

# “TA Report System”

## Request for Proposals

Drafted by  
Lecturers of Integrated Exercise for Software II  
on behalf of the SAD  
September 2023

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## 1 System Description

### 1.1 Project Background

#### 1.1.1 Title of planned system

“TA Report System”

#### 1.1.2 Background

At the University of Aizu, graduate students may work as “Teaching Assistants” to assist faculty members in instructing students in class. Each student working as a TA must create a “TA work report” and submit it to the Student Affairs Division (SAD) each month to receive payment of their honoraria. Due to its nature, the report needs to be created by following specific rules of work regulations and budget constraints that students can easily overlook. A considerable number of students are required to fix their reports after submission and puts a burden on the SAD staff for checking each report and communicating with those students. Currently, SAD provides an Excel spreadsheet to help students in input of their monthly work hours and to reduce mistakes. While this considerably improves the situation, it alone cannot prevent incorrect reports to be submitted. Further, the submitted TA work report is subsequently input to another file to produce documents to request payment to the Account Section of the University

In this project, the successive tasks of input of TA work hours by students to creating documents for payment request by staff will be realized as a system, including the support for correct and efficient input as well as its validation. The main objective is to reduce the extra workload and mistakes caused by relying on printed forms to apply, check, and relay information.

### 1.2 System Assumptions and Overview

#### 1.2.1 Assumptions

- The system is assumed to be used both on campus and off campus. Students may use the system from workstations on campus or from their own devices. Staff will most probably, although not limited, use the system from administrative terminals (desktop PC).
- All graduate students, some undergraduate students, and a small number of staff are expected to use the system.
- Students must obtain approval from the corresponding faculty member prior to submitting their monthly TA work reports by obtaining their seals on printed forms, and this will be maintained as is.
- Payment requests to the Accounting Section are sent by printed documents, and at this time this will be maintained as is.

TA	Implementation Report Form	2022	Year	10	Month	International Student select "1" ↓										
Course name		IE04 Integrated Exercises for Software II			Student ID		m5251201					Please make 1 report for each multiple classes, please make				
Instructor's Name		Yoshioka Rentaro			Name		Takeuchi Makoto			seal						

Date	Day	Time Zone A				Time Zone B				Time Zone C				Time Zone D				Break	1day Total
		Work Category	Start	End	Working Hours	Work Category	Start	End	Working Hours	Work Category	Start	End	Working Hours	Work Category	Start	End	Working Hours		
10/1	Sat				0:00				0:00				0:00				0:00	0:00	0:00
10/2	Sun				0:00				0:00				0:00				0:00	0:00	0:00
10/3	Mon	3	10:00	12:30	2:30	3	13:20	15:00	1:40				0:00				0:00	0:50	4:10
10/4	Tue				0:00				0:00				0:00				0:00	0:00	0:00
10/5	Wed	1	9:50	12:30	2:40				0:00				0:00				0:00	0:00	2:40
10/6	Thu				0:00				0:00				0:00				0:00	0:00	0:00
10/7	Fri				0:00				0:00				0:00				0:00	0:00	0:00
10/8	Sat				0:00				0:00				0:00				0:00	0:00	0:00
10/9	Sun				0:00				0:00				0:00				0:00	0:00	0:00
10/10	Mon				0:00				0:00				0:00				0:00	0:00	0:00
10/11	Tue				0:00				0:00				0:00				0:00	0:00	0:00
10/12	Wed	1	9:50	12:30	2:40				0:00				0:00				0:00	0:00	2:40
10/13	Thu				0:00				0:00				0:00				0:00	0:00	0:00
10/14	Fri				0:00				0:00				0:00				0:00	0:00	0:00

Figure 1 Example of current TA work input form

## 1.2.2 Overview

- Assignment of students as TA:
  - Students are assigned as a SA or TA to a course for one of the semesters/quarters (S1, Q1, Q2, S2, Q3, Q4).
  - Graduate students may work as a Teaching Assistant (TA), and undergraduate students may work as a Student Assistant (SA). In this document, both will be referred to as “TA” for simplicity if not otherwise noted.
  - The honorarium (payment) for a TA is 1,000 yen per hour and that for an SA is 900 yen per hour.
  - Each student working as a TA is assigned a specified number of work hours per course by the instructor which must not be exceeded.
  - One student can be assigned as TA for multiple courses for each semester/quarter.
- Information required for TA work report:
  - One TA work item is reported by the following information: date, course, work category, start time, end time, length of break, total hours. (All items are required)
  - Total work hours for each item should be entered in units of 10 minutes.
  - Start/end time should be entered in 24-hour format (Ex. 2:00 p.m. -> “14:00”)
  - A “work category” is selected from the following: [1] Assistance in lectures/exercises, [2] Assistance in exam proctoring, [3] Assistance in making teaching materials, [4] Assistance in grading, [5] Other (preparing for class, printing class handouts, etc.)
  - A monthly TA work report is created for each course separately.
  - A monthly TA work report for each course includes the following: course title,

instructor's name, list of work items performed within the month, total hours, cumulative total hours.

