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## Assignment 7

Many constraints can pop up when looking at a project's development and impacts. Whether it will harm the environment or have unintended side effects, it is important to consider how these issues can impact the project. By looking at the economic, professional, cultural, and environmental areas, we will see how these topics relate to our project as well as what steps we are taking in order to deal with them.

We are not constrained economically compared to other senior design solutions. The cost of materials, research and development, and other expenses would have limited the scope of most projects. However, our project is software-focused and doesn't require an upfront cost. Most cloud services that we plan on using have a free tier for individual users, which allows us to use many of these services without any cost. As a bonus, our solution can have an indirect effect on the economic development of programmers, as it will allow them to train and adapt their skills to the modern job market.

When discussing project ideas for senior design, one area that we had an interest in was professional development and education. We want to create a platform that would allow developers to sharpen their programming skills in a fun and intuitive manner. As the demand for developers has grown, and new emerging technologies such as artificial intelligence have emerged, we want to create a place for people to both be able to begin and strengthen their skills during their programming journey. Creating a place where you can acquire these skills and improve on them is a focal point for this project.

Since this is a software-oriented project, the environmental constraints do not directly apply to our project. However, we will be using multiple cloud deployments, which may have an environmental impact if the user base grows and requires more compute power.

Since the majority of people can learn to become a developer through hard work and perseverance, we need to ensure that our application applies to numerous different cultures. This can be achieved by ensuring that our platforms' design and operation match our group's goal of being inclusive and intuitive. Additionally, by making the platform user-friendly and welcoming, we can open the doors to anyone who wants to give programming a try. Finally, since people can gather and build a community of lifelong learners, we will be able to foster a social aspect as well.

The application itself is intended to be free to use and is to help developers become more confident in their programming skills. It also helps train new programmers in language syntax, data structures, and programming essentials through repetition. This will have a positive impact on the broader software engineering community and help people build their skillset. Our

application is geared towards helping people prepare for technical interviews, job development, and career advancement.

In conclusion, we want to develop an essential tool that is accessible to all and becomes a standard place for people to enhance or learn new skills. This will be achieved through a number of different styles of learning, such as competitive timer programming or untimed practice questions.