'use strict';

*// using constructor function*

*//1 - Book constructor function*

*let* Book = *function* (*title*, *author*, *numOfPages*, *numOfCopies*) {

*this*.title = title;

*this*.author = author;

*this*.numOfPages = numOfPages;

*this*.numOfCopies = numOfCopies;

  Book.count = (Book.count ? Book.count : 0) + 1;

};

*//2 - Box constructor function*

*let* Box = *function* (*height*, *width*, *langth*, *material*, *contentArr* = []) {

*this*.height = height;

*this*.width = width;

*this*.langth = langth;

*this*.material = material;

*this*.contentArr = contentArr;

};

*// Static method that get book objects count*

*let* getBookCount = (Book.getCount = *function* () {

  return Book.count;

});

*// add book*

Box.prototype.addBook = *function* (*book*) {

*this*.contentArr.push(book);

};

*// count of books in box*

Box.prototype.getCountOfBooks = *function* () {

  return *this*.contentArr.reduce((*count*, *book*) => count + book.numOfCopies, 0);

};

*// delete book*

Box.prototype.deleteBook = *function* (*title*) {

*// find the index of wanted book*

*let* wantedBookIndex = *this*.contentArr.findIndex(*function* (*book*) {

    return book.title === title;

  });

*//check the numOfCopies*

  if (*this*.contentArr[wantedBookIndex].numOfCopies == 1) {

*this*.contentArr.splice(wantedBookIndex, 1);

  } else {

*this*.contentArr[wantedBookIndex].numOfCopies--;

  }

*// console.log(wantedBookIndex)*

};

*// toString*

Box.prototype.toString = *function* () {

  return `Dimensions of the book --> height: ${*this*.height} , width:  ${*this*.width} , langth":  ${*this*.langth}`;

};

*// override valueOf to det total count of books in all boxes*

Box.prototype.valueOf = *function* () {

  return *this*.getCountOfBooks();

};

console.log('-------------constructor function -----------------');

*// using*

*let* firstBook = new Book('Book1', '', 1, 4);

*let* secondBook = new Book('s', '', 1, 1);

*let* box1 = new Box(10, 20, 40, '');

*let* box2 = new Box(20, 20, 40, '');

box1.addBook(firstBook);

box2.addBook(secondBook);

console.log(

  'count of books in box1 before deleting one ' + box1.getCountOfBooks()

);

box1.deleteBook('Book1');

console.log(

  'count of books in box1 after deleting one ' + box1.getCountOfBooks()

);

console.log('count of books in all boxes ' + (box1 + box2));

console.log('number of created book object ' + getBookCount());

console.log(box1.toString());

*//-------------------------------------------------------*

*// 1- book class*

*class* ClassBook {

*static* count = 0;

*constructor*(*title*, *author*, *numOfPages*, *numOfCopies*) {

*this*.title = title;

*this*.author = author;

*this*.numOfPages = numOfPages;

*this*.numOfCopies = numOfCopies;

    ClassBook.count += 1;

  }

*static* getCount() {

    return ClassBook.count;

  }

}

*//2 - Box class*

*class* ClassBox {

*constructor*(*height*, *width*, *langth*, *material*, *contentArr* = []) {

*this*.height = height;

*this*.width = width;

*this*.langth = langth;

*this*.material = material;

*this*.contentArr = contentArr;

  }

*// add book*

  addBook(*book*) {

*this*.contentArr.push(book);

  }

*// count of books in box*

  getCountOfBooks() {

    return *this*.contentArr.reduce((*count*, *book*) => count + book.numOfCopies, 0);

  }

*// delete book*

  deleteBook(*title*) {

*// find the index of wanted book*

*let* wantedBookIndex = *this*.contentArr.findIndex(*function* (*book*) {

      return book.title === title;

    });

*//check the numOfCopies*

    if (*this*.contentArr[wantedBookIndex].numOfCopies == 1) {

*this*.contentArr.splice(wantedBookIndex, 1);

    } else {

*this*.contentArr[wantedBookIndex].numOfCopies--;

    }

*// console.log(wantedBookIndex)*

  }

*// toString*

  toString() {

    return `Dimensions of the book --> height: ${*this*.height} , width:  ${*this*.width} , langth":  ${*this*.langth}`;

  }

*// override valueOf to det total count of books in all boxes*

  valueOf() {

    return *this*.getCountOfBooks();

  }

}

console.log('-------------using classes -----------------');

*// using classes*

*let* firstBookClass = new ClassBook('Book1', '', 1, 4);

*let* secondBookClass = new ClassBook('s', '', 1, 1);

*let* box1Class = new ClassBox(10, 20, 40, '');

*let* box2Class = new ClassBox(20, 20, 40, '');

box1Class.addBook(firstBookClass);

box2Class.addBook(secondBookClass);

console.log(

  'count of books in box1 before deleting one ' + box1Class.getCountOfBooks()

);

*//delete based on title*

box1Class.deleteBook('Book1');

console.log(

  'count of books in box1 after deleting one ' + box1Class.getCountOfBooks()

);

console.log('count of books in all boxes ' + (box1Class + box2Class));

console.log('number of created book object ' + ClassBook.getCount());

console.log(box1Class.toString());