Milestone 1: Customer Requirement Analysis

Topic: Flight Training Academy

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This is customer requirement analysis report for a Java GUI FXML application to simulate operations of a Flight Training Academy. Users of this application is given below:

1. Student.
2. Flight Instructor.
3. Head of Training.
4. Aircraft Maintenance Engineer.
5. Accounts and Admin.

**Common action:** Every user of this application needs to login with their specific ID, Password and User type for accomplishing their task. If any of these found wrong or does not match with the combination, it will show an invalid message and ask to login again with correct ID, Password and User type. If login is successfully done then user will see five options to accomplish their five tasks.

***User -1: Student***

**Goal 01: Students will be able to see their program history.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After login successfully, students can able to see a button named ‘Course History’. By clicking on this, student can able to see two table view. One is for grade history and another is one for attendance history.
* After completing task, student will click on ‘logout’ button to log out.

**Goal 02: Students will be able to see their flying hours history.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After login successfully, students will be able to see an option named ‘Flying History’. By clicking on this button, student can able to see two options. One is for aircraft flying hours history and another is one for simulator hours history.
* If a student wants to see his/her aircraft flying hours then click on ‘Aircraft Flying Hours’ option which will show aircraft flying hours.
* And if a student wants to see his/her simulator then click on ‘Simulator Hours’ option which show the simulator hours.
* After completing task, student will click on ‘logout’ button to log out.

**Goal 03: Students will able to access their course materials and download.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After login successfully, student will click on ‘Course Material’ option which will show available resources.
* If student wants to download any specific materials then simply click ‘download’ button.
* After completing task, student will click on ‘logout’ button to log out.

**Goal 04: Students will be able to evaluate flight instructor.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After login successfully students can see an option named ‘Instructor Evaluation’. By clicking on ‘Instructor Evaluation’ he/she able to see list of courses for that semester.
* Here students need to select certain course to evaluate a certain faculty.
* After completing task, student will click on ‘logout’ button to log out.

**Goal 05: Students will able to download their reports.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After login successfully, student will see a button named ‘Reports’. After clicking on ‘Reports’ option which will show two options one is for bill paper and another is for transcript.
* If a student wants see/download bill paper then click on ‘Download Bill Paper’ option, it will allow to download.
* If a student wants see/download transcript then click on ‘Download Transcript’ option, it will allow to download.
* After completing task, student will click on ‘logout’ button to log out.

***User -2: Flight Instructor***

**Goal 01: Flight instructor will be able to take class attendance.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, instructor will click on ‘Class Attendance’. After clicking on that button instructor will be able to see the course list, where he/she needs to choose course name.
* After choosing course name, he/she needs to click on that which will show the course and information (such as course name, course id, students id list, students name list). To take the attendance, instructor needs to click ‘Take Attendance’ button.
* After taking attendance instructor should click on ‘submit’ button which will commit to database. And print class attendance submitted successfully.
* After submitting the attendance, instructor will click on ‘logout’ button to log out.

**Goal 02: Flight instructor will be able to submit grades and flying hour submission.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, instructor will see two buttons, ‘Submit Grades’ and ‘Submit Flying hour’. If instructor choose ‘Submit Grades’ for grade submission, he will get course name.
* After choosing course name, he/she needs to click on that which will show the course and information (such as course name, course id, students id list, students name list).
* After assigning grades, instructor should click on ‘submit’ button which will commit to database. And print grades are submitted successfully.
* Else he will choose ‘Submit Flying hour’ to submit flying hour history.
* After selecting the button, he will input student Id, name and flying hour.
* After inputting flying hour information, instructor should click on ‘submit’ button which will commit to database.
* After submitting the grades, instructor will click on ‘logout’ button to log out.

