

| Class Name: BankInfo | |
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| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> ID of the bank Name of the bank <p>Does</p> <ul style="list-style-type: none"> Carry bank information within a login response | <ul style="list-style-type: none"> LoginSystem |

| Class Name: ApproveResponse | |
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| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> If status change was a success and error if not <p>Does</p> <ul style="list-style-type: none"> Carry loan status change success or failure to the frontend | <ul style="list-style-type: none"> LoanSystem |

| Class Name: LoanResponse | |
|---|--|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> Detailed student information Detailed loan information <p>Does</p> <ul style="list-style-type: none"> Carry student and loan information to frontend in a response to a request for loan details | <ul style="list-style-type: none"> LoanSystem |

| Class Name: LoanApproveInformation | |
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| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> ID of user requesting loan status change ID of the loan a status change is being requested on If loan is approved or denied <p>Does</p> <ul style="list-style-type: none"> Carry request of user to approve/deny loan from frontend to backend | <ul style="list-style-type: none"> LoanSystem |

| Class Name: LoanInformation | |
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| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> • ID of the loan • ID of the bank the user is associated with <p>Does</p> <ul style="list-style-type: none"> • Carry request of user to view loan details from frontend to backend | <ul style="list-style-type: none"> • LoanSystem |

| Class Name: LoanSystem | |
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| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> • Request of the user to view or change status on loans <p>Does</p> <ul style="list-style-type: none"> • Handle detail retrieval of loans • Handle status updates of loans | <ul style="list-style-type: none"> • LoanRepository • UserRepository • StudentRepository • BankRepository • BankOfficerRepository • LoanInformation • LoanResponse • LoanApproveInformation • ApproveResponse • Bank • BankOfficer • Loan • Student • User |

| Class Name: LoanListInformation | |
|--|--|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> • ID of student to filter by • ID of bank to filter by • Name of the school to filter by <p>Does</p> <ul style="list-style-type: none"> • Carry request of user to view a loan list from frontend to backend | <ul style="list-style-type: none"> • LoanListSystem |

| Class Name: LoanListResponse | |
|--|--|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> • List of loans <p>Does</p> <ul style="list-style-type: none"> • Carry loan information to frontend in a response to a request for a loan list | <ul style="list-style-type: none"> • LoanListSystem • LoanView |

| Class Name: LoanView | |
|--|--|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> • Loan information at a glance • Student information at a glance • Bank information at a glance <p>Does</p> <ul style="list-style-type: none"> • Carry loan information to frontend in a response to a request for a loan list | <ul style="list-style-type: none"> • LoanListSystem |

| Class Name: LoanListToLoanViewListTransformer | |
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| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> • List of loans and their associated entities <p>Does</p> <ul style="list-style-type: none"> • Transform a loan into a view of the loan | <ul style="list-style-type: none"> • LoanView • Loan • Bank • BankRepository • Student • LoanListResponse |

| Class Name: LoanListSystem | |
|---|--|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> • Request of the user to view a list of loans <p>Does</p> <ul style="list-style-type: none"> • List out loans and filter them by requested parameters | <ul style="list-style-type: none"> • LoanListInformation • LoanListResponse • LoanListSystem • LoanListToLoanViewListTransformer • BankRepository • LoanRepository • StudentRepository • Loan • Student • LoanView |

| Class Name: LoanListSystem | |
|---|--|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> • Request of the user to view a list of loans <p>Does</p> <ul style="list-style-type: none"> • List out loans and filter them by requested parameters | <ul style="list-style-type: none"> • LoanListInformation • LoanListResponse • LoanListSystem • LoanListToLoanViewListTransformer • BankRepository • LoanRepository • StudentRepository • Loan • Student • LoanView |

| Class Name: BankOfficerResponse | |
|--|---|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> • Bank information • User roles • Whether authentication was successful <p>Does</p> <ul style="list-style-type: none"> • Carry login status to the frontend after a login request for a bank officer | <ul style="list-style-type: none"> • LoginSystem • BankInfo |

| Class Name: LoginResponse | |
|--|---|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> • User roles • Whether authentication was successful <p>Does</p> <ul style="list-style-type: none"> • Carry login status to the frontend after a login request for a generic user | <ul style="list-style-type: none"> • LoginSystem |

| Class Name: StudentResponse | |
|--|---|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> • Student Information • User roles • Whether authentication was successful <p>Does</p> <ul style="list-style-type: none"> • Carry login status to the frontend after a login request for a student | <ul style="list-style-type: none"> • LoginSystem |

