Programmering för testare

Inlämningsuppgift #2 – individuell

Published: 2022-12-19 via OmniWay

Deadline: 2023-01-02 kl 23.55

Library System:

Our School has a system that mange all employees and students and recently they started a small library that got big success and decide to build a python system as well.

This system should work independently right now, and the manager of the school's library would like to have an easy python system that manage books already has as well as new books.

According to this manager these Books are in 3 main different categories:

- **Literature books**: that students and teachers are allowed to borrow for max 4 weeks. It is Free of Charge for students and 10_SEK for teachers.
- **Science books:** that students are allowed to borrow for max 4 weeks. And teachers for 2 Weeks. It is 5_sek for students and 15 SEK for teachers.
- **Entertainment books:** that students and teachers are allowed to borrow for max 3 weeks. It is Free of Charge for student and for teachers.

The system should be written in Python and create **the needed classes, look for attached code for these classes Book and Borrower with this task!**

Based on these classes the System should has **main desktop app called New_library_app** that store books and borrowers into 2 different dictionaries, and need a menu to manage these operations:

1. Method called **menu_choices()** that print the list of these choices(and **'Quit'** to quit).
2. Menu choice #1 = Adding new borrower by reading in via input () the name and Id and ask/identify if it was a teacher or a student then add it to borrower_dict{}.
3. Menu choice #2 = Add a new book to book_dict{}.
4. Menu choice #3 = Borrow or rent out a book to teacher or to student and when should be returned. (don't forget to change the status_week into the book in book_dict{}).

5. Menu choice #4 = Return a book and print out the charges applied.
6. Menu choice #5 = Create method that Print out in the terminal all books we have in library.
7. Menu choice #6 = Create method that Print out a report that show:
    a. the current funds collected,
    b. how many books we have in the library.
    c. how many books we borrowed.

Your Tasks:

1. Testing the constructor in Book class. **(4 point)**
2. Testing __repr__( ) into Book class. **(4 point)**
3. Testing is_available ( ) into Book class. **(4 point)**
4. Testing borrow_book( ) into Book class. **(4 point)**
5. Testing return_book( ) into Book class. **(4 point)**
6. Testing the constructor in Borrower class. **(4 point)**
7. Testing __repr__( ) into Borrower class. **(4 point)**
8. Create the main app with needed dictionaries and needed menu_choices(). **(30 point)**
9. Testing menu_choices() **in this case only** : testing that print the choices -> user input Quit.
    (6 point)
10. Testing each method/choice in **New_library_app. 6 choices. (36 point, 6 per each)**

Betyg : G more than 80 points