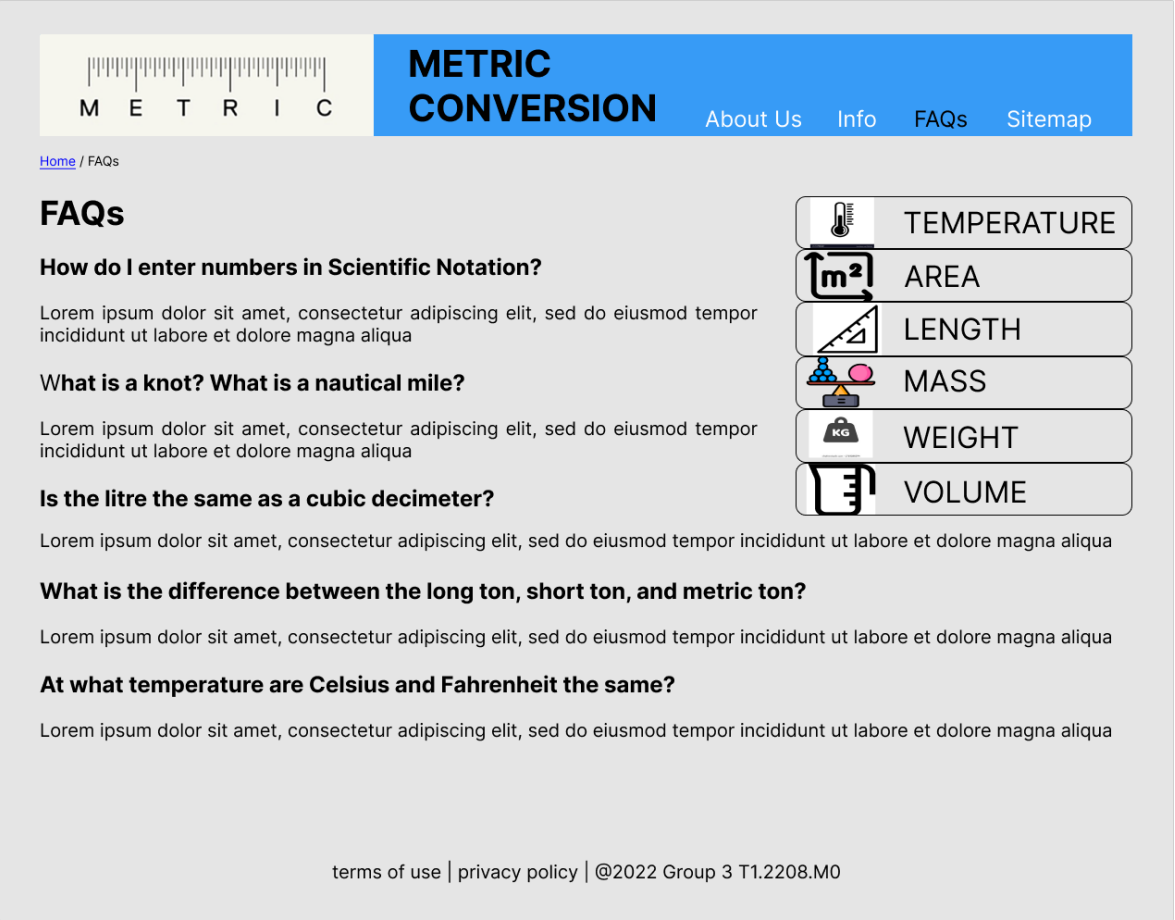
Description: After the user clicks on the About Us tag on the navigation bar, it will lead to this page. The page contains detailed information about Metric Conversion, Term of use, Privacy policy and how to contact the website owner.

V. Info



Description: After clicking the Info tag on Navigation bar, user will be redirected to this Information page. This page purpose is to provide some articles and information about relate topic such as: the SI system, Imperial System, etc.

VI. FAQs



Description: After clicking the FAQs tag on the navigation bar, user will be redirected to this page. Just like its name, this page contains some frequently asked questions about the measurement units, conversion systems, how to use website, etc.

