1. What is the name of your language?

The name of the language I would like to use is C++, however, it was first dubbed as "C With Classes". The name was changed to C++ in 1983 and reflected how its creator added many different features to the C language to create his own.

Reference:
http://www.cplusplus.com/info/history/

2. When/where was it created and by whom? Was it developed to address a particular computing problem or need?

The language, C++, was created in 1976 by Bjarne Stroustrup, who was a Ph.D. student working on his thesis at the time. At the time Stroustrup was working with a language called Simula, specifically Simula 67, however, he found that even though it supported object-oriented programming, it was not practical to use due to the fact that it was too slow. Thus, Stroustrup came up with the idea of "C With Classes", which is based on the C language. He wanted to take its tried and true portability and add classes, basic inheritance, inlining, default function arguments, virtual functions, function overloading, and strong type checking.

Reference:
http://www.cplusplus.com/info/history/

3. Is it primarily procedural, functional, scripted, object-oriented, or a combination of these? Or something else?

This language is considered to be a multi-paradigm language. This essentially means that it supports more than one of the options above. In regards to C++ individually, it supports object-oriented programming, procedural programming, statically typed and type checking, and generic programming. Object-oriented programming refers to a language's ability to use objects, classes, encapsulation, inheritance, and polymorphism. Procedural programming uses procedures, functions, and methods. Generic programming means that software components can be generalized so that they can be more easily reused in more than one situation.

References:
https://www.mycplus.com/featured-articles/multiparadigm-programming-standard-cplusplus/
https://www.boost.org/community/generic_programming.html

4. Is it compiled or interpreted, or a combination? Does it use a virtual machine?

C++ is a compiled language, which means that it produces a program that is written in assembly language. It is then turned into binary code by an assembler of the computer architecture. Due to the fact that assembly language can change from computer to computer(which is due to the fact that different computers have different computer architectures), languages that are compiled can only run on computers that share the same computer architecture as the one they were compiled on.

References:
http://www.cplusplus.com/info/description/
https://kb.iu.edu/d/agsz

5. What types of applications is your language primarily used for (e.g.: web development, video games, mobile devices, back-end services, operations engineering, etc.). If your language is multi-purpose, provide some examples of different applications it has been used for.

The C++ language can be used in a very wide variety of applications. One of them is in operating systems, mostly due to the fact that it is strongly typed, closely related to C, and fast. The next few applications are commonly programmed in C++ due to their need for speed. Such applications are browsers, in which C++ can be used to program rendering engines, the backend of libraries, graphics and games, and telephone switches. Banking applications and cloud/distributed systems will use C++ for its speed and its ability to use multithreading, the latter also takes advantage of its ability to work close to the hardware. Embedded systems and compilers are also programmed in C++ due to its ability to work closely with the hardware. Lastly, databases are another application in which C++ can be used in. Lastly, C++ can also be used for GUI, or graphical user interface, advanced computations, development of advanced software(for example, it can be used in flight simulators and radar processing), and medical and engineering applications.

References:
https://hackr.io/blog/features-uses-applications-of-c-plus-plus-language
https://www.invensis.net/blog/it/applications-of-c-c-plus-plus-in-the-real-world/

6. Search on Github.com for your language: what are the 3 most popular projects (the ones with the most stars) involving your language?

1. grpc/grpc - gRPC stands for remote procedure call, and is a modern, open-source, high-performance framework. It has the ability to run anywhere and makes it possible for client and server applications to be able to communicate transparently. Additionally, it allows the building of connected systems to be simplified.

   Reference:
   https://github.com/grpc/grpc

2. dmlc/xgboost - XGBoost is an optimized, efficient, flexible, and portable distributed gradient boosting library. It provides a way to solve data science problems accurately and fast, and implements machine learning algorithms under the Gradient Boosting framework.

   Reference:
   https://github.com/dmlc/xgboost

3. ocornut/imgui - A bloat-free immediate mode graphical interface for C++ with minimal dependencies.

   Reference:
   https://github.com/ocornut/imgui

7. Where will you get information about this language when it's time to start programming in it?

I plan to use the following resources to gather information about C++:

- https://en.cppreference.com/w/ - This is a reference page on C++
- Programming Principles and Practices Using C++ by Bjarne Stroustrup
  - https://www.amazon.com/Programming-Principles-Practice-Using-2nd/dp/0321992784/ref=tmm_pap_title_0?_encoding=UTF8&qid=&sr=
- https://google.github.io/styleguide/cppguide.html - Google Style Guide on C++
- https://www.learncpp.com/ - a website to help you learn C++ (structured like a book)