OOP: Simulate operations of British Council BD - MS1_V2.

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0. Default Page:

i. Schedules of currently occurring local events and classes.

- Takes information from the events etc. created by Manager class employees to display. Unique to each branch.

ii. Display notices from Admin.

- Maintains a notice board of recent notices posted by Manager class employees of this branch.

iii. Display upcoming sessions of international exams and (i.e registration open).

- Takes information from the exam created by Manager class employees to display.
- Shows registration start, end, last-day-of-cancellation dates, list of subjects offered along with the fee when double-clicked.

iv. Self-register for an exam (IELTS, IGCSE, IAL).

- Any user (non-employees) can use this to register for an international exam (which is created/enabled by a Manager).
- Click “Register for an exam”. Select exam series. Venue options appear depending on exam series selected.
- Enter email address, name, address, phone number, date of birth etc.
- Select exam subjects from a dropdown list. Click “x” symbol to remove a choice if necessary. Confirm.

- ExamSeries_Session_candidateNum_RegistrationSlip.pdf is generated.
- Registration sent to “Pending Payment” list. Once payment has been confirmed by an accountant, it is moved to “Valid Registrations” list (visible to receptionists).

v. Self-Register for an event or on-premise class using membership ID.

- Click “Register for an event or class”.
- Enter membership ID. ID validity is checked from the database.
- Select event from list if valid membership. Member may only register for event if it has capacity.
- Confirm to generate EventTitle_memberID_RegistrationSlip.pdf.
- If registration is free (i.e fee = 0), add member to the event’s registeredMembers list. Else, send to accountant’s EventPaymentPending list to be validated after payment.

vi. Let users log in. Button changed to log out if already logged in.

- Enter username and password. Select employee type. Click login.
- If all three match, log user in and open default scene for the user.
- Clicking the “Home” button allows users to view this Default page again.
- If already logged in, login button is shows “logout”.

1. Receptionist:

i. Register a new membership and print out registration slip. Documents such as photos and identification are attached. Print out ID card for a member.

- Click “Register New Member” button from the left sidebar.
- Type in fields: Name, Date of Birth, Address, e-mail, Phone, Identification document type/number (e.g. passport, NID).
- Click “Register”, authenticate, Unique ID number is generated for this new member and the member is added.
- If successful, generate registration slip (Tk.1000/-fee payable immediately to receptionist).
- Enables “Print new member ID” button. MemberID card pdf is generated on click. More copies can be printed from the “Print ID card” button from Modify/Renew section.
- Add fee transaction entry to “Memberships” financial account.

ii. Modify or Renew a membership

- Click Members List.
- Double click desired member.
- If renewing: Add an extra year to member’s validity period and generate MemberID_date_renewalSlip.pdf (fee payable immediately to receptionist).
- Add entry to transaction history file as MemberID-”membREN”-500+-”to”-ReceptionistID
- Add amount to branch’s “Members” balance.
- If modifying: View text fields. Modify as desired, “Confirm” to commit to the database.
- Generate an updated MemberID_ID_card.pdf using member object fields.

iii. Lodge requests for exam registration cancellation. All requests sent to the shared-queue of Instructor-class employees for approval.

- View valid candidates list, select exam from combobox, select candidate and view.
- Check if registration cancellation window has passed. If not, ungrey ApplyForRefund button. Add reasons text.
- Send to Instructor’s queue to await approval/forwarding.
- Generate cancellation application slip.

iv. Query the availability of a certificate in the archives. Mark as "handed-over" once the recipient takes delivery.

- Click “Certificates” option from sidebar menu. A new window will open.
- Select exam series (e.g. IAL) and session (e.g. Summer 2019).
- Enter year, candidate number and search.
- Display status of certificate e.g. “available” or “handed over on dd/mm/yyy”.
- If the certificate is in the archive and the recipient wishes to take delivery, click “Mark as handed over”.
- Certificate status changed to handed-over.

v. View lists of members, exam registrations,

- Click “Members list” to view list of members.
- Click “Exam registrations list” to display list of currently active exams. Select an entry (e.g. IAL Summer 2021) to viewlists of approved registrations.

2. Accountant:

i. Accept fees for an international exam registration and mark said registration as valid.

- Click “International Exam Payment”. Select exam, select registration.
- Enter name of person paying and the paid amount. Click Mark as Paid.
- Check if the paid amount matches registration slip value.
- Enter accountant’s authorisation code to authorise payment received.
- Registration is removed from the queue of pendings and is added to list of validated registrations.
- Generate paid slip.
- Paid amount is added to FinancialAccounts file (EXAM_REG account).

ii. Refund a cancelled international exam registration.

- Click “Pending Refunds”, select.
- Enter name of refundee and amount of refund calculated as (int)PaidAmount * 0.75. click “Refund Now”
- Enter accountant’s authorisation code to authorise.
- Registration removed from list of validated registrations.
- Generate refunded slip.
- Refunded amount is added to FinancialAccounts file (EXAM_REFUND account).

iii. Accept payment and validate a member’s event/course registration.

- Click “Event Registration Fee”. A list of pending payments opens in a new window. Shown as: MemberID-EventTitle-Amount.
- Search by member ID.
- Select registration, “Mark as paid”. Enter auth. code.