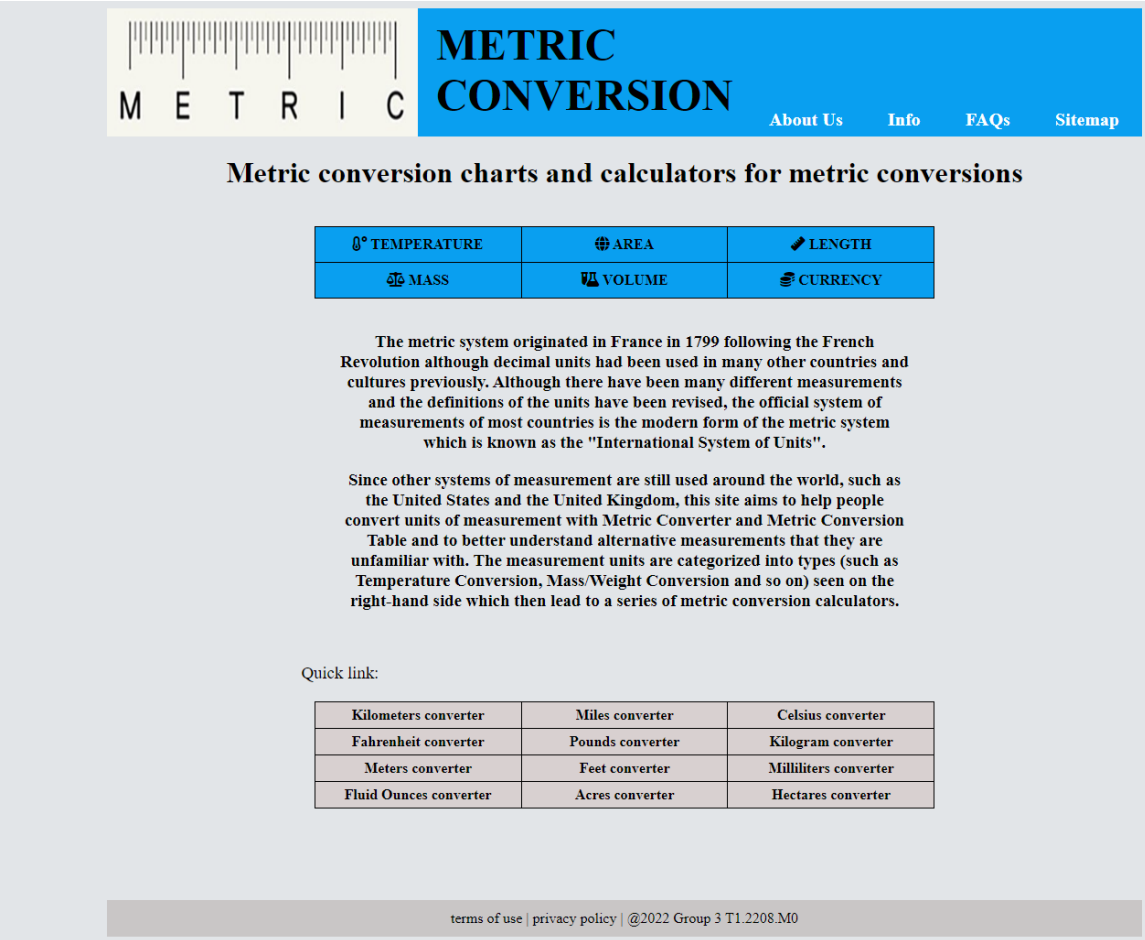
Task Sheet

Project Ref No.	Project Title – Metric Conversion	Activity Plan Prepared by	Date of preparation of Activity Plan			
Task			Actual Start Date	Actual Days	Teammate Names	Status
Brainstorming ideas for layouts and Project Object		Quân, Đạt, Khoa, Vương	29/10/2022	1 days	Quân, Đạt, Khoa	Completed
Draw sitemap and architecture design		Quân	29/10/2022	2 days	Quân	Completed
Wireframing general page layout		Quân, Đạt, Khoa	29/10/2022	2 days	Đạt, Khoa, Vương	Completed
Collect static assets (pictures, documentation,…)		Quân, Đạt, Khoa, Vương	29/10/2022	2 days	Quân, Đạt, Khoa, Vương	Completed

