Background

Search engines are complicated systems that crawl and Index websites at search providers like Google, Bing, Yahoo, and more. Their search algorithms are typically proprietary and kept secret by the provider and are modified from time to time. Their dynamic weighting of various factors are directly responsible for how a web page ranks based on key word searches.

Most businesses and organizations want their web page to rank high to increase customer traffic to their site. At the least, a web page is a marketing tool for organizations, in some cases, the web page is also a major source of ecommerce and provides a virtual storefront. Whichever purpose the web page serves, organizations will rely on web designers and developers to improve the search engine optimization (SEO) of their site in order to rank high on search engines. Typically, the 1st page of results is the most important to consumers as well as the web page's owner.

The SEO Top Rank project is a group project with groups consisting of 2 or 3 students. The objective of this project is to learn:

- How SEO affects page ranking
- How design impacts SEO
- Page speed effects
- The use of analytic tools
- Internal and external metrics
- Competitive intelligence
- Accessibility impacts
- Significance of content
- Relevance and back links

A significant impact of page SEO is based on competitiveness of websites. Therefore, search engine page ranking will impact the grade. You want your site's landing page to be placed in the coveted #1 spot on page 1 of Google search rankings.

Web page design

In the SEO Top Rank project, your (fictitious) web design & marketing company will build a website to promote the product "Spray on Shoes" for your client, a Lakeland, Florida business. The business of selling Spray on Shoes aerosol spray products could sell similarly to other standard show manufacturers. The name of your fictitious company is up to you but it should be consistent throughout the rest of the semester.

The web site will need to have a public domain name which should correspond with the business name. Part of your goal is brand ranking. At most, the cost should be no more than $10 for a 1-year service. This cost can be shared between the team members. The domain will point to a LAMP stack that is on a team member's AWS EC2 instance. It is up to each team to decide which EC2 they will use, but only one is needed. You should set up Amazon Identity and Access Management (IAM) service to manage access between the group members.

The web site is built on the LAMP stack and will need to look professional and engaging for marketing a business. It needs to be coded in HTML and CSS but can also use bootstrap, javascript, React and PHP. However, you are not to use a content management system (CMS) for this requirement. In other words, do not use Wordpress or a web builder. It needs to be designed and built with discrete code.

The site will also need to have effective coding that is succinct and supports good SEO practices. A zip of the top-level directory of web pages and css will need to be submitted. The minimum website pages are required:

- Landing page
- shopping or product page
- about us page

Effective SEO

The main search phrase is "spray on shoes" but there may be other key words that people use. Google will the be exclusive search engine used for ranking. Google Business pages will not be used nor the Google Business search results. When testing the search engine relevance of your site, I will use the unbranded search phrase "spray on shoes" which would be the most competitive search phrase that all of your competitors will also count on. However, I will also use 5 alternative search phrases (short and long-tail) that I may not reveal in advance. Examples could be "athletic spray on shoes", "hiking spray on shoes", "Spray on shoes in Lakeland". Plan a marketing design strategy but keep abreast of competitive intelligence.

Note that you will also need to have excellent branded SEO. Your website should rank the highest possible for your brand. This refers to the name of your company.

Analytics

Proper design of the website needs to be supported with evidence of effectiveness. Your design team will need analyze reporting from Google and other sources at least every 1-2 weeks minimum and use the data to make changes to your site to improve site and page ranking. The data can be used to prepare analytics for your client to demonstrate the effectiveness of your design team/company.

Reporting

Your final report will be an overview of the entire project
The recommended outline is shown below, which follows lecture notes presented in class.
Use 'subheadings' to separate your sections, and 'rule of thumb' is minimum of 1 or more paragraphs of text per section, but if more is necessary to show the depth and extent of your work do not feel limited and expand the text length as necessary.

TEAM REPORT:

1) **Cover page** – Use creative graphics such as an image of your landing page or product.
    Must include:
        Project Title – List the name of your marketing campaign
        Domain Name- Domain name of the website

Client Name – The business name that is selling spray on shoes
Team Members name – Need your real names here!

2) Table of Contents: (optional)

3) Introduction: ½-1 page text requirement .
Discuss the overall requirements and approach to the project. Research done on Search Engine Optimization, your team's approach, objectives and expectations for the client.

4) Body of the report:
   a. **Define the problem – statement**
   b. **Generate Concepts –**
      i. Brainstorming as a team. Combine the best ideas from your team in this section of the discussion (**1 paragraph text**):
         ▪ **Overall Goal**: Describe your objective in a simple narrative.
         ▪ **Sub-goals:** Breakdown your objective into a numbered list of separate sub-goals. (At least 3 separate items.)
         ▪ **Specifications**: For each sub-goal, provide a measurable success criterion.
      i. **Discussion**: **1 paragraph text** – How did your team decide to break up the tasks involved in this project?
      ii. **Discussion**: **Develop a solution- 1 – 2 paragraph of text** –How did your team approach your objectives and improve the site and page ranking ?

5) **Data Visualization**
   a. Show data of page ranking over the range 6 weeks based on different search phrases. At least 5 historical points. Differentiate branded vs unbranded key word search ranking.
   b. Show analytics from Google Search Console (format in a professional manner as if for a client)
   c. Show analytics from Google Key Word Research if relevant
   d. Show list of backlinks.
   e. Screen shot of at least landing page and two other pages.

