**ASSIGNMENT 5 - NGA NGUYEN**
**HEURISTIC EVALUATION OF SIMPLE TOOLS**

Main task: Use length conversions between feet and meters.

I. **convert-me.com**
1. **Aesthetic and minimalist design**
   - Severity: 3
   - Description: There is too much information on the webpage, making it distracting. Also, the layout is complicated with different elements, font sizes and colors. There is no visual harmony of the interface.



However, the site provides a solution, which is a bit hard to locate as the font size is too small. The information said that users can hide some blocks if users do not need them by clicking "hide" .



2. **Flexibility and efficiency of use:**
   - Description: It is easy and fast to convert from one unit to all the other units. For example when user types 2 in meters, other units also are converted automatically, even without typing Enter.

| | | | |
|---|---|---|---|
| **kilometer (km)** | 0.002 | millimeter (mm) | 2,000 |
| **meter (m)** | 2 | micrometre (micron) | 2,000,000 |
| decimeter (dm) | 20 | nanometer (nm) | 2,000,000,000 |
| **centimeter (cm)** | 200 | ångström | 20,000,000,000 |

**i** **Hint:** You don't have to click "Convert Me" button every time. Hitting Enter or Tab key after typing in your value also triggers the calculations.

## The American System (US Customary Units) and British Imperial Measures  ⌃ hide ⌃

American weights and measures are based on units used in Britain prior to 1826, when imperial system was officially established. Until 1960-1963 American and British units of length were different in 2 parts per million. In the middle of 20th century it started causing problems and the governments of the two countries agreed to refine the measures to exactly match. Since then Great Britain and the United States were using the same measures of length. In the U.S. the old standard of foot was retained with the name US survey foot.

From 1995 the UK adopted metric units for general use. The only imperial measures of length that can be officially used now are miles, yards, feet and inches for road traffic signs.

| | | | |
|---|---|---|---|
| league | 0.0004142 | **yard (yd)** | 2.187 |
| **mile (mi)** | 0.001243 | **foot (ft)** | 6.562 |
| land | 0.001243 | **feet and inches (x'y")** | 6'6.74" |
| furlong | 0.009942 | span | 8.749 |
| bolt | 0.05468 | hand | 19.69 |
| chain | 0.09942 | **inch (in)** | 78.74 |
| pole | 0.3977 | line | 944.9 |
| rod (rd) | 0.3977 | mil | 78,740 |
| perch | 0.3977 | microinch | 78,740,157 |

### 3. Error prevention
- Description: This site has a good design for error prevention. If users type something, which are not numbers, the whole line will be highlighted and the system keeps users informed that they are mistyping.

## Metric

× clear form    Is it a number? Sorry, can't parse it.

**kilometer (km)** ⃞ O ?

**meter (m)**

**decimeter (dm)**

**centimeter (cm)**

### 4. Recognize, diagnose and recover from errors
- The site has good design for users to recognize and recover from errors.
- Description: The red color highlights well the "?" question mark and asks users if "Is it a number? …" Error message here is expressed in clear language, indicating a problem and a solution at the same time. It indicates that users are mistyping and users should type some numbers instead.

### 5. Help and documentation:

- The site has good design on help and documentation.
- Description: The site has a search bar which allows users to search on the site. The results are well presented and focused on only this site.
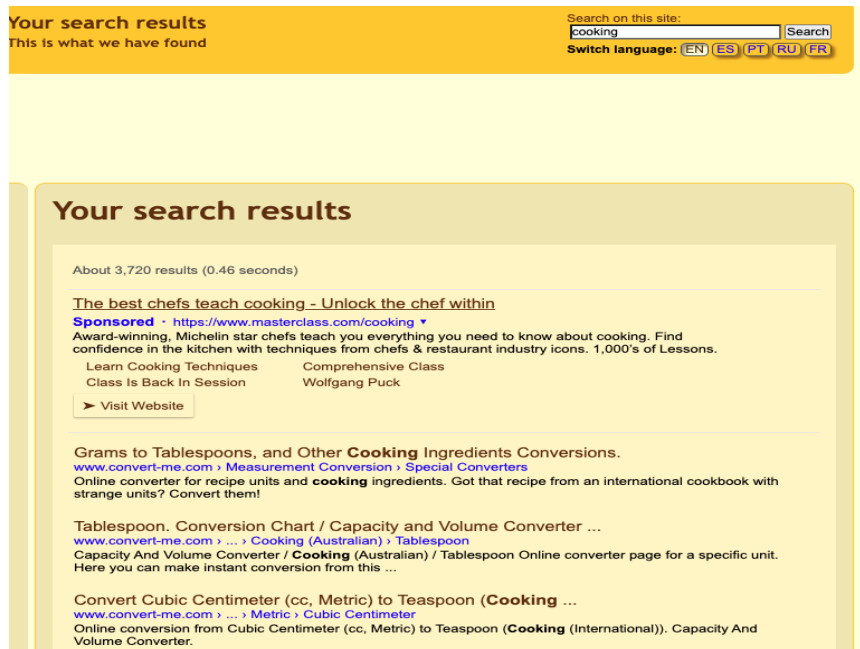


Also, the left side navigation is organized well, despite the font size being small and too much information.