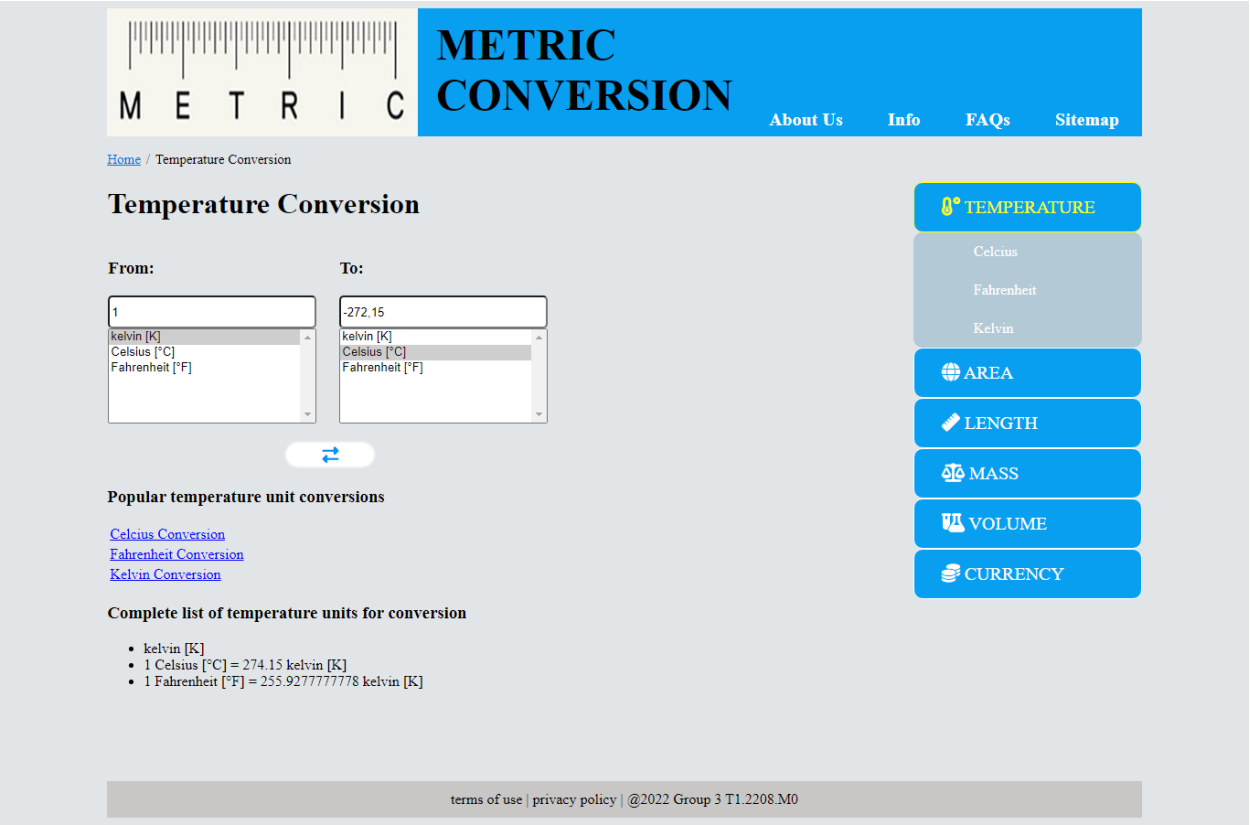
REVIEW 2

WEBSITE USER INTERFACE

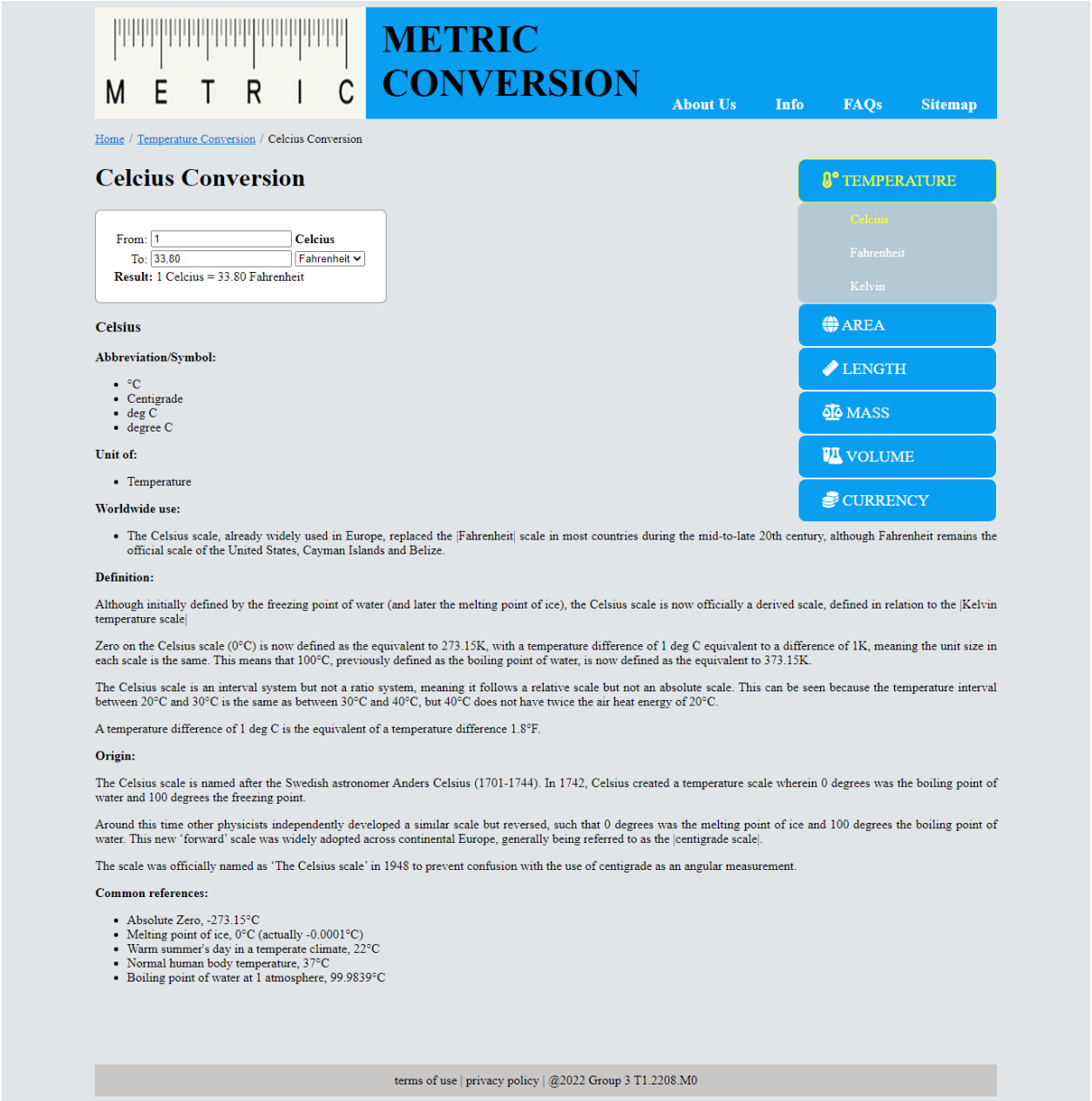
I. Homepage



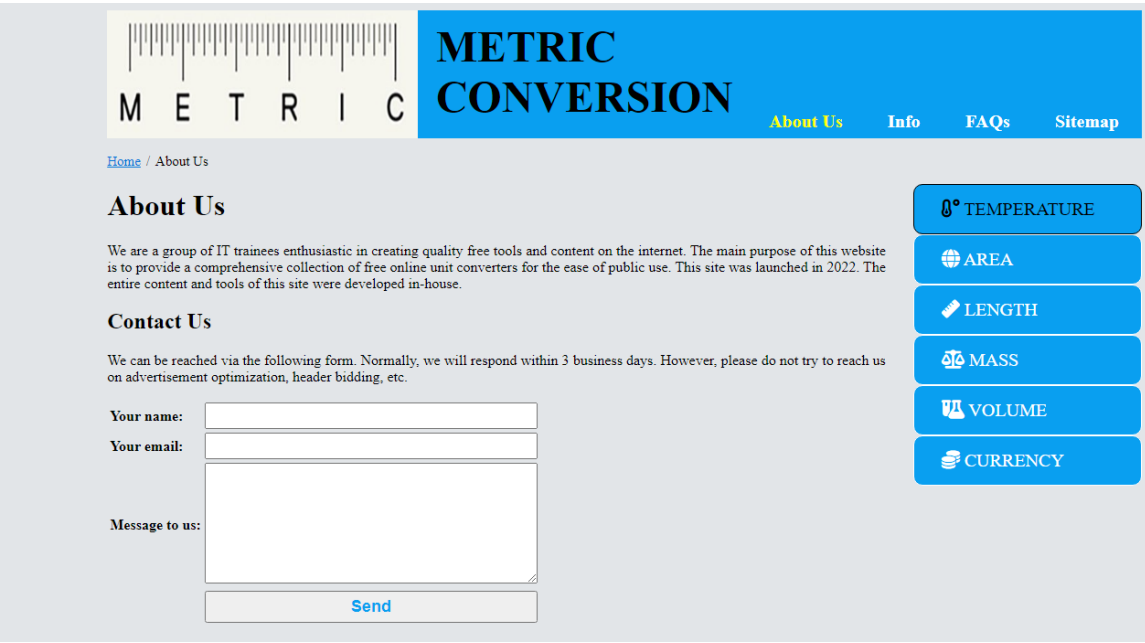
II. Conversion Category



III. Unit Conversion



IV. About Us



Privacy Policy

This page is used to inform website visitors regarding our policies with the collection, use, and disclosure of Personal Information if anyone decided to use our Service.

If you choose to use our Service, then you agree to the collection and use of information in relation with this policy. The Personal Information that we collect are used for providing and improving the Service. We will not use or share your information with anyone except as described in this Privacy Policy.

Information Collection and Use

We take and respect your privacy seriously. We may collect information via cookie or web log. This is to customize services and enhance customer satisfaction.

The data we collect are:

Log Data

We want to inform you that whenever you visit our Service, we collect information that your browser sends to us that is called Log Data. This Log Data may include information such as your computer's Internet Protocol ("IP") address, browser version, pages of our Service that you visit, the time and date of your visit, the time spent on those pages, and other statistics.

Terms of Use

Acceptance of Terms

We provides this website for use by consumers and businesses. By using the Website in any way, you are agreeing to comply with the Terms of Use. Should you object to any term or condition of the Terms of Use or any guideline of the Website, your only recourse is to immediately discontinue use of the Website.