**Goal 03: Flight instructor will be able to provide course materials for students.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, instructor will click on ‘Course Materials’. After clicking on that button instructor will be able to see the course list, where he/she needs to choose course name.
* After choosing course name, he/she needs to click on that. It will show a button named ‘Upload Your Materials’, where instructor should click on.
* After clicking on ‘Upload Your Materials’ button, instructor will be able to choose which file is to be uploaded. Then he/she will upload their materials (choosing from device) and click on ‘ok’ button.
* After completing task, instructor will click on ‘logout’ button to log out.

**Goal 04: Flight instructor will be able to assign Exam and Class schedule.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, instructor will click on ‘Set Schedules’ button. After clicking on that button instructor will see two buttons, ‘Exam Schedule’ and ‘Class Schedule’. After selecting anyone of this he will be able to see the course list, where he/she needs to choose course name.
* After selecting course name, he will schedule.
* After completing task, instructor will click on ‘logout’ button to log out.

**Goal 05: Flight instructor will be able to see their feedback from both students and academy.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, instructor will click on ‘Feedback’ button. After clicking on that button instructor will be able to see the course list, where he/she needs to choose course name.
* After choosing course name it will show two options one is ‘Feedback from Students’ and another is ‘Feedback from Academy’.
* If instructor wants to see feedback from students then click on ‘Feedback from Students’. After clicking on this, instructor will be able to see the feedback from students.
* If instructor wants to see feedback from academy then click on ‘Feedback from Academy’. After clicking on this, instructor will be able to see the feedback from academy.
* After completing task, instructor will click on ‘logout’ button to log out.

***User -03: Head of training***

**Goal 01: Head of training will be able build training program.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, user will see ‘Training Program’ button where he/she will click on.
* Head of Training will upload a file for training program.
* He/she can also set training program manually by clicking on existing table view. After giving user needs to click on ‘Set Schedule’ button.
* For uploading file he/she needs click on ‘Upload Your File’ to upload.
* After completing task, Head of Training will click on ‘logout’ button to log out.

**Goal 02: Head of training will able to check and set all flight time schedule for academy.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, user will see ‘Flight Schedule’ button. After clicking that button, he/she will see the table view scene of existing flight schedule.
* To set schedule, he will assign student, instructor, time, date and by clicking on ‘Set Schedule’, he/she will be able to set the schedule.
* After completing task, Head of Training will click on ‘logout’ button to log out.

**Goal 03: Head of training will be able to check students training progress and give feedback.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, he/she will click on ‘Students Training Progress’ button. After clicking on that button, it will show the list of training section is going on in the academy.
* After that, head of training will select the specific section (by clicking on that) to see the training progress of students.
* After clicking, specific section, he/she will be able see the all students progress on that section. There are two text fields and one text area section below where he/she will be able to give feedback to the students by clicking on ‘Give Feedback’ button.
* After completing task, Head of Training will click on ‘logout’ button to log out.

**Goal 04: Head of training will able to ensure security issue.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, he/she will click on ‘Ensure Security’ button.
* After clicking ‘Ensure Security’ it will show security issues, he/ she will view all the security issues from maintenance engineer. If there is any security issue then he/she will give an issue in text are section and click on ‘Add Issue’.
* After completing task, Head of Training will click on ‘logout’ button to log out.

**Goal 05: Head of training will be able to check Flight instructor performances and give feedback.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, he/she will click on ‘Instructor Performance’ button. After clicking on that button, it will show the list of flight instructors who are teaching in the academy.
* After that, head of training will select the specific flight instructor (by clicking on that) to check the trainer performance.
* After clicking on the specific instructor name, he/she will be able see the details performance of that instructor (like teaching quality, training quality, feedback from students etc.). There is a comment section below where he/she will be able to give feedback to the instructor.
* After giving feedback in comment section, head of training should click on ‘Give Feedback’ button.
* After completing task, Head of Training will click on ‘logout’ button to log out.

***User-04: Aircraft Maintenance Engineer***

**Goal 01: Aircraft engineer will test and measure the performance of aircraft and build a report.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, he/she will click on ‘Performance of Aircraft’ button.
* After physically test and measure the performance of aircraft, engineer will create performance report here by clicking on ‘Upload Performance Report’.
* After completing task, Aircraft Maintenance Engineer will click on ‘logout’ button to log out.