II. omnicalculator.com
1. **Aesthetic and minimalist design**
   - Severity: 3
   - Description: Some information in the webpage is not really relevant. User only wants to convert quickly from meters to feet or vice versa, not really interested in the history or definition of conversions/ units

## 2. Flexibility and efficiency of use:

- Description: It is easy and fast to convert from one unit to all the other units. For example when user types 2 in meters, other units also are converted automatically, even without typing Enter.



## 3. Error prevention
- Severity: 4

- Description: The site lets users type anything without alerting them when they are mistyping something, which is not a number.

**Metric**

Length in millimeters     •••

$$fvsdfv \qquad \text{mm}$$

Length in centimeters     •••

$$fsf| \qquad \text{cm}$$

Length in meters     •••

m

Length in kilometers     •••

km

4. **Recognize, diagnose and recover from errors**
   - Severity: 4
   - Description: There is no warning or alert about possible errors that users make, therefore, it sometimes makes users feel confused when they do not understand the problem and do not know how to fix it.
5. **Help and documentation:**
   - Severity: 2
   - Description: The site provides documentation about length conversion chart, table and definitions of units. The information is also organized into categories, which helps users navigate and have an overall look.

**Table of contents**

Length conversion table

Length conversion chart

Inch definition

Feet definition

Meter definition

Imperial / US measurement system

Metric measurement system

FAQs

However, the idea of writing all the information below the table of contents makes the page look very lengthy and as a user, I found it

tiring to look at it.

1. **Aesthetic and minimalist design**
   - Severity: 2
   - Description: Too many words, the representative images are small. There is no need for arranging the conversion into alphabetical order. Rather than that, bigger representative pictures are more preferable.

| In Alphebetical Order | | | |
| --- | --- | --- | --- |
| **Acceleration**<br>Foot/square second, kilometer/hour second, meter/square second, mile/hour minute | **Base Numbers**<br>Base number conversions from base 2 to base 36, hex, decimal, binary, octal | **Calorific**<br>Calorific units, btu/cubic foot, joule/cubic meter, therm/cubic foot | **Circular/Angle**<br>Circular and angle units, radian, degree, grade, minute, second, circumference |
| **Data Transfer**<br>Data transfer units, adsl, modem, usb, ethernet, fiber optics and other several networking devices | **Date/Time**<br>Date and time conversions, second, millisecond, minute, hour, day, week, month, year, century | $\rho = \frac{m}{v}$ **Density**<br>Density units converter, gram/cubic millimeter, kilogram/liter, ounce/cubic foot, pound/gallon | **Digital Storage**<br>Digital storage units, bit, byte, megabyte, gigabyte, terabyte, exabyte |
| **Electrical**<br>Electrical conversions, resistance, capacitance, conductance, current, charge | **Energy/Work**<br>Energy and work units converter, btu, calorie, joule, kilojoule, newton meter, kilowatt hour | **Flow Rate**<br>Flow mass, flow volume and molar units converter | **Force**<br>Force units conversion, dyne, gram force, kilogram force, kilonewton, newton, ounce, pound force |
| **Frequency**<br>Frequency units converter, hertz, kilohertz, radian hour, degree second | **Fuel Economy**<br>Fuel economy conversions, mpg, L/100km, kml | **Heat**<br>Heat transfer coefficient, heat capacity and flux density units converters | **Light**<br>Illumination, luminance, luminous intensity units conversions |
| **Magnetic**<br>Magnetic flux and flux density units conversions | **Power**<br>Power units converter, btu/hour, megawatt, gigawatt, horsepower, | **Radiation**<br>Radioactivity, radiation exposure, absorbed dose units conversions | **Sound**<br>Sound units converter, bel, decibel (dB), neper (Np) |

2. **Flexibility and efficiency of use**
   - It is easy and fast to look up for other unit conversion tools and charts thanks to a table of options.

| Share | Share | Tweet | Email |
| --- | --- | --- | --- |
| **Area**<br>Convert between acres, hectares, square meters, square feet and other types of area units | **Cooking**<br>Convert all types of cooking measurement units for cooking and baking recipes | **Length**<br>Convert meter, centimeter, inch, foot, yard, mile, kilometer and other common length units | **Pressure**<br>Convert atm, bar, pascal, kPa, MPa, psi, torr and all other units of pressure |
| **Temperature**<br>Convert between Celsius, Fahrenheit, Kelvin and Rankine temperature scales | **Size Conversion**<br>Convert Men's and women's clothing, shoes and ring sizes | **Weight**<br>Convert pound, ounce, kilogram, gram, milligram, stone, ton and other common weight units | **Volume**<br>Convert liter, milliliter, oz, gallon, cup, quart, pint, cubic meter, cubic feet and other common volume units |

   - It is also easy to transfer from meter to foot. There is no need to click anywhere after typing the input as the value is automatically

converted. It is quick and easy.