Changes to the Terms of Use

We reserve the right, at our sole discretion, to change, modify, or alter the Terms of Use at any time. Such changes shall become effective immediately upon the posting thereof. The most current version of the Terms of Use will be linked from the footer of the Website. You must review the Terms of Use on a regular basis to keep yourself apprised of any changes.

V. Information

Home / Information

Common Unit Systems

TEMPERATURE
AREA
LENGTH
MASS
VOLUME
CURRENCY

A unit system, or system of measurement, is a system comprised of interrelated units of measurement. Various unit systems have existed throughout history, and their importance remains evident today, as seen by their widespread use within society.

In the past, unit systems were defined locally, and often, highly arbitrarily. As such, the length of a unit could vary significantly from region to region. For example, since some units in the past were often based on parts of the body, the unit of the "foot" could have a different definition based on the size of the foot of the king or feudal lord of a given region. Since travel was more limited in the past, local definition and use of units could be seen as being more practical. However, with the advent of globalization, particularly the growth of commerce and science, the arguable need for a universal system of measurement became more apparent.

Standardized units of measurement facilitate communication between different cultures and countries that may otherwise choose to use local systems, potentially leading to confusion and miscommunication. The International System of Units (SI), the most widely used system of measurement today, was developed in an effort to provide a standardized, more rational system that could be used worldwide. Despite efforts to implement SI globally, there are still a few unit systems in common use, including the United States customary units, and the imperial system of measurement (though most countries that have not officially adopted SI still use SI to a certain extent). Although striving for standardization is important, since it is difficult to entirely eliminate the local use of historical unit systems, it is equally important to accept that other systems of measurement exist and be able to use them, or at least relate and convert them to the preferred unit system.

The three common unit systems that are in use today are the International System of Units, United States customary units, and the imperial system of units.

International System of Units

The international System of Units (SI) is the modern form of the metric system and is comprised of seven base units that use twenty metric prefixes to denote decimal multiples or submultiples of the base unit. SI is intended as a coherent, rational system of measurement. It is a system that was stringently conceived and is defined based on invariant constants of nature including the speed of light, the triple point of water, and a physical prototype. In order to maintain reliability and precision, SI requires the precise definition of constants in addition to precise of measurement standards. As such, it is an evolving system that changes when more stable constants are discovered, or other constants can be more precisely measured. SI is the most widely used system of measurement, and the evolution of the system is still ongoing today.

The SI base units as well as a table of metric prefixes (courtesy of Wikipedia.org) are listed below:

SI base units:

- ampere (symbol: A) – unit of electric
- kelvin (symbol: K) – unit of temperature
- second (symbol: s) – unit of time
- meter (symbol: m) – unit of length
- kilogram (symbol: kg) – unit of mass
- candela (symbol: cd) – unit of luminous intensity
- mole (symbol: mol) – unit reflecting amount of a substance

SI-derived units:

In addition, SI also includes 22 units of measurement that are derived from the 7 SI base units. These units are either dimensionless or are expressed as a product of one or more of the SI base units. Some of the more common examples of these include:

