**实 验 报 告**

**课程名称：**  **模型驱动的软件开发技术**

**学 院： 计算机科学与工程学院**

**专 业：** **软件工程**  **班 级： 软件18-1班**

**姓 名：KAFLE SAMRAT学 号： 201801060933**

**2020年 09月 21日**

**山 东 科 技 大 学**

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| **组 别** |  | **姓 名** | **KAFLE SAMRAT** | **同组实验者** |  |
| **实验项目**  **名称** | [用例建模实验总结](javascript:void(0);) | | **实验日期** | **2020.9.21** | |
| **教师评语** |  | | | | |
| **实验成绩：** | | | **指导教师（签名）：**  **年 月 日** | | |
| 1. **要求和内容：**   本实验要求学生对学校的图书馆管理系统进行需求分析，对系统功能进行用例建模，画出用例图，类图以及相应的时序图。在使用UML对系统建模时，学会使用UML建模工具， 熟悉工具中的功能。  **二， 实验过程：**   * 1. 创建一个project，名称为实验一。   2. 在Moudle中创建一个view，并在view中创建Diagram   3. 在Diagram中导入所要生成类图的工程。         **三，Creating UML diagram of Library management System**     1. User who register himself as a new user initially is regarded as staff or student for the library system.  * For the user to get registered as a new user registration forms are available that is needed to be filled. * After registration, user may apply for the library card.  1. After getting the library car user can borrow book from the library or can reserve the book from library as per rules and regulation of the system. 2. After requesting, the desired book or the requested book is reserved by one user that means no other user can request same book. 3. User must renew the book or give back to the library on time. 4. If the user dose not return back the book on time then user must pay fine. 5. User may fill the feedback form if they want. 6. Librarian has a key role in this system. Librarian adds the records in the library database about each student or user every time issuing the book or returning the book, or paying fine. 7. Librarian also deletes the record of a particular student if the student leaves the college or passed out from the college. If the book no longer exists in the library, then the record of the particular book is also deleted. 8. Updating database is the important role of librarian.   四， **class of library management system**    Library Management System class, Attribute and methods:   * It manages all operations of library management system. It is central part of organization for which software is being designed. * Usertype , username, password – attribute * Login(), Register(),Logout() – method   User class:   * It manages all operations of user. * Name, ID -- Attributes * Verify(),checkaccount(),get\_book\_info() --method   Librarian class:   * It manages all the operations of librarian. * Name, Id, Password, SearchString – attribute * Verify\_librarian(), Search() -- method   Book class:   * It manages all operations of book. It is basic building block of system. * Title, Author, Publication – attribute * Show\_duedt(), Reservation\_status(), Feedback(), Book\_request(), Renew\_info() -- method   Account Class:   * It manages all operation of account. * no\_borrowed\_books, no\_reserved\_books, no\_returned\_books, no\_lost\_books, fine\_amount – attribute * Calculate\_fine() -- method   Library database class:  -it manages all operations of library database.  - booklist – attribute  - Add(), Delete(), Update(), Display(), Search() -- method  List\_of\_books -- attribute  Staff class:   * It manages all operations of staff. * Dept -- attribute   Student class:   * It manages all operations of student. * Class -- attribute  1. 问题及解决方案   **遇到的问题：**众多类图生成后聚合重叠在一起，不易观察。  **解决方案：**通过EA的Diagram Layout视图按钮对所有的类图进行整理，即可得到简洁的类图和类图之间的关系图。   1. 实验总结   通过本次实验简单的了解了EA的使用方法，通过EA可以简单地实现一个工程的类图建造，并可对建好的类图进行管理。还可以通过EA来制作类图，并通过类图来直接生成简单的程序框架。 | | | | | |