| Class Name: LoginInformation | |
|---|---|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> • Principle with which a user attempted to authenticate <p>Does</p> <ul style="list-style-type: none"> • Carry information from frontend login request to backend | <ul style="list-style-type: none"> • LoginSystem |

| Class Name: LoginSystem | |
|--|---|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> Request user tries to authenticate with <p>Does</p> <ul style="list-style-type: none"> Fetch a user from the database and give out their information Ensure frontend request using this information has the correct credentials | <ul style="list-style-type: none"> BankOfficerResponse LoginResponse StudentResponse LoginInformation UserRepository StudentRepository BankOfficerRepository BankRepository Bank BankOfficer Student Uesr |

| Class Name: Bank | |
|---|---------------|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> ID Bank ID Bank Name <p>Does: Nothing.</p> | |

| Class Name: BankOfficer | |
|---|--|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> ID Officer Name Bank <p>Does: Nothing.</p> | <ul style="list-style-type: none"> Bank |

| Class Name: Loan | |
|---|---|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> ID Bank Student Amount Interest Terms Status <p>Does: Nothing.</p> | <ul style="list-style-type: none"> Bank Student |

| Class Name: Student | |
|--|---|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> • ID • Name • Address • School • Credit Score • Family Income • Tuition • Student ID <p>Does: Nothing.</p> | <ul style="list-style-type: none"> • Bank • Student |

| Class Name: User | |
|--|---------------|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> • ID • Username • Password • Role • Person ID <p>Does: Nothing.</p> | |

| Class Name: BankOfficerRepository | |
|--|---|
| Responsibilities | Collaborators |
| <p>Knows: Nothing.</p> <p>Does</p> <ul style="list-style-type: none"> • Fetches bank officers from the database | <ul style="list-style-type: none"> • BankOfficer |

| Class Name: BankRepository | |
|--|--|
| Responsibilities | Collaborators |
| <p>Knows: Nothing.</p> <p>Does</p> <ul style="list-style-type: none"> • Fetches banks from the database | <ul style="list-style-type: none"> • Bank |

| Class Name: LoanRepository | |
|--|--|
| Responsibilities | Collaborators |
| <p>Knows: Nothing.</p> <p>Does</p> <ul style="list-style-type: none"> Fetches loans from the database | <ul style="list-style-type: none"> Loan |

| Class Name: StudentRepository | |
|---|---|
| Responsibilities | Collaborators |
| <p>Knows: Nothing.</p> <p>Does</p> <ul style="list-style-type: none"> Fetches students from the database | <ul style="list-style-type: none"> Student |

| Class Name: UserRepository | |
|--|--|
| Responsibilities | Collaborators |
| <p>Knows: Nothing.</p> <p>Does</p> <ul style="list-style-type: none"> Fetches users from the database | <ul style="list-style-type: none"> User |

| Class Name: ApplicationInformation | |
|--|---|
| Responsibilities | Collaborators |
| <p>Knows:</p> <ul style="list-style-type: none"> Template ID Student ID Amount <p>Does</p> <ul style="list-style-type: none"> Carries information from frontend request for loan application | <ul style="list-style-type: none"> LoanApplicationSystem |

| Class Name: ApplicationResponse | |
|--|---|
| Responsibilities | Collaborators |
| <p>Knows:</p> <ul style="list-style-type: none"> • Result • Error message <p>Does</p> <ul style="list-style-type: none"> • Respond to frontend with status for a loan application | <ul style="list-style-type: none"> • LoanApplicationSystem |

| Class Name: LoanApplicationSystem | |
|--|---|
| Responsibilities | Collaborators |
| <p>Knows:</p> <ul style="list-style-type: none"> • Result • Error message <p>Does</p> <ul style="list-style-type: none"> • Respond to frontend with status for a loan application | <ul style="list-style-type: none"> • ApplicationInformation • ApplicationResponse • LoanRepository • StudentRepository • Student • Loan • Bank |

| Class Name: StudentInfo | |
|---|---|
| Responsibilities | Collaborators |
| <p>Knows</p> <ul style="list-style-type: none"> • ID of the student • Name of the student • Name of the school the student attends <p>Does</p> <ul style="list-style-type: none"> • Carry student information within a login response | <ul style="list-style-type: none"> • LoginSystem |