Inch

78,7401574

Foot

6,56167979

Yard

2,1872266

Mile

0,0012427423844746678

Millimeter

2000

Centimeter

200

Meter

2

Kilometer

0,002

► **all length conversions**

- It is convenient to have the option of "all length conversions" where users can choose freely to convert from exactly one unit to another.

## Length Converter

Convert all length measurement units, including meters, feet, inches and cm, with our length measurement units conversion tool. Input a value in the provided field and choose the length units you wish to convert between.

How to use the converter? ⓘ

Round: 12 ▾ ❓

From

centimeter
foot
inch
kilometer
meter

To

centimeter
foot
inch
kilometer
meter

**Convert**

3. **Error prevention**
   - It is impossible to type anything except numbers so it is good to prevent mistyped errors. However, the system doesn't inform users about what is wrong here (violated visibility of system status - severity: 2)

Length converter to convert between common Imperial and Metric length units. Enter a value into any of the fields below to instantly view the converted length in the remaining fields.

Round: [ 12 ⌄ ]

Inch

Foot

Yard

Mile

Millimeter

Centimeter

Meter

Kilometer

4. **Recognize, diagnose and recover from errors**
   - Severity: 3
   - Description: Although the site prevents the problem of mistyping from the first place when allowing users to only type numbers, there are no error messages when users mistype. This violates not only visibility of system status but also recognition and recovery from errors rules.

5. **Help and documentation:**
   - The site also provides a good search bar that focuses on searching only the site, not Google.

AskNumbers.com          area                                              ✕

About 6,860 results (0.26 seconds)

Square Meters (m2) to Hectares Conversion
www.asknumbers.com › square-meter-to-hectare
To convert the same **area** to hectares, divide the result by 10000. You may also use the conversion calculator above

Decares to Ares Conversion
www.asknumbers.com › decares-to-ares
What is a Decare? Decare is a metric system **area** unit. 1 decare = 10 ares. The symbol is "daa". What is an Are? Are

Hectares to Decares Conversion
www.asknumbers.com › hectares-to-decares
Decare is a metric system **area** unit. 1 decare = 0.1 hectare. The symbol is "daa". Please visit all **area** units conversic

   - The documentation has a good length and focuses on only converting between units, not the history of the units.

## Metric Length Units:

The Metric system is based on powers of 10 and
them, making it convenient to convert between
indicate multiples or submultiples of the base un
measurements that are either very large or very
prefixes and their symbols:

Remember that the Metric system base length ur
All other Metric length units are either the fractic

- Kilo (k): 1 kilo is equal to 1000 units of the ba
- Hecto (h): 1 hecto is equal to 100 units of the
- Deka (da): 1 deka is equal to 10 units of the k
- Deci (d): 1 deci is equal to 0.1 (1/10) of the b
- Centi (c): 1 centi is equal to 0.01 (1/100) of t
- Milli (m): 1 milli is equal to 0.001 (1/1000) of
- Micro (µ) : 1 micro is equal to 0.000001 (1/10
- Nano (n) : 1 nano is equal to 0.000000001 (1

For each prefix, there is a specific conversion fac
larger unit, divide by the conversion factor and t
unit, multiply by the conversion factor.

For example to convert 250 centimeters (cm) to

1. We know that 1 meter (m) = 100 centimeters

2. To convert from centimeters to meters, divide

Therefore, 250 cm ÷ 100 = 2.5 meters

## CONCLUSION

| |
|---|
| 1. convert-me.com has an overall best user experience in terms of efficiency of use, error prevention, recognition & recovery from error, help and documentation. |
| 2. asknumbers.com has good design for efficiency of use and error prevention, however it does not inform users what is wrong (not good in terms of recognition and recovery from error). Help and documentation is informative and selective. |
| 3. omnicalculator.com has good design for efficiency of use but nothing for error prevention and recognition, recovery from error. Help and documentation is lengthy and some of them are irrelevant (history of units, for example). |

The heuristic evaluation gives a result that is consistent with my subjective user experience. So it is grading the same from how I felt when using these tools.