305CDE Challenge 3

This challenge should be attempted after you have attended the third lab and worked through Worksheet 3 (*Functions and Objects Part 2*). You may need to attend other labs to fulfil some of the requirements.

Guidelines

- Commit your solution to a new private project/repository in GitLab, and give it a sensible name: for example `305CDE Challenge 3`.
- Add the following members with *reporter* permissions under `Settings > Members` for your project:

    - Mark Tyers `marktyers`
    - Jianhua Yang `jianhua`
    - Colin Stephen `c0lin`

- You are free to commit changes to your code to improve it further at any point up to the assessment submission deadline.
- You may not manage to satisfy all of the requirements, but you should aim to do so.
- Extended requirements may require knowledge from future lab sessions to complete.
- Marking will be based on how closely you meet the requirements, whether you attempt any of the extended requirements, and how maintainable your JS code is.

Specification

Implement "Shopping Basket" functionality in JS, suitable for a basic e-Commerce web application.

Requirements

Minimal

Items

- Implement an `Item` constructor function that can be invoked with the `new` keyword to create shopping items
- Each item object should have:
    - Title
    - Description

– Price

- Invoke the constructor several times to create a number of objects
- Each item should then be displayed on the page with its details and a "Add to basket" button

Basket

- The internal state of the basket should be maintained via a function closure
- Basket state should include:
    - list of items
    - total number of items
    - running total of cost
- The current number of items in the basket should be displayed somewhere on the page
- Include a "Show Basket" button on the page
    - Clicking the button should pop up an alert showing the current Basket state

Extended

- Implement your Basket as a module that can be added to any page with `Item` objects on it which contain `Title`, `Description` and `Price` properties.

Constraints

Use only HTML, JavaScript, and optionally CSS styling. Do not use any additional JS libraries.