

Department of Physical Science
In-Course Assessment Examination –II
IT1214-Object-Oriented Design and Programming (Practical)
Answer all questions

Time: One hour and 15 minutes

September 2022

1. Create a class **Author** with following properties.

- **private** attributes *name* (**String**), *sex* (**char**- M or F) and *age* (**int**).
- a constructor to initialize the attributes.
- get methods(getter) for age and sex.
- a (**public**) method to display the details of author.

2. Create a class **Book** with following properties.

- **private** attributes *title* (**String**), *price* (**Double**), *pages* (**int**) and *author* (**Author**).
- a constructor to initialize the attributes.
- get methods for price, pages and author
- set method (or setter) for price.
- a (**public**) method to display the details of car including author's details.

3. Create a class **BookStore** with main method to do the followings.

- Create instances for following authors:

Name	Sex	Age
D.R.David	M	40
K.N.Irfhan	M	45
T.K.M.Kumari	F	36
S.Y.Nimali	F	32
L.Ramanan	M	30

- Create instances for following books:

Title	Price	Pages	Author
Introduction to Java	2000.00	340	K.N.Irfhan
Object-Oriented Design	2500.00	500	S.Y.Nimali
Java for Beginners	1800.00	300	D.R.David
Introduction to C	1500.00	250	L.Ramanan
Java Script for Beginners	1700.00	550	T.K.M.Kumari

- List or display the details of all books including author's details.
- List or display the details of all books which are written by female authors.
- List or display the details of all books which are written by youngest author.
- Increase each book's price with following conditions:
 - if the number of pages is < 500 increase the price by 20%
 - else increase the price by 10%.

Sample Output:

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The details of all books:
Title:Introduction to Java      Price:2000.0    Pages:340
Author's Details
      Name:K.N.Irfhan Sex:M    Age:45
Title:Object-Oriented Design    Price:2500.0    Pages:500
Author's Details
      Name:S.Y.Nimali Sex:F    Age:32
Title:Java for Beginners        Price:1800.0    Pages:300
Author's Details
      Name:D.R.David  Sex:M    Age:40
Title:Introduction to C Price:1500.0    Pages:250
Author's Details
      Name:L.Ramanan  Sex:M    Age:30
Title:Java Script for Beginners Price:1700.0    Pages:550
Author's Details
      Name:T.K.M.Kumari      Sex:F    Age:36
#####
The details of all books which are written by female authors:
Title:Object-Oriented Design    Price:2500.0    Pages:500
Author's Details
      Name:S.Y.Nimali Sex:F    Age:32
Title:Java Script for Beginners Price:1700.0    Pages:550
Author's Details
      Name:T.K.M.Kumari      Sex:F    Age:36
#####
The details of all books which are written by youngest author:
Title:Introduction to C Price:1500.0    Pages:250
Author's Details
      Name:L.Ramanan  Sex:M    Age:30
```

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The details of all books:

Title:Introduction to Java Price:2400.0 Pages:340

Author's Details

 Name:K.N.Irfhan Sex:M Age:45

Title:Object-Oriented Design Price:2750.0 Pages:500

Author's Details

 Name:S.Y.Nimali Sex:F Age:32

Title:Java for Beginners Price:2160.0 Pages:300

Author's Details

 Name:D.R.David Sex:M Age:40

Title:Introduction to C Price:1800.0 Pages:250

Author's Details

 Name:L.Ramanan Sex:M Age:30

Title:Java Script for Beginners Price:1870.0000000000002 Pages:550

Author's Details

 Name:T.K.M.Kumari Sex:F Age:36

[100%]