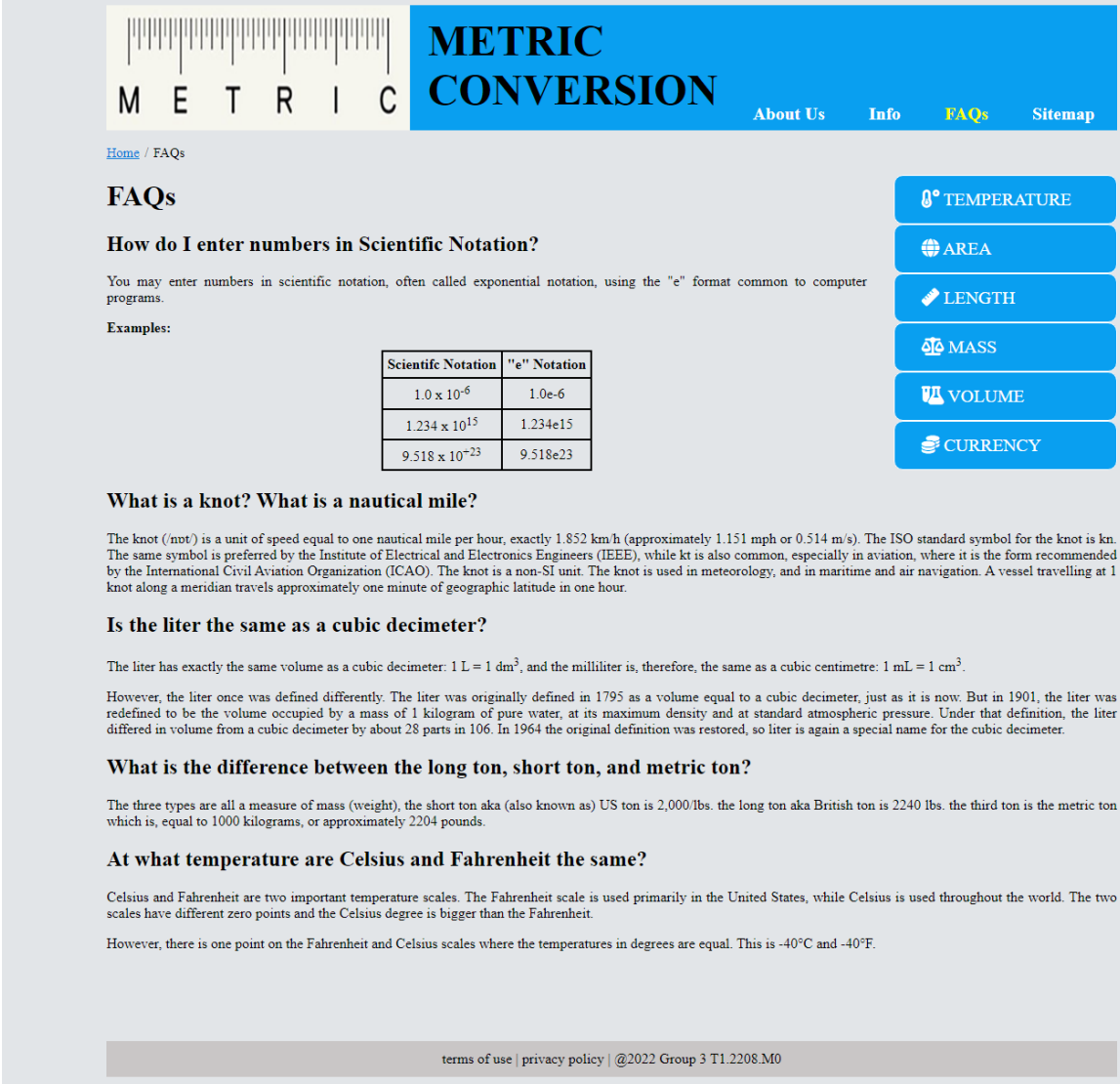
- radian (symbol: rad) – unit of angle
- newton (symbol: N) – unit of force or weight
- watt (symbol: W) – unit of power
- volt (symbol: V) – unit of voltage, electrical potential difference, and electromotive force
- degree Celsius (symbol: °C) – unit of temperature

Non-SI units accepted for use with SI:

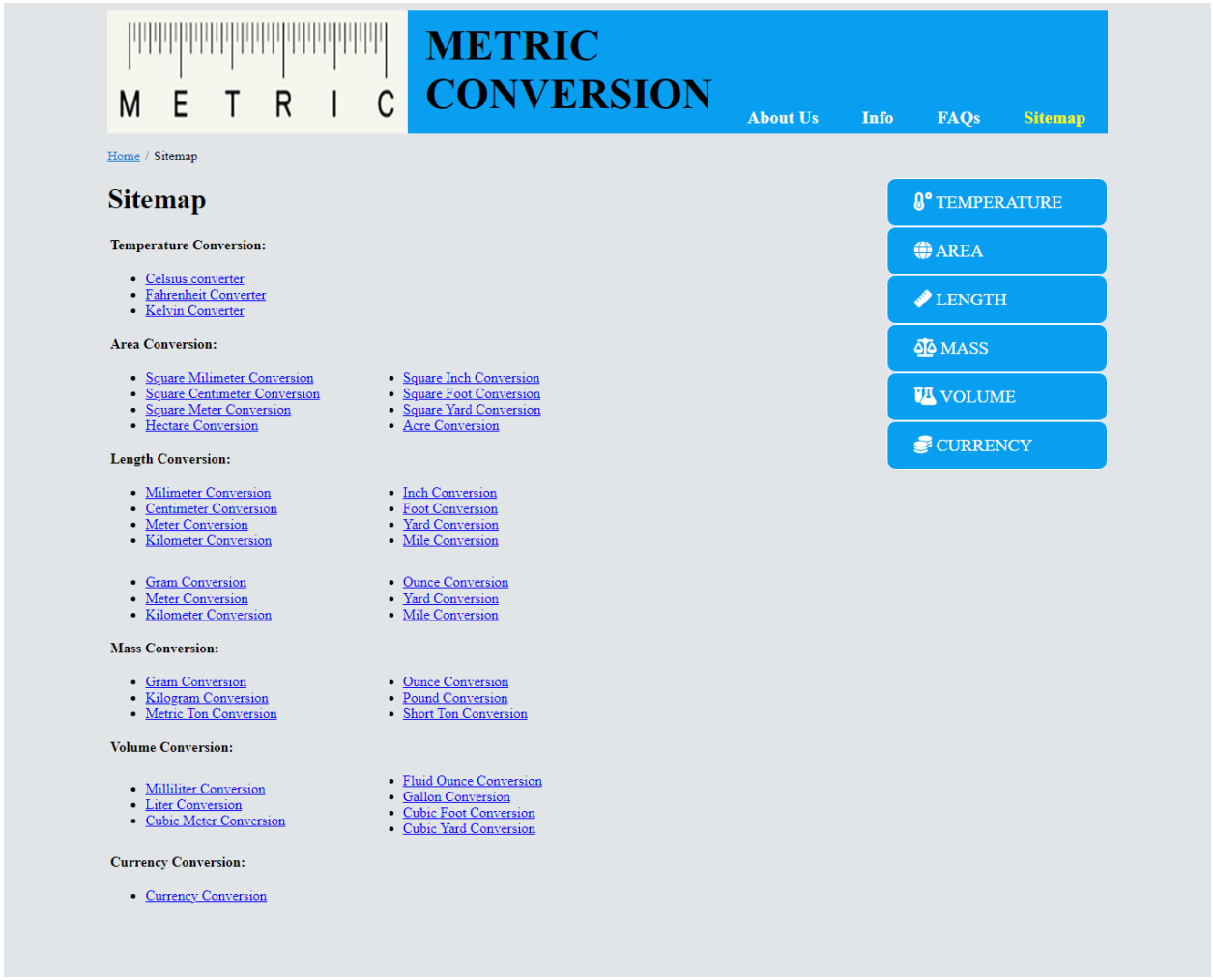
There are also numerous units that are accepted for use with SI that are not considered SI units or SI derived units. Some of the more common examples include:

