**////////////////////////QUESTION 1 IMPLEMENTATION STARTS HERE ///////////////////**

let book\_library\_collections = [];

let books = [

{

book\_title: "A Time to Kill",

author\_name: "John Grisham",

year\_of\_publication: 1989

},

{

book\_title: "The Firm",

author\_name: "John Grishamn",

year\_of\_publication: 1991

},

{

book\_title: "The Pelican Brief",

author\_name: "John Grisham",

year\_of\_publication: 1992

},

{

book\_title: "The Client",

author\_name: "John Grisham",

year\_of\_publication: 1993

}, {

book\_title: "The Chamber",

author\_name: "John Grisham",

year\_of\_publication: 1994

},

{

book\_title: "The Rainmaker",

author\_name: "John Grisham",

year\_of\_publication: 1995

},

{

book\_title: "The Runaway Jury",

author\_name: "John Grisham",

year\_of\_publication: 1996

},

{

book\_title: "The Partner",

author\_name: "John Grisham",

year\_of\_publication: 1997

},

{

book\_title: "The Street Lawyer",

author\_name: "John Grisham",

year\_of\_publication: 1998

},

{

book\_title: "The Testament",

author\_name: "John Grisham",

year\_of\_publication: 1999

},

{

book\_title: "The Brethren",

author\_name: "John Grisham",

year\_of\_publication: 2000

},

{

book\_title: "The Painted House",

author\_name: "John Grisham",

year\_of\_publication: 2001

},

{

book\_title: "The Skipping Christmas",

author\_name: "John Grisham",

year\_of\_publication: 2001

},

{

book\_title: "The Summons",

author\_name: "John Grisham",

year\_of\_publication: 2002

},

{

book\_title: "The King of Torts",

author\_name: "John Grisham",

year\_of\_publication: 2003

},

{

book\_title: "The Bleachers",

author\_name: "John Grisham",

year\_of\_publication: 2003

},

{

book\_title: "The Last Juror",

author\_name: "John Grisham",

year\_of\_publication: 2004

},

{

book\_title: "The Broker",

author\_name: "John Grisham",

year\_of\_publication: 2005

},

{

book\_title: "Playing for Pizza",

author\_name: "John Grisham",

year\_of\_publication: 2007

},

{

book\_title: "The Appeal",

author\_name: "John Grisham",

year\_of\_publication: 2008

},

{

book\_title: "The Associate",

author\_name: "John Grisham",

year\_of\_publication: 2009

},

{

book\_title: "The Confession",

author\_name: "John Grisham",

year\_of\_publication: 2010

},

{

book\_title: "The Litigators",

author\_name: "John Grisham",

year\_of\_publication: 2011

},

{

book\_title: "Calico Joe",

author\_name: "John Grisham",

year\_of\_publication: 2012

},

{

book\_title: "The Racketeer",

author\_name: "John Grisham",

year\_of\_publication: 2012

},

{

book\_title: "Sycamore Row",

author\_name: "John Grisham",

year\_of\_publication: 2013

},

{

book\_title: "Gray Mountain",

author\_name: "John Grisham",

year\_of\_publication: 2014

},

]

function add\_book\_to\_library() {

console.log("Question 1, add the following books in the library collection for author John Grisham");

console.log("===========================================")

for (let i = 0; i < books.length; i++)

book\_library\_collections.push(books[i])

return book\_library\_collections;

}

**////////////////////QUESTION 1 IMPLEMENTATION ENDS HERE ////////////////**

**/////////////////////////// QUESTION 2 IMPLEMENTATION STARTS HERE //////////////**

function books\_published\_before\_2000(book\_library\_collection) {

console.log("Question 2 A, Find All the books published before 2000 (by any author)");

console.log("===========================================")

let all\_books\_published\_before\_2000 = [];

for (let index = 0; index < book\_library\_collection.length; index++) {

let authorBook = book\_library\_collection[index];

if (authorBook.hasOwnProperty("year\_of\_publication") && authorBook.hasOwnProperty("book\_title")) {

if (authorBook.year\_of\_publication <= 2000)

all\_books\_published\_before\_2000.push(authorBook.year\_of\_publication);

}

}

console.log(all\_books\_published\_before\_2000);

}

function books\_published\_by\_john(book\_library\_collection) {

console.log("Question 2 A: Find books published by john")

for (let index = 0; index < book\_library\_collection.length; index++) {

let authorBook = book\_library\_collection[index];

if (authorBook.hasOwnProperty("book\_title") && authorBook.hasOwnProperty("author\_name")) {

if (authorBook.author\_name === "John Grisham")

console.log(authorBook.author\_name)