- TA work limitations to be validated against
  - Regarding Japanese students, the upper limit of working hours is “8 hours per day” and “40 hours per week (Sunday through Saturday)” including other on campus part time works.
  - Regarding international students, the upper limit of working hours is “8 hours per day” and “28 hours per week (Sunday through Saturday)” including other on campus part time works.
  - Working late at night and/or early in the morning (22:00-5:00) is not allowed.
  - If the working hours exceed 6 hours per day, students must take a break of at least 1 hour. (If the total break is 1 hour or more per day, it can be divided into multiple times such as 15 minutes + 45 minutes).
  - Students must take at least 1 day off per week (Sunday through Saturday). (Pay attention to the week that straddles the month. Please confirm the dates and hours that students engaged in the previous month.)
  - The maximum working hours per month is 120 hours.
- Validation of the input work hours should be performed automatically.
  - All validations must succeed before students can print reports for final approval.
- Please propose an intuitive and efficient user interaction scheme to support students inputting the work report items.
  - Please propose supportive mechanisms to avoid invalid input.
- Students can view their monthly TA work report for each course.
  - Students can share their monthly TA work report with the corresponding lecturer for checking.
  - The monthly TA work report can be printed by sending directly to a printer or exported as a file that can be printed as is, by the students themselves or by anyone that they shared it with.
- Students can edit their monthly TA work report before the signed report is submitted to SAD.
  - Staff can “lock” a certain report to prevent further modifications by the students after submission of the signed report.
  - Staff can edit the monthly TA work reports to apply any corrections made on the printed report.
- Staff can export the monthly TA work reports for submission to the Accounting Section.
  - The report contains the following information for each student: name, total allocated

hours, total work hours for the month for each course, total work hours (sum of all courses) for the month.

- The report should also contain the following information to verify that work hours do not exceed the allocated amount for each course: total SA hours for each course, total TA hours for each course, total SA/TA hours for each course.
- The report is preferred to be exported in Microsoft Excel format, but CSV format is also acceptable.

The proposal must include, at least, the following functions:

- Work input  
Students can input TA work hours for each of their courses.
- Work validation  
TA work hours input by students should be automatically checked to conform to the rules defined by SAD.
- Report print  
TA work reports can be sent directly to a printer for printing or exported as a file that can be printed as is.
- Report edit  
Students and staff can edit the monthly TA work reports to make corrections within the allowed conditions described above.
- Report export  
Staff can export TA work reports of a particular month to be sent to the Accounting Section for payment.

In addition to the above, please propose any functions that would improve user experience and ease system management.

- To ease management of the system, all related data should be stored in a database.
  - The database is required to be served by an existing MySQL database server.
- Users are expected to use the system on campus or from outside the campus using their own devices.
- It is preferable that any potential user may use the system without installation of additional software to their devices but is acceptable if benefits outweigh the costs/effort.
- There are no limitations on libraries and frameworks and the programming language used to develop the system. Please propose appropriate combinations to ease operation and maintenance costs.

### 1.3 Goals

- Improve correctness of student input TA work reports.
- Reduce workload of faculty in approving TA work report.
- Reduce workload of staff in validating and instructing students to correct TA work reports.
- Reduce workload of staff in preparing documents to request payment.

### 1.4 Relation with existing workflow

Currently, TA reports are created using template Excel spreadsheets and are submitted by printing them on paper and receiving the seal of the instructor as approval. The developed system is expected to replace the Excel spreadsheets in this workflow.

### 1.5 Users of the System

#### 1.5.1 Administrators

- Student Affairs Division staff: view all reports, export reports.

#### 1.5.2 TAs

- Students: input work hours, request approval, print report.

#### 1.5.3 Lecturers

- Faculty: view shared report, print shared report.

