Title: Sole Table

Problem: My program will solve the problem of storing inventory of shoes. Much like a corporate store, inventory must be kept in an efficient manner so that products can be found when asked. Specifically, when it comes to shoe stores, the store has to not only know what shoes they have, but also how many and how many in each size. Using a hash table, I think I will be able to store shoes based on ID or product numbers.

Primary stakeholder: The primary user will be the corporate shoe store. As said above, the program will use a hash table with a bucket collision resolution to store product numbers (key) and store how much in each size (value) is still in stock. The bucket collision resolution will be useful because it will allow duplicates to be hashed to the same index, but the only thing difference would be the size of each shoe. Since it is a bucket, I will be able to traverse the list to get a count of the number of shoes in a specific size. This will simply give the stakeholder an efficient way to find products and know how much of each product they have.

Graphical User interface: Provided in the sketches attached!

Data:

- **Integer Key** – the main identifier for the data being inserted; this will most likely be the product number
- **String Value** – the name of the shoe or product
- **Double Value** – this will store the size of the shoe so that there can be a count of how many shoes there is in that specific size

Format Example: *Object newShoe = new Object(product number, "shoe name", size);*

---------- Where Object type is any object that stores the actual shoe information ----------

- Then of course, the key (product number) will be put through a hash function so that it can be assigned a hash index in the hashtable

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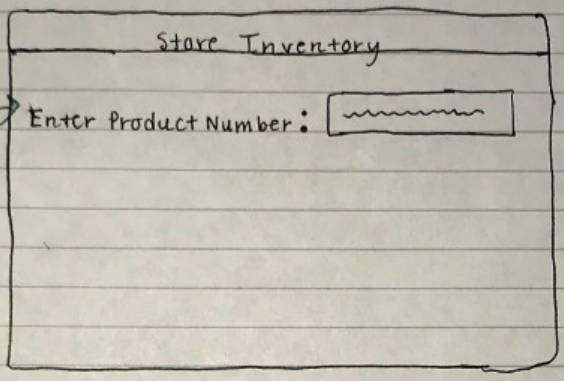
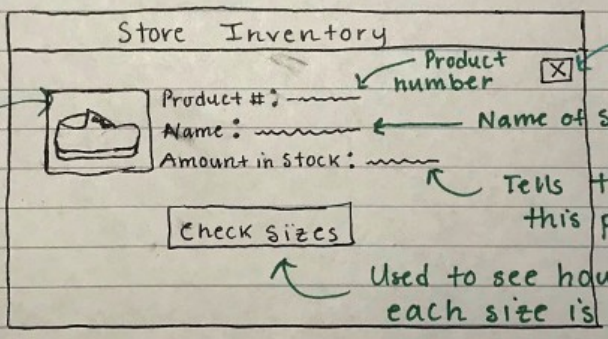


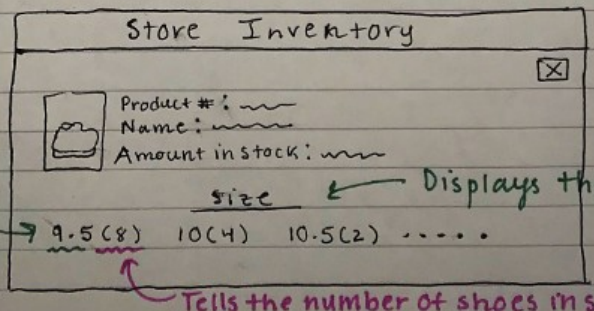
User will be prompted to enter product number

When Product number is entered, if the product exists, the user will be taken to the product screen.



Picture of the product

Once "Check sizes" has been selected the user will be taken to the "sizes" catalog.



Specified size of shoe