# Digikey Pricing Application

## Pricing Comparison function

A screen shot of a computer program

Description automatically generated

* Discovers if there is another breakpoint higher than current selection and saves to a variable. Uses price calculator function to work out the new price. Compares the current price with the new price (higher breakpoint) to see which is better value and returns the lowest price.

## Multiple units function

A screen shot of a computer

Description automatically generated

A computer screen with white and green text

Description automatically generated

* Main function responsible for dealing with price for multiple products. Called from open file for each product within the while loop iterating through the file.
* Starts by calling get breakpoint which is responsible for returning json data for the correct product package type either bulk or cut tape. Removing unnecessary json data from the api call for the product.
* Then calls breakpoint options function which will return an array of the different break point quantities.
* Will work out how many units are required for the number of products. Which is passed to break point along with options array to find the appropriate breakpoint to use.
* Then it finds the price for the product with the correct breakpoint
* Print statements have been added to show the functionality for development purposes to help better show the code working.
* It will then do a price comparison where it will see if there is a larger breakpoint available if there is it will find the price for the breakpoint and then compare it with the current price to see if it’s cheaper to buy more.
* Finally it will check to see if the breakpoint meets the number of products as there might not be a next step up in which case it will calculate how many more products need to be bought. Finding the remainder of products it then calculate the price and does the same comparison to check if buying more is cheaper it will then add the best price to the running total final price.
* Final price is then returned

## Price calculator function

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* Uses json data relating to product package type and quantity breakpoint to find how much the product costs.

## Choose breakpoint function

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* Goes through each option comparing the quantity with each available breakpoint option discovered until it finds one that is the correct fit by comparing one with the next one in the array to the number of units. If the unit quantity exceeds the limit then the highest is returned it also checks if there is only one option before comparing values and returns the one option if it applies.

## Get breakpoint function

A screen shot of a computer program

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* Checks to see what the package type options are if it uses bulk or cut tape and returns only the pricing breakpoint data for the specific option.

## Updated open file function

A screen shot of a computer program

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* Added a line to get the user input for the number of products to calculate

A screen shot of a computer program

Description automatically generated

* Inside of the loop for products found the multiple units function is called. It is then concatenated into a string with any necessary information to be displayed in the GUI
* Price rounded to two decimal places and added to the running total.

A screen shot of a computer code

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* Responsible for displaying the total price and adding it to the textbox widget.