

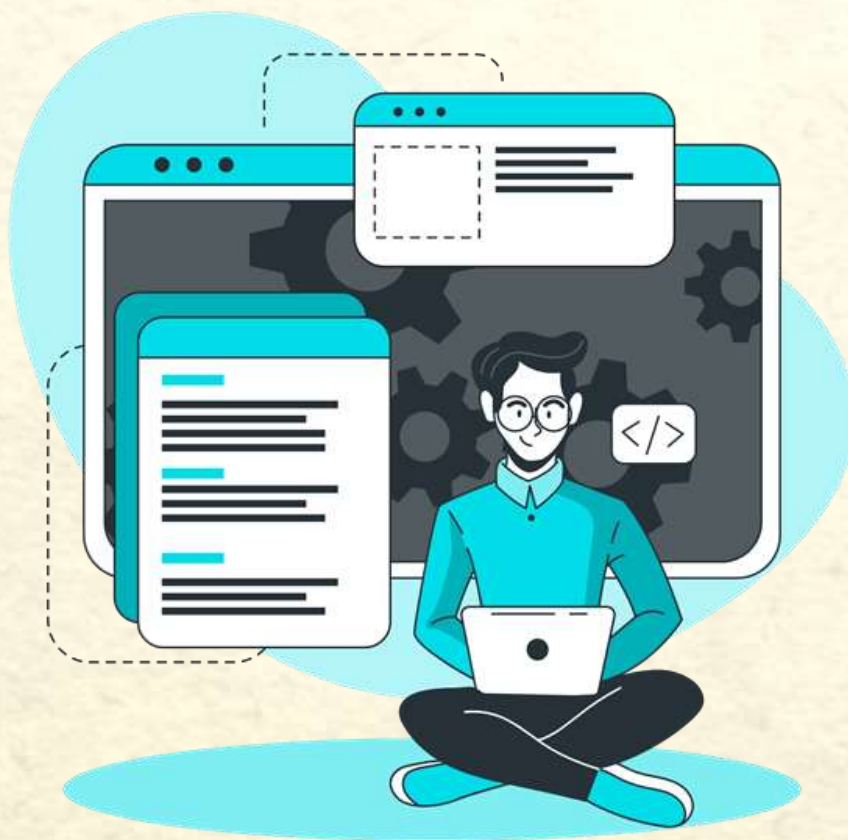
مکتب شریف

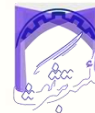
اولین بوتکمپ آموزشی - استخدامی ایران



سری پنجم

مکتب ۵۱





Meimanat has some books, podcasts and audiobooks on her phone. As studying something new instead of surfing the net is one of her 1400 resolutions, she needs a program to list everything in one place. Moreover, she has to give assignments to maktab "karvands" to ensure they have learned OOP inside and out. So here's what we want:

1. personal bookshelf

1. First of all, we have a list of books to add. so:
2. create a book class with attributes and methods:

1. attributes:

1. title
2. author(s)
3. publish_year
4. pages (number of pages)
5. Language
6. price

ii. methods:

1. read(pages):

to keep track of readen pages. update readen pages in this method ad print in this format:

*"you have read **x** more pages from **book_name**. There are **y** pages left"*

Note: you can not read more than book's pages. Print a comment about completing the book whenever needed.

2. print(book):

- a. override `__str__` method to print all book information

3. get_status():

based on number of readen pages, return 3 statues:

- a. 1- "unread" (no pages has been read yet)
- b. 2- "reading" (reading the book)
- c. 3- "finished" (all pages has been read)

- c. write a function to get data from input and make a book instance from that information

- d. add books to the bookshelf

Test:

i.create 3 books

1)

Title : No Friend But the Mountains

author(s) : Behrouz Boochani

Publish_year: 2018

pages (number of pages):374

Language: English

Price : 10 \$

2)

Title : *The Black Swan*

author(s) : Abbas Maroufi

Publish_year: 2007

pages (number of pages):280

Language: Persian

Price : 20 \$

3)

Title : *Symphony of the Dead*

author(s) : Behrouz Boochani

Publish_year: 2018

pages (number of pages):374

Language: English

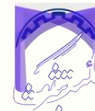
Price : 126 \$

- ii. *print all books*
- iii. *read from book 1,3*
- iv. *read from book 3*
- v. *get status of 1*
- vi. *get status of 2*

2. create different classes (using inheritance whenever needed) for other publication types listed in below table:

Note: listen method is just like the read method, but based on time.

media type	features	methods
Book	title author(s) publish_year pages language price	__str__ read get_status
Magazine	title author(s) publish_year pages language price issue	__str__ read get_status
Podcast episode	title speaker publish_year time language price	__str__ listen get_status
Audiobook	title speaker author publish_year pages	__str__ listen get_status



	book_language audio_language time price	
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In order to add other media types to the shelf, you need to update get_data function. You have to define media type first, then enter information to create it.

a. Add samples to shelf in a loop, until 'Quit' is typed.

i. Create a magazine:

title: Bukhara
 author(s): [Ali Dehbashi, Darioush Ashoori]
 publish_year: 2020
 Pages: 768
 language: Persian
 price: 55
 Issue: 140

ii. Create a podcast:

Sample:

title: Ravaaq
 speaker: Farzin Ranjbar
 publish_year: 2020
 time : 50(min)
 language: Persian
 Price: 0

iii. Create an audiobook:

Sample:

title: The Black Swan
 speaker: Ali Bandari
 author: Nassim Nicholas Taleb
 publish_year: 2020
 pages: 400
 time: 62
 book_language: English
 audio_language: Persian
 Price: 0

c. Print all shelf items

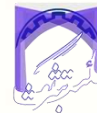
3. Let's define "progress" as percent of (pages/time) which has been (read/listened) for each media. For example, if 20 pages of a 100 pages book is read, progress is 20%.

So:

Write a function which sorts all shelf items (descending) based on progress and print their {media type, name, progress}

a. Print all items sorted

Note: This shelf is personal and we don't consider multiple users.



نکات ارسال تمرین:

۱- مهلت ارسال تمرین تا پایان روز پنجشنبه مورخ ۱۴۰۰.۰۱.۱۹ می باشد.

۲- پاسخ تمرین را از طریق گوگل فرم بفرستید. فرمت ارسال در گوگل فرم و گروه تلگرام مشخص شده است.
به عنوان مثال :

Maktab_51_HW5_Mohammad_Ali_Kargar

۳- در صورتی که تمرین شامل چندین فایل یا فولدر است همگی را فشرده و سپس ارسال نمایید.

۴- در صورت نیاز یک فایل word یا pdf جهت توضیحات بیشتر کد همراه پاسخ ارسال نمایید.

۵- تمیزی فایل گزارش و فایل های برنامه نویسی نیز بخشی از نمره را تشکیل میدهد.

در صورتی که سوالی دارید در **گروه تلگرامی** پرسید.

با تشکر