- minute, hour, day (symbol: min, h, d respectively) – units of time
- degree – (symbol: °C) – unit of temperature
- liter – (symbol: L) – unit of volume
- bar – (symbol: bar) – unit of pressure
- millimeter of mercury (symbol: mmHg) – unit of pressure

VI. FAQs


METRIC
CONVERSION
About Us
Info
FAQs
Sitemap
Home / FAQs
FAQs
TEMPERATURE
AREA
LENGTH
MASS
VOLUME
CURRENCY
How do I enter numbers in Scientific Notation?
You may enter numbers in scientific notation, often called exponential notation, using the "e" format common to computer programs.
Examples:
Scientifc Notation
"e" Notation
1.0 x 10-6
1.0e-6
1.234 x 1015
1.234e15
9.518 x 10-23
9.518e23
What is a knot? What is a nautical mile?
The knot (/nɒt/) is a unit of speed equal to one nautical mile per hour, exactly 1.852 km/h (approximately 1.151 mph or 0.514 m/s). The ISO standard symbol for the knot is kn. The same symbol is preferred by the Institute of Electrical and Electronics Engineers (IEEE), while kt is also common, especially in aviation, where it is the form recommended by the International Civil Aviation Organization (ICAO). The knot is a non-SI unit. The knot is used in meteorology, and in maritime and air navigation. A vessel travelling at 1 knot along a meridian travels approximately one minute of geographic latitude in one hour.
Is the liter the same as a cubic decimeter?
The liter has exactly the same volume as a cubic decimeter: 1 L = 1 dm3, and the milliliter is, therefore, the same as a cubic centimetre: 1 mL = 1 cm3.
However, the liter once was defined differently. The liter was originally defined in 1795 as a volume equal to a cubic decimeter, just as it is now. But in 1901, the liter was redefined to be the volume occupied by a mass of 1 kilogram of pure water, at its maximum density and at standard atmospheric pressure. Under that definition, the liter differed in volume from a cubic decimeter by about 28 parts in 106. In 1964 the original definition was restored, so liter is again a special name for the cubic decimeter.
What is the difference between the long ton, short ton, and metric ton?
The three types are all a measure of mass (weight), the short ton aka (also known as) US ton is 2,000/lbs. the long ton aka British ton is 2240 lbs. the third ton is the metric ton which is, equal to 1000 kilograms, or approximately 2204 pounds.
At what temperature are Celsius and Fahrenheit the same?
Celsius and Fahrenheit are two important temperature scales. The Fahrenheit scale is used primarily in the United States, while Celsius is used throughout the world. The two scales have different zero points and the Celsius degree is bigger than the Fahrenheit.
However, there is one point on the Fahrenheit and Celsius scales where the temperatures in degrees are equal. This is -40°C and -40°F.
terms of use | privacy policy | @2022 Group 3 T1.2208.M0

