JavaScript Day 2 Assignments
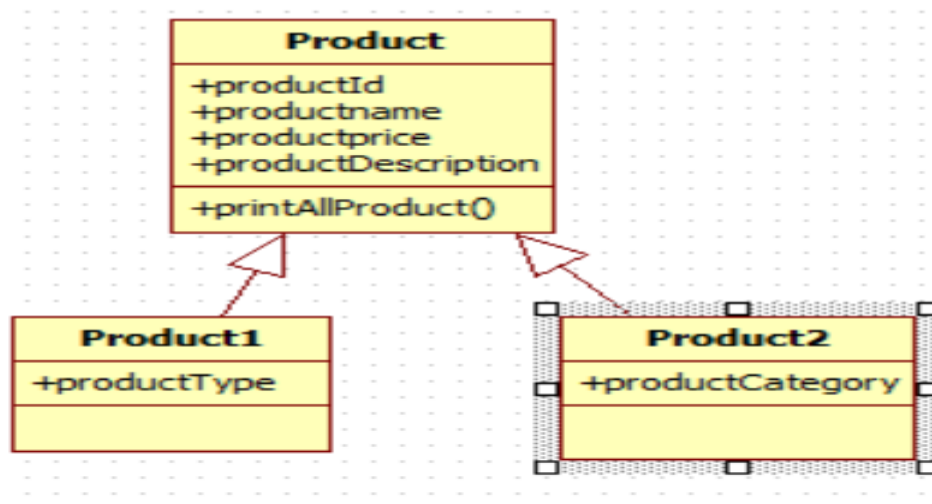
1. Create function Product, as shown in below diagram

Product

+productId
+productname
+productprice
+productDescription
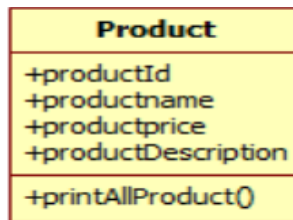
+printAllProduct()

    a.   Take data from user & put in the product.
    b.   Take number of product data by using console & print all data on console

2.Prototypal

Extend lab assignment one & as per below mentioned diagram

Product

+productId
+productname
+productprice
+productDescription

+printAllProduct()

Product1

+productType

Product2

+productCategory

Take data from console & Print all detail of Product 1 & Product 2 such as id, name, price, description .Also type & category for both product

3. Create a program in JAVASCRIPT that stores information about vehicles in an object. The properties to be stored should include Make, Model, Year, and Color. Write code that will display these properties using a single alert statement.

4. Class and Constructor Creation

Book Class

Create a script called library.js. In this file create a constructor function for a Book object. The Book object should have the following properties:

    Title

Available: Boolean representing whether the book is checked out or not. The initial value should be false.

Publication Date: Use a date object

Checkout Date: Use a date object

Call Number: Make one up

Authors: Should be an array of Author objects

Author Class

Create a constructor function for an object called Author. It should have a property for the first name and last name of the author.

Patron Class

Create a constructor function for an object called Patron. This represents a person who is allowed to check out books from the library.

Give it the following properties:

Firstname

Lastname

Library Card Number (Make one up)

Books Out: Make it an array

fine: Starts a 0.00

B. Methods to add

Book Class

Add a function to the Book **prototype** called "checkOut". The function will change the available property of the book from true to false and set the checkout date. The
checkout date should be set to the current date minus some random number of days.

Add a function to the Book prototype called "checkIn". The function will change the available property of the book from false to true.

Add a function called isOverdue that checks the current date and the checked out date and if it's greater than 14 days it returns true

Patron Class

Add a function to the Patron prototype called "read" that adds a book to it's books out property.

Add a function to the Patron prototype called "return" that removes a book from it's books out property.

C. Test Program

Create 5 different books from the Book Class and store them in an array called catalog.

Create 5 different patrons from the Patron Class and store them in an array called patrons.

Write a loop that simulates checkouts and checkins for a 3 month period. Every day iterate over the catalog, and every person in the patrons array. If the patron

currently has the book checked out then check it in. If it is not checked out then add it to the patrons list of books via the patrons read method. If the book is overdue then add a fine of $5.00 to the patron returning it. At the end of the 3 month period, display each patron, the books they have currently checked out and any fine they
   may have.

5. Create class using concept of EMCAScript6 as per below mentioned diagram

```
                        ┌─────────────────────┐
                        │       Mobile        │
                        ├─────────────────────┤
                        │ +mobileId: number   │
                        │ +mobileName: string │
                        │ +mobileCost: number │
                        ├─────────────────────┤
                        │ +printMobileDetail()│
                        └─────────────────────┘
                          △                △
                         ╱                  ╲
        ┌─────────────────────┐    ┌─────────────────────┐
        │     BasicPhone      │    │     SmartPhone      │
        ├─────────────────────┤    ├─────────────────────┤
        │ +mobileType: string │    │ +mobileType: string │
        ├─────────────────────┤    ├─────────────────────┤
        │                     │    │                     │
        └─────────────────────┘    └─────────────────────┘
```

All 3 classes are in separate file. We have to add mobile details such as id, name, cost & type from different typescript file & print data in console
   a.   Get Data from array

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