2.009 Information Treasure Hunt – Silver A

Problem Statement:

To choose and develop an interesting, useful, and marketable product, you need to be able to find good information quickly. Getting information on superhero products or devices, the communities represented, and available technologies will inform your project selection and give you ideas for new innovations. Market information will be essential in choosing a project and for building your business plan later in the semester.

A lot of information (including most scholarly research) is in the “hidden web” – not available via Google, so you need to learn where to find that information. By finding the answers in this assignment, you will explore different types of information resources and be ready to find information as the need arises throughout the semester.

Where will we find the answers?

The Libraries’ 2.009 course page will help you to easily find this information: https://libguides.mit.edu/2-009. Surfing the web will take much longer for many of these questions and may provide less reliable results. Teams using recommended library resources will rank higher than those who use other resources.

How should we submit the answers?

Your answers must come from reliable trusted sources and you must cite them so that you (or others) can go back and find the information again easily. Each answer on this assignment must include a good citation to your source otherwise it will be dismissed as unreliable information. See the accompanying handout or the Libraries’ 2.009 course page for hints on how to cite properly.

When is this due?

Thursday, September 16th at 12PM (Noon). One representative of your group should compile the answers into a single document using Microsoft Word or create a PDF. Include both the question and answer in your document. Submit your final document to Dropbox. Don’t forget to include your team section name on your document!

Who can I ask for help?

Librarians will be available during class on September 15th. After class, librarians will be at the Barker Library (10-500) desk from 2-5PM.

You can also contact Nicholas and Elizabeth directly:

Nicholas Albaugh – nalbaugh@mit.edu
Elizabeth Soergel – esoergel@mit.edu

See other options for help (phone, email, etc.) through the “Ask us!” page: http://libraries.mit.edu/ask
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For each question, please provide a citation for where you found the answer. If you used a database, indicate which database was used.

1. In an effort to bring healthy snacks to more people at a local farmer’s market, your team is designing a pedal powered smoothie machine using an old bike. To make your pedaling machine more efficient, you need to use a handbook to know more about muscle-generated power.

   a. What is the equation for **useful power production** by pedaling (legs only) for working in durations between 20 to 120 s?
   b. What is the equation for **useful power production** with pedaling efforts from 1 to about 100 minutes?

2. It would be helpful to get some statistics on the size of the global telemedicine technologies industry.

   a. What region had the largest market in telemedicine technology in 2019?
   b. What is the projected size of this region’s market in 2024?

3. You need to find a partner to help develop and commercialize (hopefully) your new product idea for an automotive sensor. An industry expert has suggested to you that Allegro Microsystems, Inc. might be a potential partner. Before contacting them, learn more about Allegro Microsystems, Inc.

   Uncover the following facts about the company’s operations:
   a. The year when the company was founded or incorporated (or changed ownership)
   b. The address of their headquarters
   c. Total number of employees worldwide (i.e., all sites, if possible)
   d. Latest revenue (sales) figures
   e. What is US 8-Digit SIC (Standard Industrial Classification) code for their primary industry?

4. You would like to learn more about plastics recycling, and you know that the right book can provide a good summary on this topic. Use the resources found on the 2.009 Guide (https://libguides.mit.edu/2-009) to answer the following questions:

   a. Find a general book on plastics recycling, available in the MIT Libraries. Provide a good citation for the book, including the library call # at the end of the citation and which library has the item (Dewey, Rotch, Barker, etc.) or if it is an eBook.
b. To find more specific information, you want to read a scholarly article on the narrower topic of **plastics recycling in the beverage industry**.

1. Use a database to search for an English language journal article on this topic published in 2010-2021. Provide a good citation for the article, and include the bibliographic database you used to find the citation.
2. Does MIT have a print subscription to this journal for the year that the article was published? If yes, in which library is it held? Does MIT have access to an electronic version of this article?

5. You want to make sure your design or project idea is unique before you take it to a company or customer for production. Check the patent literature, and find one granted (not an application) United States utility patent for **wireless microphone**.

   a. What is the patent title?
   b. What is the patent number? (Tip: numbers starting with D, e.g. D593812, are design patents, not utility patents. Numbers starting with the year, e.g. US20060201950, are applications, not granted patents)
   c. Who is the assignee? The inventor?
   d. Provide at least one classification code assigned to this patent (number and name, example: 446/486: Amusement Devices: Toys/ Resilient toy or actuator, OR A63F9/00: Sports; Games; Amusements: Card, board or roulette games; indoor games using small moving playing bodies, miscellaneous games: games not otherwise provided for)
   e. Where did you find this patent/what database did you use?