

Bilkent TA Management System Use Case Diagram – Group 3

In this part of the project, we were aiming to understand and analyze the requirements of the use cases of our project and its details. In this process, we initially began by thinking about the possible use cases for our users and came up with a sketch. While considering these factors, we realized that there are lots of ambiguity in some of the requirements that should be learned from the client. For this reason, we went to talk to Begüm Çınar who is the Administrator Assistant of Computer Science Department and Yusuf Ziya Özgül who is currently a Teaching Assistant. After careful consideration, we have finalized our first draft of use case diagrams.

In our use case diagrams, we determined our user types and then decided what are some possible actions these actors can take. We divided our user types into 5 distinct categories as follows:

1.) Teaching Assistants (TAs)

First user type of our program is TAs. TAs will obviously be one of the main users of our application. So, the use cases of TAs are ordered as follows:

- a.) Approve / Reject Proctoring Task: In daily life, TAs can take assignments from different departments or their own department. If proctoring task is from their department, it is considered as an unpaid proctoring. Instructors assign unpaid proctoring tasks to their TAs (refer 2i). Afterwards, our TAs should be able to view those unpaid assignments and either confirm or reject them. After confirming or rejecting, our application will send notification to the instructor. As long as they have unconfirmed assignments, our application will remind them via email every 3 hours.
- b.) Apply Available Paid Proctoring: Our TAs are also able to apply for other departments' proctoring tasks, these proctoring tasks are called paid proctoring tasks. In case there is a need for TAs from other departments, TAs can see these openings and apply for those openings and some authorized staff can approve or reject that request. (refer 4a, 4b, 5a)
- c.) Send – Accept/Reject Swap Request: TAs should also be able to send swap request for proctoring tasks, (if swapping is not locked, request not already sent and TAs are available for that (refer 1f, 1g, 2d)). They may want to have the task of another TA or they may want to swap their current duties. After the request is sent, other TA can confirm or reject the request. In case of confirmation, our application sends a notification to the course instructor and wait for approval.
- d.) Enter Workload: TAs will enter their workload, informing the instructor about how much time they spent on which task. They can only send this workload approval request if time spent is lower than maximum time limit determined by the instructor. After sending their workload, they will wait for approval from instructor.
- e.) Cancel Sent Request: As described above, as TAs are able to send requests, they can also cancel these requests within a time interval determined by the instructor.
- f.) (Un)Locking Swaps: TAs can lock their swapping so that they can prevent other TAs from sending swap request to them.

- g.) Set Unavailable Time: TAs may want to declare their unavailability (e.g. vacation, illness etc.). Afterwards, our application again will send a notification to authorized staff for approval. In case of approval, instructors will not be able to assign some task to TAs.
- h.) Print Classroom Details: TAs are able to print the classrooms details.
- i.) View Personal Task Info: TAs will be able to view their personal task info.

2.) **Instructor**

Second user type of our application is instructors. Use case for instructors are as follows:

- a.) Creating New Task Type: Instructors can define (or choose from already defined ones) new task types according to the need of their courses. For instance, they can state that they are going to have quizzes, labs exams etc. Here, they also can determine how much maximum time these tasks will take for TAs. The purpose of this is, when TAs entering their workload, they will select the task type and then enter the necessary information. (refer 1d).
- b.) Initialize Tasks that Requires Class Assignment (e.g. Exams, Quiz, Recitations etc.): Instructors can initialize task that requires a class environment. For instance, they can initialize exam, quiz, recitation etc. While initializing this type of tasks, they can determine how many TAs they want, which classroom will it take place in etc., and also assign TAs automatically or manually.
- c.) Adding/Removing TAs to Black List: Instructors can also add TAs to their black list. So that once they are at the assignment stage, they do not see TAs who are in the black list.
- d.) (Un)Locking Swap of TAs: Instructors can lock their TAs swapping so that other TAs will not request swapping. Or they can also unlock swapping of their TAs as well for opposite reason.
- e.) Request TAs From Other Departments for Proctoring (Through Dean's Office): In case there is a TA need, instructors can request additional TAs from other departments by applying to their dean's office (refer 4e).
- f.) Viewing TA Status / Workload: Instructors can view workload of their TAs.
- g.) Answer Request: As described in TA section, instructors can approve/reject some request coming from TAs. For example, workload approval request, swap request, TA status (if available or not).
- h.) Dismiss TA from Assignment: Instructors can dismiss one or more TAs from particular tasks.
- i.) Assign TAs to Proctoring Tasks: Instructors can assign TAs to specific tasks manually or automatically.
- j.) Print Classroom Details: Instructors are able to print the classrooms details.
- k.) View Task with Class Info: Instructors can view details of the task that requires classes (e.g. quiz/exam proctoring, recitation etc.).

3.) *Admin*

Third user type of our application is admins. They are going to be responsible for data maintenance.

- a.) Change (create, update, remove) Database: Admins can change database. They can do that both manually or via Excel. They can change information of classes, students, courses, TAs, instructors and exams.
- b.) View Logs: From the beginning, our application will keep track of any kind of logs (swap request, swaps, assignments of TAs etc.). Admins can view these logs.
- c.) View Data: Admin can view the data of classes, students, courses, TAs, instructors, exams.
- d.) Set Current Term: Admins can set current term.
- e.) Generate Term / Annual Report: Admins can generate term or annual term report according to their needs.
- f.) Set TA Proctoring Task Cap: Admins can determine how many proctoring TAs can take place in.

4.) *Dean's Office*

Fourth user type of our application is Dean's office. They are going to be responsible for interactions between different faculties or departments under its roof.

- a.) Request TAs from Other Faculties: In case of need of TA, Dean's office might request additional TAs from other faculties (not current scope of our project, investment in future).
- b.) Approve / Reject TA Request Coming from Other Faculties: Dean's office can approve or reject TA request coming from other faculties.
- c.) Inform Administrator Assistants about Requested TAs: After confirming request of TAs from other faculties, Dean's office will inform Administrator Assistants of departments about how many TAs will be needed for each department.
- d.) Assign TAs to Other Faculties Proctoring: After confirming TA request coming from other faculties, Dean office will assign selected (by Administrator Assistant) TAs to specified tasks.
- e.) Approve/ Reject Other Department TA Request from Instructor: Dean's office can approve or reject TA from other departments request coming from instructors.
- f.) Dismiss TA from Assignment: Dean's office can dismiss one or more TAs from particular tasks.
- g.) Approve Swap of TAs Between Different Faculties/Department: Dean's office can permit swap of TAs currently enrolled in different faculties or departments.

5.) *Administrator Assistant*

Fifth user type of our application is the Administrator Assistants who are specific for each department in one faculty.

- a.) Inform All Department TAs About New Paid Proctoring: Once Dean's office informs Administrator Assistants about how many TAs are required from their department, they will inform all TAs of their departments about these proctoring opportunities. So that, TAs will be able to know about openings and apply for them.
- b.) Inform Dean's Office about Selected TAs: Once all application from department TAs collected, Administrator Assistants will select which TAs will be assigned and inform Dean's office accordingly.

Some Common Features:

Some of the features are common all user types:

- a.) Login / Logout
- b.) Change / Forgot Password
- c.) View Notifications
- d.) View Schedules