}

}

}

function books\_published\_not\_by\_john(book\_library\_collection) {

console.log("Question 2 C: Find books NOT published by john")

console.log("===========================================")

for (let index = 0; index < book\_library\_collection.length; index++) {

let authorBook = book\_library\_collection[index];

if (authorBook.book\_title && authorBook.author\_name !== "John Grisham")

authorBook.book\_title.concat(authorBook.author\_name);

}

}

function books\_published\_between\_2000\_and\_2009(book\_library\_collection) {

console.log("Question 2 D: Find All the books published between years 2000 and 2009")

console.log("===========================================")

for (let index = 0; index < book\_library\_collection.length; index++) {

let authorBook = book\_library\_collection[index];

if ((authorBook.year\_of\_publication >= 2000) && (authorBook.year\_of\_publication <= 2009))

console.log(authorBook.year\_of\_publication);

}

}

function books\_number\_of\_books\_published\_after\_2009(book\_library\_collection) {

console.log("Question 2 E: Find the number of books published after 2009")

console.log("===========================================")

for (let index = 0; index < book\_library\_collection.length; index++) {

let authorBook = book\_library\_collection[index];

if (authorBook.year\_of\_publication > 2009)

console.log(authorBook.year\_of\_publication);

}

}

function queries\_to\_find\_the\_following(book\_library\_collection) {

books\_published\_before\_2000(book\_library\_collection);

books\_published\_by\_john(book\_library\_collection);

books\_published\_not\_by\_john(book\_library\_collection);

books\_published\_between\_2000\_and\_2009(book\_library\_collection);

books\_number\_of\_books\_published\_after\_2009(book\_library\_collection);

}

**/////////////////////////// QUESTION 2 IMPLEMENTATION ENDS HERE ////////////////**

**///////////////////////////// QUESTION 3 IMPLEMENTATION STARTS HERE /////////////**

function delete\_all\_books\_published\_after\_2009(book\_library\_collection) {

console.log("Question 3 A: Delete All the books published before 2000 (by any author)")

console.log("===========================================")

let arr = [];

arr = book\_library\_collection.filter(n => n.year\_of\_publication < 2009);

console.log(arr);

}

function delete\_all\_books\_published\_by\_john\_grisham(book\_library\_collection) {

console.log("Question 3 B: Delete All the books published by John Grisham")

console.log("===========================================")

let arr = [];

arr = book\_library\_collection.filter(n => n.year\_of\_publication < 2009);

console.log(arr);

}

function delete\_all\_books\_not\_published\_by\_john\_grisham(book\_library\_collection) {

console.log("Question 3 C: Delete All the books not published by John Grisham")

console.log("===========================================")

let arr = [];

arr = book\_library\_collection.filter(n => n.year\_of\_publication < 2009);

console.log(arr);

}

function delete\_all\_books\_not\_published\_between\_2000\_and\_2009(book\_library\_collection) {

console.log("Question 3 D: Delete All the books published between years 2000 and 2009 (by any author)")

console.log("===========================================")

let arr = [];

arr = book\_library\_collection.filter(n => n.year\_of\_publication < 2009);

console.log(arr);

}

function queries\_to\_delete\_the\_following(book\_library\_collection) {

delete\_all\_books\_published\_after\_2009(book\_library\_collection);

delete\_all\_books\_published\_by\_john\_grisham(book\_library\_collection);

delete\_all\_books\_not\_published\_by\_john\_grisham(book\_library\_collection);

}

**////////////////////////////// QUESTION 3 IMPLEMENTATION ENDS HERE ////////////////////**

**//////////////////// EXECUTION POINT – SCRIPT RUNS HERE //////////////////////////////**

**/\***

**Question 1**

**Write a JavaScript function to add the following books in the library collection for author John**

**Grisham. The number in the parentheses is the year of publication.**

**\*/**

let book\_library = add\_book\_to\_library();

**/\***

**Question 2**

**Write queries to find the following:**

**\*/**

queries\_to\_find\_the\_following(book\_library);

**/\***

**Question 3**

**Write queries to delete the following:**

**\*/**

queries\_to\_delete\_the\_following(book\_library)

/\*

**Question 4 (Community Project)**

Either develop or selection a mobile application. Demonstrate this application to a community of your

\*/

choice. Discuss the application created/selected and how this uplifted the selected community.

\*/