**Long Qs (250 words each)**

**The Stanford community is deeply curious and driven to learn in and out of the classroom. Reflect on an idea or experience that makes you genuinely excited about learning**

“Welcome to HOMER” faded onto the screen.

After waiting 3 hours to download Parallel, a Windows Simulator on my Macbook Air, I finally got my hands on HOMER Energy, an electrical grid design and simulation software. What fascinated me most was not the mathematical methods the software used to make out-of-the-world yet accurate predictions, but being able to put my prior knowledge on the subject into use. After writing a school dissertation on the use of ‘smart grids’ to replace our current conventional electrical grids, I was eager to put my theory-based learning into practical use.

*New Project.*

*Location: Keban, Indonesia.*

*Power Generation: Diesel Plant, 200kW installed capacity; Solar PV, 886kW installed capacity*

*Simulate electrical grid.*

Aha! Just what I was looking for: levelized cost of electricity (LCOE).

*Diesel only: 0.2368 $/kWh*

*Solar PV:**0.3854**$/kWh*

*PV and diesel: 0.2078 $/kWh*

No way, I thought. The combination of diesel and solar PV was more cost effective than either on their own. This idea intrigued me- we have been working on achieving net renewable energy, but when we look at it at economic scale, perhaps it may not currently be the best idea.

Since then, I have looked at the smart grid through a different lens- rather than solely using it to increase sustainability, I now look at improving efficiency to therefore increase sustainability. These surprising experiences are truly what drove me to pursue electrical engineering.

**Virtually all of Stanford's undergraduates live on campus. Write a note to your future roommate that reveals something about you or that will help your roommate – and us – get to know you better**

Hey future roomie!

I don’t mean to brag, but I’d say I’m a world-class room-sharer. As a twin who’s shared a room 14 out of my 17 years of life, I have grown used to the missing hairbrush that mysteriously shows up in the other’s drawer the next week, or the $30 Olaplex shampoo that runs out after a week because it’s been used by the other. I feel the need to apologize to you in advance though- I developed a skincare phase over quarantine, I’ll be taking up a lot of bathroom space with my many skincare products (except for Clinique because animal testing is a big no no). On the bright side, if you ever need any skin advice, I’m a self-proclaimed expert. Salicylic acid? Retinols? I know about all those ingredients. Anyway, I hope you enjoy jazz music, because I’ll be practicing my saxophone at least 4 times a week. Don’t worry though, I’ll make sure I play those smooth John Coltrane study tunes I know everyone loves... unless you ask me to play Careless Whisper. In that case, I’ll resort to practicing my boring scales and we BOTH don’t want that. Lastly, I hope you like to sleep with the lights off. According to a study by NCBI, sleeping with the lights on can suppress melatonin levels by 50%! As the dedicated future uni students we both are, I’m sure we need the melatonin!

Can’t wait to meet you,

Rachinta

**Tell us about something that is meaningful to you and why**

I am a blue person (the color blue, not the sorrow feelings associated with it). As a twin, my sister and I used color as a differentiator. From the womb to the age of 8, my mother solely dressed me in colder colors- greens and blues- while my sister was dressed in pinks and reds. As we grew older, this colour scheme stuck with us. In twinning fashion, every morning, my sister and I would carefully choose out our outfits, ensuring that we both had the same we would wear the same skirt, the same headband, tops with the same dainty frills… in different colours.

While we aren’t identical, wearing different colors was supposed to give us a sense of identity.

Yet I felt like I lacked identity. To those who didn’t personally know me, I was known as ‘the blue twin’. I subconsciously kept myself in my ‘blue box’ for the sake of not getting mixed up with my sister.

We stopped meeting in the mornings to thoughtfully curate our outfit. When my sister wore a skirt, I would put on shorts. Soon, my colour scheme expanded. I no longer only purchased blues and greens- I dove into purples, oranges and even my sister’s pinks.

Truthfully, at times, I felt like I was isolating myself from her.  When I ‘wore her colours’, I felt like I was stealing her identity. However, I now see it differently: when I wear pink, I bring a piece of my twin sister’s childhood identity with me.

I am no longer known as ‘the blue twin’, but I still see myself as a blue person. I see my childhood differentiator as a sign of development to become my own individual person.