6) Conclusion: Evaluate Solution
      a. **Discussion 1-2 paragraph text -**To what extent did your team meet the objective outlined in your introduction?
      b. **1-2 paragraph text - Discussion:** From this experience, propose and recommend at least two improvements that could be made to your design or strategy.
      c. **1 paragraph text - Discussion:** What seemed to matter the most to site and page ranking? Explain. Use evidence as well personal observations.

7) References- as needed.

Presentation

Your final presentation will be in class and should include visuals such as power point. All members should be present and take turns speaking. 4-6 minute max presentation
Your presentation should include:

- outline of your web page, visuals
- objectives
- approach
- analytics
- results
- what was learned

Procedure

1. Join a team of 2-3 students. You will be assigned a team If you do not choose one.

2. Build an AWS EC Instance with Lamp Stack. You should reuse one from the AWS project.

3. Setup IAM authentication for multiple user access.

4. Determine a business name for your client and obtain a domain name that reflects the business.

5. Direct the domain name to your EC2 Instance.

6. Develop a website with a minimum of 3 web pages to market "Spray on Shoes" for your client.

7. Make design and other changes to your site to Improve page ranking In Google over 8 weeks.

8. Capture analytics weekly (should have 6 weeks)

9. Submit project with:

    a. web page html/css code and images in a zip folder

b. team Report as outlined here (one report for team)

c. power point visuals that accompany presentation

d. List percentage of work each student contributed in Doc or txt document

Project-SEO Top Rank Rubric

Web page Design				
Simplicity	Beginning 4 points	Developing 6 points	Meet Standards 8 points	Above Standard 10 points
In terms of Web design, simplicity refers to an approach to express something in a complete and efficient way.	•web page is too busy • people reading it cannot find what they want quickly. excessive use of graphic elements	• web page is somewhat busy • people reading it will have difficulty finding what they want quickly. excessive use of graphic elements	content is simple and to the point. • appealing graphic elements are included appropriately. • differences in type size and/or color are used well.	• content is simple and to the point. • design is easy to understand in many ways • colors, layout, typeface and overall esthetic is appealing and supports site's message
Consistency				
The design must be consistent in the whole website. Each page must be predictable and look similar to each of the other pages in color, text format, and/ or some familiar layout.	• background, text format, and color usage are randomly chosen • pages seem unrelated	• background, text format, and color usage are randomly chosen with few consistent elements throughout	• background, text format, and color usage are somewhat consistent with little inappropriate variation.	• background, text format, and color usage are carefully chosen to produce a consistent screen layout for all your pages.
Audience				

The audience will influence every aspect of your website's design	• tone of language not appropriate • use of graphics and/ or colors is not appropriate for audience	• audience is not defined or poorly defined through confusing use of tone and language structure	• tone of language is mostly appropriate • use of graphics and colors is mostly appropriate for audience.	• tone of language appropriate for audience • use of graphics and colors is appropriate for audience. • audience is well defined.
Structure/ Navigation/Format				
Good websites are well organized. Their content is presented in a clear manner that is easy to follow. You should ensure that the readers get around your website with ease. Blocks of text and images must be of appropriate size.	• content is confusing and difficult to follow. • site is difficult to navigate. • not intuitive. • large images that take long to load.	• content is somewhat confusing and difficult to follow. • site is somewhat difficult to navigate. • too much textual information.	• content is presented in a clear manner that is easy to follow • navigation is difficult • not intuitive.	• content is presented in a clear manner that is easy to follow. • readers can get around your website with ease. • there are no blind links.
Code				

Websites need to be developed with good coding practices, that are error free and take optimize the site for strong search engine performance	• Code is not written clearly, with useful comments and some errors may exist • Code does not support good SEO practices • Too much greyhat or blackhat techniques	• Code is written clearly with some areas that could use comments or have errors • Code has some good SEO practices • There are some greyhat or blackhat techniques	• Code is written clearly, with useful comments but some errors may exist • Code missed some opportunities for good SEO practices • There are no blackhat techniques	• Code is well written, with useful comments and error free • Code supports good SEO practices • There are no blackhat techniques
Effective SEO				
Primary Ranking	8 points	10 points	12 points	15 points
Site search engine optimization is dynamic and is directly affected by competition. Competitive intelligence is vital to achieving a high ranking site. Uses "helicopter conversion kit" keywords	Page 3 search ranking via Google	Page 2 search ranking via Google	Page 1 search ranking via Google, but not top 3	Page 1, top 3 search ranking via Google
Secondary Ranking				
	1 point	2 points	4 points	5 points
Alternate search phrases optimization. Short and long tail key	None of the alternate search phrases associated	1 of the alternate search phrases associated with site via google search	2- 4 of the alternate search phrases associated with site via google search	All five search phrases associated with site via google search

word phrases will be tested in Google	with site via google search			
Team report with Analytics				
Cover all of the points effectively and professionally listed under Team Report above				50 points max
Presentation				
An effective presentation is communicating your ideas to an audience. A good presentation is rehearsed, has good eye contact, animated, clear voice, good language skills, visual aids well prepared, length is appropriate, and information is well communicated				50 points max
Team member Contribution				
Each member should contribute an equal percentage of effort. Teams will self report. Each member will receive a max of 30 points if equal effort.				30 points max

	Points
Assessment Summary	
Web page design	50
Effective SEO	20

Team report and analytics	50
Oral presentation	50
Team member contribution	30
Max total	200