Here are two problems that you may try to solve using any tech stack of your choosing. The works should be uploaded to individual git repos and sent as a reply in the email. Problem 1 is mandatory. The latter one is to show off your web skills. You may opt-out without any hesitation. For any kind of queries, please contact us at nahid.rahman@dsinnovators.com. The email subject should include your name, the position you are applying for, and the date you have been given this assignment on.

Problem 1

You are starting a small business. So, you need to keep a ledger for all the buys, sells, and available balance on your account. When you run the program, it will be able to accept command line inputs. And, will show the result in the command line. When engaging with the command line, it will give you options to

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1. Add a product
     a. A product should have this information
          i.    Product name
         ii.    Buy price
        iii.    Sell price
         iv.    Available number in the inventory to sell
          v.    Total profit selling the product
     b. One must input all the info in a natural number to add a
        product.

2. Delete a product
     a. When a product is deleted, it will not show in the list but
        the profit made from the product will still be there in the
        available balance.

3. Buy a product
     a. You will select the product and the number of products that
        you bought. It will add the number to the inventory of that
        product. The total buy price of the products should be
        subtracted from the available balance.

4. Sell a product
     a. You will select the product and the number of products that
        you sold.
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        b. The profit is the difference between the buying price and
           the selling price. The number should be added to profit and
           the whole selling price should be added to available money.
        c. The number of selling products can not exceed the number
           available in the inventory.

5. See the list of products
        a. This list will include the name of the products, the number
           of available products in the inventory, and also the profit
           from each product. Showing these in a tabular form is not
           mandatory. But, anyone would love that, right?

6. See available balance

After creating the application, assume you have nothing at the moment. The available balance is also 0 BDT. Now, add five products of your choosing. Sell any three of them.

Problem 2 (optional)

Your friend has an idea of a company, he wants your help building its website. Using the website a customer will see specific products which are actually available on Amazon, can add them to their cart, pay the price of those products in BDT and get them for a little extra as a service charge. You need not build the whole website. What you will build is

1. A usable link in localhost that'll take the browser to a webpage.
2. That webpage will consist of 10 products with name, price in BDT, and image.
3. If an image is clicked the browser will take you to that product on the Amazon website. The products can be anything of your liking.

As we might not be able to run every project sent to us, screenshots of the webpage should be included in a folder of the repo.

Bonus: To make you excited, there are also some bonus factors. These are not mandatory. But if you have it, it will act as some bonus points for you.

These are
        1. Responsive UI

2. Framework
3. Dependency Management
4. Database
5. Object Relation Mapping
6. Pull the images directly from amazon
7. Sortability
8. Searchability
9. A suitable look for the use case

You can use any Language you want to build the application. It's totally up to you.
Languages Preferred: JAVA, JavaScript(NodeJS Environment), Python.
Using your work, we aim to judge your ability and concept knowledge in OOP. We want to see how you understand the use case and structure your code efficiently.
Enjoy making systems. Wish you good luck.