Yes

```
                                    ┌─────────┐
                                    │  Start  │
                                    └────┬────┘
                                         │
                                         ▼
                              ┌──────────────────────┐
                              │ Declare array named  │
                              │ itemsNames, itemPrices,
                              │ itemStock, categories(2d array),
                              │ cartItems, and cartQty │
                              └──────────┬───────────┘
                                         │
                                         ▼
                                    ◇─────────◇
                          ┌────No───◇ Did user input Q? ◇◄──────────────────┐
                          │         ◇─────────◇                             │
                          ▼              │ Yes                              │
                  ┌──────────────┐       ▼                                  │
                  │ print out    │   ┌────────┐                             │
                  │ categories   │   │  End   │                             │
                  └──────┬───────┘   └────────┘                             │
                         ▼                                                  │
                  ┌──────────────┐                                         │
                  │ Ask user to  │◄──┐                                      │
                  │ choose a     │   │ No                                   │
                  │ category     │   │                                      │
                  └──────┬───────┘   │                                      │
                         ▼           │                                      │
                    ◇─────────◇──────┘                                      │
            ┌─Yes─◇ Is category valid? ◇                                    │
            │     ◇─────────◇                                               │
            ▼                                                               │
    ┌──────────────┐                                                        │
    │ Ask the user │◄──────────────────┐                                    │
    │ for an item  │                   │ No                                 │
    │ to search    │                   │                                    │
    │ the store for│                   │                                    │
    └──────┬───────┘                   │                                    │
           │                           │                                    │
           ▼                           │                                    │
      ◇─────────◇                      │                                    │
 ┌─Yes─◇ Did the inventory ◇───────────┘                                    │
 │     ◇ search find the item? ◇                                            │
 ▼                                                                          │
◇─────────◇                                                                 │
◇ IS the item ◇                                                             │
◇ already in   ◇      ┌──No──────No──┐                                      │
◇ the cart?    ◇      │              │                                      │
◇─────────◇           │              │                                 Yes  │
     │ No             ▲              │                                      │
     ▼                │          ◇─────────◇                               │
┌──────────────┐      │      ◇ Is there enough ◇                           │
│ Ask for the  │      │      ◇ stock?          ◇                           │
│ quantity of  │  ◇─────────◇  ◇─────────◇                                 │
│ the item the │  ◇ is quantity ◇──Yes──┘   │                             │
│ user would   │──◇ greater     ◇           │ Yes                          │
│ like to add  │  ◇ than zero?  ◇           │                              │
│ to the cart  │  ◇─────────◇               │                              │
└──────────────┘                  ┌─────────▼────┐                         │
                                  │ Add the item │                         │
                                  │ to cart items│                         │
                                  │ array, and   │                         │
                                  │ add the      │                         │
                                  │ quantity to  │                         │
                                  │ the cartQty  │                         │
                                  │ array        │                         │
                                  └──────┬───────┘                         │
                                         ▼                                  │
                                    ◇─────────◇                            │
                                ◇ Does user want to ◇──Yes──┐   ◇─────────◇│
                                                            ▼   
                                                    ┌──────────────┐
                                                    │ Calculate the│
                                                    │ subtotal     │
                                                    └──────────────┘
```

checkout?

Yes

Calculate the subtotal
using a function by
inputting them in and
adding them together

Clear the cart and
subtract the amount of
items from the item
stock array.

Does user wish to
quit?