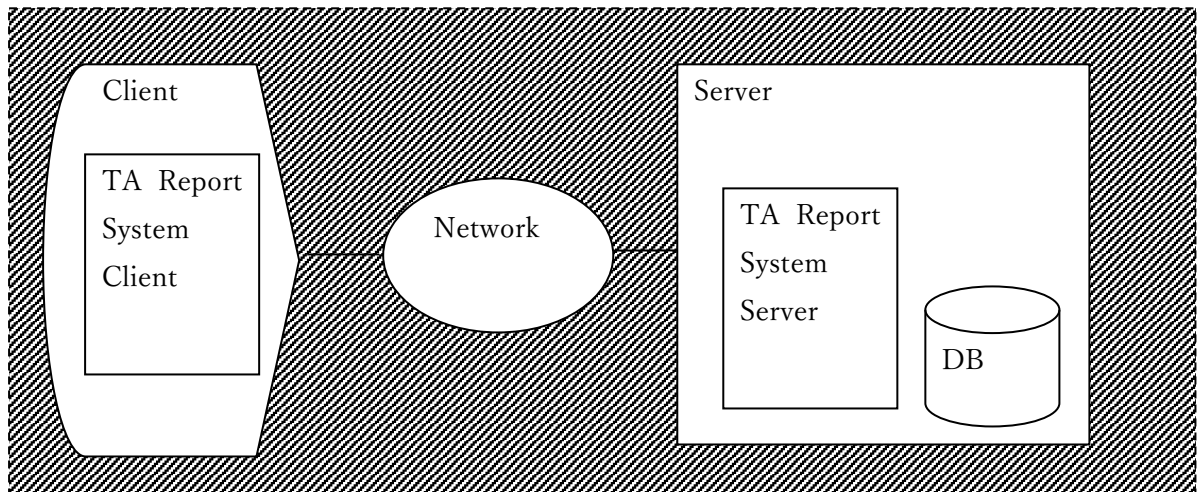
## 2 Content of Proposal

Please clarify assumptions if any. In case your proposal does not satisfy the requirements, or you have a better proposal, please explain their differences.

### 2.1 Extent of the Proposal

The scope of the system to be proposed is as described in the previous section “System Description”. Please propose appropriate functions for the system using the following information as a guide. Note that this is only for general orientation and is not intended as any limitation.

#### 2.1.1 Scope of the System



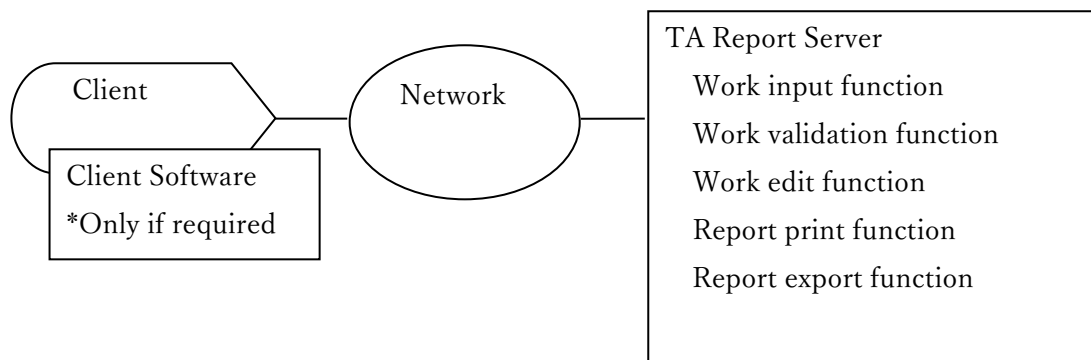
\*The inclusion of the client software is up to the decision of the developer.



## 2.2 System Structure

Please devise an adequate system architecture and propose requirements for the following items. The architecture should support viewing and management of the corresponding data with reasonable reliability. Preferably, the system should be reasonably cost-effective and support future enhancements.

### 2.2.1 Application software



### 2.2.2 Hardware

Please propose requirements for the server and client hardware as necessary.

### 2.2.3 Network architecture

Please propose a sufficient network environment for the system.

### 2.2.4 Security system

There are no specific requirements so please propose a configuration if necessary.

## 2.3 Quality and performance assumptions

Please propose the quality and performance assumptions for the proposed system.

## 3 Requirements on Development

Conditions of system development are as follows.

### 3.1. Development period

- Beginning of development : Oct. 11, 2023 (after approval of plan)
- Date of delivery : Jan. 31, 2024 (final class)