VII. Sitemap


METRIC
CONVERSION
About Us
Info
FAQs
Sitemap
Home / Sitemap
Sitemap
TEMPERATURE
AREA
LENGTH
MASS
VOLUME
CURRENCY
Temperature Conversion:
Celsius converter
Fahrenheit Converter
Kelvin Converter
Area Conversion:
Square Milimeter Conversion
Square Centimeter Conversion
Square Meter Conversion
Hectare Conversion
Square Inch Conversion
Square Foot Conversion
Square Yard Conversion
Acre Conversion
Length Conversion:
Milimeter Conversion
Centimeter Conversion
Meter Conversion
Kilometer Conversion
Inch Conversion
Foot Conversion
Yard Conversion
Mile Conversion
Gram Conversion
Meter Conversion
Kilometer Conversion
Ounce Conversion
Yard Conversion
Mile Conversion
Mass Conversion:
Gram Conversion
Kilogram Conversion
Metric Ton Conversion
Ounce Conversion
Pound Conversion
Short Ton Conversion
Volume Conversion:
Milliliter Conversion
Liter Conversion
Cubic Meter Conversion
Fluid Ounce Conversion
Gallon Conversion
Cubic Foot Conversion
Cubic Yard Conversion
Currency Conversion:
Currency Conversion

Task Sheet

Project Ref No.	Project Title – Metric Conversion	Activity Plan Prepared by	Date of preparation of Activity Plan			
Task			Actual Start Date	Task	Teammate Names	Status
Brainstorming ideas for layouts and Project Object		Quân, Đạt, Khoa, Vương	29/10/2022	1 day	Quân, Đạt, Khoa	Completed
Draw sitemap and architecture design		Quân	29/10/2022	2 days	Quân	Completed
Wireframing general page layout		Quân, Đạt, Khoa	29/10/2022	2 days	Đạt, Khoa, Vương	Completed
Collect static assets (pictures, documentation,…)		Quân, Đạt, Khoa, Vương	29/10/2022	2 days	Quân, Đạt, Khoa, Vương	Completed
Design & Build Homepage		Đạt, Vương	01/11/2022	4 days	Đạt, Vương	Completed
Design & Build Vertical Menu		Quân, Vương	02/11/2022	3 days	Quân, Vương	Completed
Design & Build About Us		Khoa	02/11/2022	2 days	Khoa, Quân	Completed
Design & Build Information		Khoa	04/11/2022	2 days	Khoa, Quân	Completed
Design & Build FAQs		Khoa	06/11/2022	1 day	Khoa	Completed
Design & Build Temperature and its Units Conversion		Khoa, Quân	07/11/2022	8 days	Quân, Khoa, Vương	Completed
Design & Build Mass and its Units Conversion		Vương	10/11/2022	5 days	Quân, Vương	Completed
Design & Build Volume and its Units Conversion		Đạt	10/11/2022	5 days	Đạt, Quân	Completed
Design & Build Area and its Units Conversion		Vương, Khoa	15/11/2022	3 days	Khoa, Quân	Completed
Design & Build Length and its Units Conversion		Quân	15/11/2022	3 days	Quân, Đạt	Completed

Design & Build Currency Conversion	Quân	16/11/2022	2 days	Quân	Completed
Design & Build Sitemap	Quân	18/11/2022	1 day	Đạt, Quân	Completed
Final testing	Quân, Đạt, Khoa, Vương	18/11/2022	3 days	Quân, Đạt, Khoa, Vương	Completed
Write Project Report	Quân	21/11/2022	1 day	Quân	Completed

Testing document

Sr.No	Features Tested	Remarks
1	Are all the users able to view the images and links?	OK
2	Have all the views, modules and controllers been properly integrated, and is the site function as a single page application?	OK
3	Are the GUI content devoid of spelling mistakes?	OK
4	Is the application user-friendly?	OK
5	Is the Website launching correctly in all popular browsers?	NOT OK
6	Are all the forms validated with proper criteria?	OK
7	Do all text links lead to the appropriate website?	OK
8	Do all image links lead to the appropriate website?	OK
9	Are all the images and links clearly visible on the page?	OK
10	Does the Web page work properly in all the tested browsers?	NOT OK
11	Does the Web page take too long to be loaded fully?	OK
12	Is the navigation sequences correct through all the Web pages on the site?	OK
13	Is the JavaScript code working as expected in all click	OK

Final checklist

Sr.No	Features Tested	Remarks
1	Are all the users able to view the images and links?	OK
2	Have all the views, modules and controllers been properly integrated and is the site function as a single page application?	OK
3	Are the GUI content devoid of spelling mistakes?	OK
4	Is the application user-friendly?	OK
5	Is the Website launching correctly in all popular browsers?	NOT OK
6	Are all the forms validated with proper criteria?	OK
7	Do all text links lead to the appropriate website?	OK
8	Do all image links lead to the appropriate website?	OK
9	Are all the images and links clearly visible on the page?	OK
10	Does the Web page work properly in all the tested browsers?	NOT OK
11	Does the Web page take too long to be loaded fully?	OK
12	Is the navigation sequences correct through all the Web pages on the site?	OK
13	Is the JavaScript code working as expected in all click	OK