- Registration removed from queue, memberID added to event’s registered list.
- Add the amount to the branch's “local events fee” balance of financial account file.

iv. Accept payment for a library fine (late or lost book)

- Click “Library Fine”, select member (dues shown), click mark as paid. Usual checks apply.
- Clears all member dues. Generate slip.
- Add the amount to the branch's “library fine” balance of financial account file.

v. Show balances of various accounts of the current British Council branch and the transaction history.

- Click Accounts Summary. Select an account to view entire transaction history.

3. Manager:

i. Create on-premise events/class. Information (e.g. registration period, details) that are shown in the default page.

- Click “Create Local Event”. A new window opens.
- Enter event title, Event detail and capacity, fee, schedule, last day of registration, instructor name & ID (if course). Tick event or class box. Click confirm. Authentication is required
- New event is created and added to branch’s list of events.

ii. Post/remove notices to the default page notice board.

- Click “Post notice”. List of notices opens.
- To remove, select a notice and select “remove”.
- Enter notice text in the box that appears, click post.

iii. Enable registration for an international exam session.

- Click “International Exam Enable”
- Select type (ial,igcse,ielts) and session (summer, winter, spring), enter year.
- Enter registration window dates, cancellation date.
- Enter subjects offered and their prices.
- Confirm to create. Authentication required.

iv. Add an employee to the system (for hirings - needs documents).

- Click “Add employee”.
- Enter name, date of birth etc. fields. Select employee type, create.
- New employee is added to branch’s employee list and can now login using the password set during creation.

v. View list of all employees of the current branch and their details.

- Select from table, click “View”. A window will open with employee details.

4. Instructor:

i. View the relevant documents and fields and approve exam cancellation request filed in <1.iii>. Approved requests are forwarded to queue of accountant to be refunded.

- Click “Exam related requests” to view list of cancellation requests.
- Select an entry to view details.
- Click approve or disapprove, enter authorisation code.
- Approved request removed from list of valid registrations. Also forwarded to queue of accountant for refunding.

ii. View scheduled class timings and students', exams info.

- Courses section has combobox of courses of this instructor.
- Selecting course shows students and exams list.

iii. Assign grades to students.

- While viewing a class, click the “Assign grades” button.
- In the new window, enter the test title, total marks, percentage, date taken.
- A list of students open. Enter marks for first student, remarks if necessary.
- Clicking next brings up next student.
- Click commit once all done to finally save to database.

iv. Generate report card for students.

- While viewing a class, select student, click the “Generate Report” button.
- May only be done once 100% of exam are graded

v. View pie chart of grade distribution of a class

- Select “exam” to generate pie chart of exam, or “overall” to generate pie chart from overall student data. Shows proportion of students at each grade level (eg. 90+ A, 80+ B etc).

vi. Create Exam for class

- Click add exam, enter marks, percentage of total, title. Create exam that can be graded and used to generate piechart.

5. Librarian:

i. View list of all books sorted by various fields (e.g. alphabetically, by genre, availability etc.). Search a book from the list.

- This is the default page for the librarian user.
- Searching with a search bar only displays books whose title matches search terms.
- Clicking (or searching) a book shows all of the above info in the sidebar along with Cover Photo, Year, Publisher, ISBN.
- A list on the sidebar shows borrower IDs, date borrowed, and return-by date if applicable.

ii. Add book to collection.

- Click “Add Book” button. A new window opens.
- Click “Add book” from the window to go to the fields page. Type in new book info, add cover image and click “Confirm”, authenticate to create book entry in this branch’s library database. Book fields: “Title-Author-Genre-Year-Available-Total-CoverPhoto-Publisher-ISBN-Price”

iii. Mark a book as borrowed/returned. For borrowings, the borrower's membership ID and other relevant information are recorded and a slip is printed out. Each member may only borrow 3 at a time and must not be in blacklist.

- Click “Borrow/Return” button to open a new window.
- Enter member’s ID number. Check if the ID number is valid and such a member exists. If the check is successful, proceed.
- List of borrowed books by this member is shown in the format Title-Author-DateBorrowed-ReturnBy.

- Click the book in the list to view the “Return” option and confirm. The book’s availability increments by 1, and is removed from the borrower's list.
- Generate ReturnSlip.pdf (applicable only for timely returns).

- Check if ReturnBy date has not passed for any of the books in list. Check if the member currently has less than 3 books borrowed and if their membership has not expired. Enable search-bar iff all checks OK.
- Type in book title to search.
- Check if title is the correct format. Check whether the member already has the searched book borrowed. If not, throw relevant error messages and ask to enter again.
- IFF both checks are successful, initiate search.
- If found, display book details the same way as in the main window details sidebar.
- Check if availability is greater than 1. Grey out “Borrow” button if not.
- Click “Borrow” button on the book detail window to generate BorrowingSlip.pdf for the book. Book availability is decremented by 1 and is entered into the member’s borrowed list.
- Check if borrowing capacity is exceeded. Grey out search bar if so. If more slots are available, librarians may search again.

iv. View list of members who have borrowed books, along with information of the book borrowed

- In the main page, click “Members” tab to switch from the books list to member’s list page. Format: “memberID-Name-Book1\nBook2\nBook3(Titles)-PendingFines”.

v. Late returns and mark book as lost. Opens a similar page as the returns page.

- If book is lost, mark as lost. Decrements total copies of book, enters fine into member’s record so that they may not borrow again. Fine includes late fee, if any already incurred.
- Late return allows to return books past returnBy date. Adds due to member records.
- Print late/lost slip as appropriate. Payable to accounts before member can borrow again.