

Student Loan System Problem

You have been tasked with developing the software for an automated **student loan system** for use at universities. The system is fully web-based and connects multiple regional banks with students needing loans for tuition, etc. There are three key users of the system: (i) bank officers who need to review and approve student loans and also advertise to students to select their bank, (ii) the students who can apply online, request monthly checks for living expenses, approve payment to school for tuition, etc. and (iii) the school billing office to track the progress of the loans and submit payment requests to the banks that have approved the loans to directly pay tuition bills. These requests are then posted on the student's web page for them to approve.

The features (functionality) of the system include:

1. fully web-based access for all three types of users
2. Interfaces to:
 - a. a database of banks and their loan terms from which students can select best rates for the amounts they need
 - b. a database of student financial information for each student visible only to the bank officers
 - c. a view of the database of the students that applied for loans and their status for the registrar to see who is approved and for what amounts
 - d. the credit reporting bureaus for gathering students credit reports
3. screens for loan officers to access system for reviewing loans
4. screens for students to access system for applying for loans
5. screens for registrar to direct billing the loans directly for tuition payments
6. screens for students to access system for monthly support checks
7. a loan risk calculator for the bank to use that determines whether to approve a student loan request
8. payment calculator that takes all the student's loans and computes the predicted monthly bill and interest and principle paid each month when loan re-payment begins