

```

classDiagram
    class Journal {
        +volume: int
        +getVol()
    }
    class newspaper {
        +bill: string
        +calculateBill()
    }
    class Magazines {
        +issue_no: int
        +year: year
        +getIssueNo()
    }
    class Book {
        +book_id: int
        +name: string
        +author: string
        +publisher: string
        +price: double
        +date_of_purchase: date
        +displayBook()
    }
    class «enumeration» book_type {
        referencebook
        novels
        magazines
        fiction
        Literal
        anime
    }
    class Reference_Books {
        +edition: int
        +ISBN: string
        +getISBN()
    }
    class Library {
        +library_name
        +library_id
        +getDetails()
    }
    class divisions {
        +div_name
        +div_address
    }
    class Librarian {
        +name
        +password
        +address
        +issueBook()
        +returnBook()
        +maintainRecord()
        +search()
    }
    class Transaction {
        +transaction_id
        +member_id
        +book_id
        +issue_date
        +due_date
        +createTransaction()
        +delTransaction()
        +displayTransaction()
    }
    class Member {
        +mem_id: int
        +name: string
        +branchName: string
        +address: string
        +bookBorrowed: string
        +requestBook()
        +returnBook()
    }
    class Bill {
        +bill_id
        +date
        +mem_id
        +amount
        +createBill()
        +updateBill()
        +processBill()
    }
    class student {
        +SName
        +SUSN
        +SDept
        +SSem
        +addStud()
        +RemoveStud()
        +editStud()
        +searchStud()
    }
    class Teaching_staff {
        +name: String
        +getdetail()
    }
    class Non_teaching_Staff {
        +name: String
        +getdetail()
    }
    class Staff {
        +designation
        +name
        +dept
        +age
    }

    Journal --|> Book : +has
    newspaper --|> Book : +has
    Magazines --|> Book : +has
    Book --|> book_type
    Book --|> Reference_Books : +has
    Library -- "1" -- "0..*" divisions : +has
    Library -- "1" -- "1" Librarian : +works for
    Librarian -- "1" -- "1..*" Transaction : +creates
    Librarian -- "1" -- "1..*" Bill : +pays
    Member -- "1" -- "1..*" Transaction : +request {sequence}
    Member -- "1" -- "1..*" Bill : +request
    Member --|> student : +includes
    Member --|> Teaching_staff : +includes
    Member --|> Non_teaching_Staff : +includes
    Member --|> Staff : +includes
    Transaction -- "1" -- "1" Bill : +refers
    
```