

Develop an application to store Student information using following services:-

- 1- Insert a Student data
- 2- Search a Student data (if logged in).
- 3- Remove a Student data (if logged in).
- 4- Update student email Address (if logged in).
- 5- Calculate aggregate marks scored by the Student at the end of academic year (if logged in).
- 6- Retrieve the Grade of the Student on basis of their aggregate marks (if logged in).

Project Structure:-



Student Class Structure:-

```
public class Student {  
    private int regno;  
    private String fname; //should have max of 10 char  
    private String lname; //should have max of 12 char  
    private String email;  
    private double monthlyMarks;  
    private double quaterlyMarks;  
    private double aggregateMarks;  
    private String password; //should be alphanumeric  
}
```

Marks Grade Structure:-

Marks	Grade
9.1 – 10	A+
8.1 – 9.0	A
7.1 – 8.0	B
6.1 – 7.0	C
5.1 – 6.0	D
4.1 – 5.0	E
Below 4.0	Fail

Note:

- (i) *You need to use Spring and Hibernate for creating the above application.*
- (ii) *Use DAO Design pattern for DB Interactions.*
- (iii) *On successful login it should go to home page.*
- (iv) *If invalid credentials are given then display proper error message using custom exceptions.*
- (v) *After 3 unsuccessful attempts account should be locked and on the 4th attempt it should display the message as “Account has been locked. Please Contact System”*
- (vi) *When the account is locked, after one hour if the user tries again to login then it should allow the user to go to home page if the credentials are proper.*