**Goal 02: An Aircraft maintenance engineer will be able to ensure an operates properly and safely**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, he/she will click on ‘Status of Aircraft’. After clicking that, he/she will able to see a table view for aircraft performance.
* Engineer will click on ‘Ready to Fly’ cell to update status of aircraft and ‘Need to Maintenance’ to edit those who needs to maintenance.
* Engineer will give inputs for specific aircrafts to ensure it works properly or not by clicking on ‘Add to Status’ button.
* After completing task, Aircraft Maintenance Engineer will click on ‘logout’ button to log out.

**Goal 03: Aircraft engineer also able to see the list of aircrafts which need to troubleshoot.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, he/she will click on ‘Troubleshoot’ button. After clicking troubleshoot button, it will show a table view with ‘Model Name’, ‘Aircraft Name, ‘Not Emergency’ (for troubleshoot) and ‘Emergency’.
* If engineer clicks on the ‘Emergency Troubleshoot’ then he/she will be able to see the list of the aircrafts which need to troubleshoot emergency. After checking this, engineer will take an initiative to solve the issue. After solving the problem, he/she will update this on the table.
* User can also add a new aircraft to the troubleshoot menu by clicking at ‘Add a new’ button.
* After completing task, Aircraft Maintenance Engineer will click on ‘logout’ button to log out.

**Goal 04: Aircraft engineer also able to order parts.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, he/she will click on ‘Order Parts’ which will show some fields to order parts, where he needs to provide the information and click on ‘order’ button.
* After completing task, Aircraft Maintenance Engineer will click on ‘logout’ button to log out.

**Goal 05: An Aircraft engineer also can give idea about developing design and specification by a report. User also can view existing ideas.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, he/she will click on ‘Ideas’ button. After clicking that button, it will show a list of files. If user wants to view any ideas then he/she needs to click on specific file. After clicking on specific file, he/she can view that.
* If user wants to upload a new idea, then he/she needs to click on ‘upload your idea’ button. By clicking on upload your file, engineer can attach the report and click on ‘upload’.
* After clicking upload, it will commit to database.
* After completing task, Aircraft Maintenance Engineer will click on ‘logout’ button to log out.

***User -05: Accounts and Admin***

**Goal 01: Accounts officers can keep financial records.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, it will show a button named ‘Financial Records’.
* After clicking on ‘Financial Records’, he can see three text fields named ‘Income’, ‘Expenses’ and ‘Balance’.
* Here he will set the information.
* After setting the information he will click on ‘Submit’ button.
* After completing task, user will click on ‘logout’ button to log out.

**Goal 02: Accounts officer will be able to see salary information of employees.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, he/she will see a button named ‘Salary Information’. By clicking ‘Salary Information’ button user will able to see the salary information of employees.
* He/she will be able to update salary by clicking on ‘update salary’ button.
* After completing task, user will click on ‘logout’ button to log out.

**Goal 03: Accounts officer will be able maintain reserve fund.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, he/she will see a button named ‘Fund’. By clicking this button, it will show the approved funds and balance.
* After completing task, user will click on ‘logout’ button to log out.

**Goal 04: Admin will entry data for students and employees.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, he/she will see a button named ‘Data Entry’. Here will be two options one is ‘Students’ and another is ‘Employee’.
* If he wants to set data for students then he will click on ‘Student’ and input data and submit by clicking on ‘submit’ button.
* If he wants to set data for employee then he will click on ‘Employee’ and input data and submit by clicking on ‘submit’ button.
* After completing task, user will click on ‘logout’ button to log out.

**Goal 05: Admin will arrange occasional program.**

**Workflow:**

* User will provide ID and password to login.
* If login is successful then load home scene else it will show appropriate message.
* After successfully login, he/she will see a button named ‘Occasional Program’.
* By clicking this he/she will be able to set the programs.
* After completing task, user will click on ‘logout’ button to log out.