**PIMPRI CHINCHWAD EDUCATION TRUST'S**

**PIMPRI CHINCHWAD COLLEGE OF ENGINEERING**

**DEPARTMENT OF COMPUTER ENGINEERING**

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**MINI PROJECT REPORT**

**TITLE : STUDENT DATABASE MANAGEMENT SYSTEM.**

**Subject: Object Oriented Programming Lab**

**Group Members:**

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| --- | --- | --- |
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1. **INTRODUCTION-**

**STUDENT DATABASE MANAGEMENT SYSTEM.**

Student Management System is a basic C++ program for education establishments to manage student data and manage many other student-related data needs in a school. In this Student Management System project, there are mainly 3 types of users (hence 3 classes ). They are admin , student and staff.

Admin:

Admin is the who takes admissions and assigns students as well as staff with their unique id and password . This id and password can be used by student/staff to login to their accounts and view information related to them. The personal data like address is visible to admin but password is not visible. A student/staff can leave college . Hence Admin has provision to remove student/staff.

Student:

Each student has a password (which is visible to only student) and a unique id.

If student enters his correct password and id then

Student can view his profile ,check his attendance and marks.

Staff:

Each staff has a password (which is visible to only staff) and a unique id.

If staff enters his correct password and id then

Staff can view his profile , enter marks and attendance of students of only the subject he teaches .

**MODULES PRESENT IN THE PROJECT:**

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| **MAIN MENU :**  **1 : ADMIN**  **2 : STAFF**  **3 : STUDENT**  **(Also check corresponding passwords)** |

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| --- | --- | --- |
| **STUDENT**  1.View Profile  2.View Attendance  3.View Marks | **STAFF**  1.View Profile  2.Manage attendance  3.Manage Marks | **ADMIN**  1.Add Student  2.Remove student  3.Add staff  4.Remove staff  5.List Students  6.List Staff |

**OOP CONCEPTS USED:**

**CLASSES AND OBJECTS:**

Classes of admin, student and staff and their corresponding objects

**ENCAPSUATION:**

All data related to a class is within one class .If it is required by other classes specific functions are called. Example checkpassword(char check[]) is a function of student class that checks if password is valid.

**INHERITANCE:**

Multilevel inheritance used in student class**.**

**EXCEPTION HANDLING:**

Exception handling is used in checking passwords , file handling to check records ,etc.

**FILE HANDLING:**

Binary files are created for storing student and staff data , the total count of student and staff is stored in config file.

**POINTER:**

This pointer is used at appropriate places.

Sign of Faculty