Widget Co

Widget Co are the leading provider of made up widgets and they’ve contracted you to create a proof of concept for their new sales system.

They sell three products –

| Product | Code | Price |
| --- | --- | --- |
| Red Widget | R01 | $32.95 |
| Green Widget | G01 | $24.95 |
| Blue Widget | B01 | $7.95 |

To incentivise customers to spend more, delivery costs are reduced based on the amount spent. Orders under $50 cost $4.95. For orders under $90, delivery costs $2.95. Orders of

$90 or more have free delivery.

They are also experimenting with special offers. The initial offer will be “buy one red widget, get the second half price”.

Your job is to implement the basket which needs to have the following interface –

* It is initialised with the product catalogue, delivery charge rules, and offers (the format of how these are passed it up to you)
* It has an add method that takes the product code as a parameter.
* It has a total method that returns the total cost of the basket, taking into account the delivery and offer rules.

Here are some example baskets and expected totals to help you check your implementation.

| Products | Total |
| --- | --- |
| B01, G01 | $37.85 |
| R01, R01 | $54.37 |
| R01, G01 | $60.85 |
| B01, B01, R01, R01, R01 | $98.27 |

**What we expect to see –**

1. The solution should be implemented in Python.
   * The code should be easy to understand and easy to extend.
   * The basket should handle adding products, calculating totals, and applying offers and delivery rules effectively.
2. A README file explaining how it works and any assumptions you’ve made