

*For the next step in the interview process with LISNR, we are asking Candidates to complete a simple project and a personality assessment. The personality assessment will be sent to you direct via test gorilla and the project is below.*

*Once you have reviewed the requirements, please let me know how much time you will need. Once we receive it, our Engineering managers will review and we will determine the next steps from there. Let me know if you have any questions.*

### **Please see below for instructions:**

Develop a C/C++ library and executable that performs the following actions:

- Retrieves an image from a specified URL.
- Base64 (RFC 4648) encodes this image.
- Returns the Base64 encoded version of the image.
- Writes the Base64 data to a specified file

The library shall provide an API that takes the URL to the desired image as in input parameter and provides the Base64 encoded version of the image as an output parameter.

The executable shall take as command-line parameters the URL for the image to be retrieved and a file to which the Base64 encoded data shall be written. It should use the previously described library to perform the image retrieval and encoding. It will then write the Base64 data to the specified file.

Exhaustive error handling is not required, but the application should behave in a predictable and describable fashion.

Feel free to use any 3rd party libraries **with the exception of** the Base64 encoding, provide your own implementation of the Base64 encoder (do not simply copy/paste a Base64 encoding solution from the internet). Specify any dependencies or other requirements introduced through the use of any 3rd party libraries.

Provide all source files as well as instructions for building and running the application. If you will be sharing google drive, please give permission to [sam@lisnr.com](mailto:sam@lisnr.com) to access it.