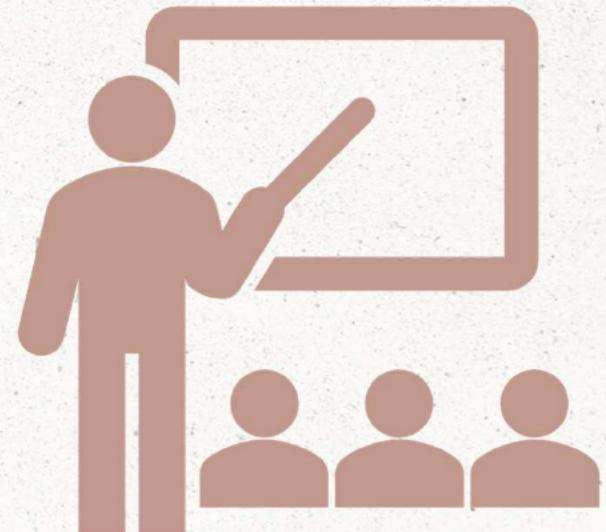


An Online Reservation System for Teaching

COMP4913 Capstone Project Report (Final)
Yu Fong Yan [REDACTED]

Why?

- Teachers: often have need to hold consultation / presentation sessions with students individually
- Not 1:1 but 1:N meeting scheduling issue for the same purpose
 - What if **>100 students in a class?**
 - Communicating and compromising with every student's preference **manually?**
 - **Who is privileged** in reaching professor first?
 - How to deal with the **conflicted selection** without being biased?



Objectives



Efficiency



Fairness

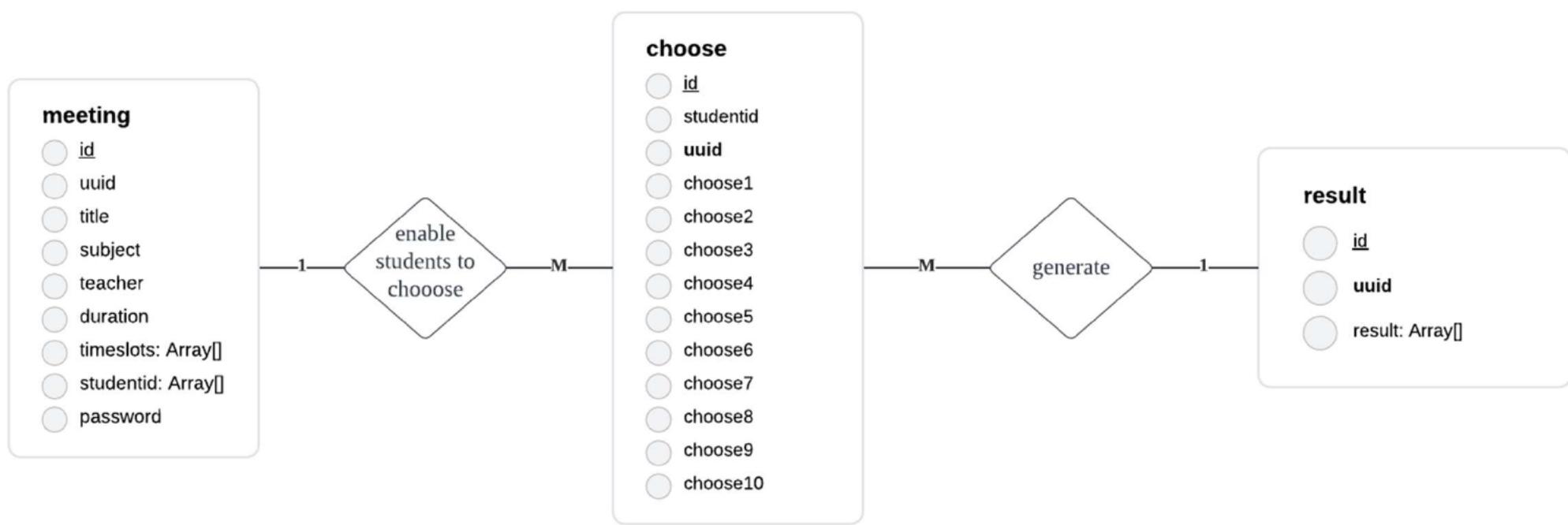


Caring

Functional Requirements

- **Amendment on existing system**
 - Revise the database structure
 - Update the time allocation algorithm for strengthening fairness
 - Improve user-friendliness of webpages
- **Declaration** of creation, authorization, results through individual mails
- **Generation of the next-round scheduling form**
 - if the result could not attain students' preferences in the first round
 - if students are found not filling in the form before the deadline

Database Design (Legacy)



Database Design (Legacy)

id	uuid	title	subject	teacher	duration	deadline	timeslots	studentid	password
1	a63c35a2-e30e-4918-bf40-59e5bd28b015	a	a	a	10	2023-03-	["2023-03-15_18:34-18:44","2023-03-15_18:44-18:54" ...]	["12345678d", "12345678d"]	jn87m98b

- Used for storing meeting details

Points to stress on:

- The usage of array on storing multiple timeslots and students
- Data visualization

Database Design (Legacy)

id	studentid	uuid	choose1	choose2	choose3	choose4	choose5	choose6	choose7	choose8	choose9	choose10
1	12345678d	58c0dbe2-fac0-49c8-8444-904287191808	2023-04-09_11:02-11:12	2023-04-09_11:12-11:22	2023-04-09_11:12-11:22	2023-04-09_11:02-11:12	2023-04-09_11:02-11:12	2023-04-09_11:12-11:22	NULL	NULL	NULL	NULL

- Used for storing students' preferences

Points to stress on:

- Fixed students with only 10 options at most during their preference input
- NULL values on few choices columns

Database Design (Legacy)

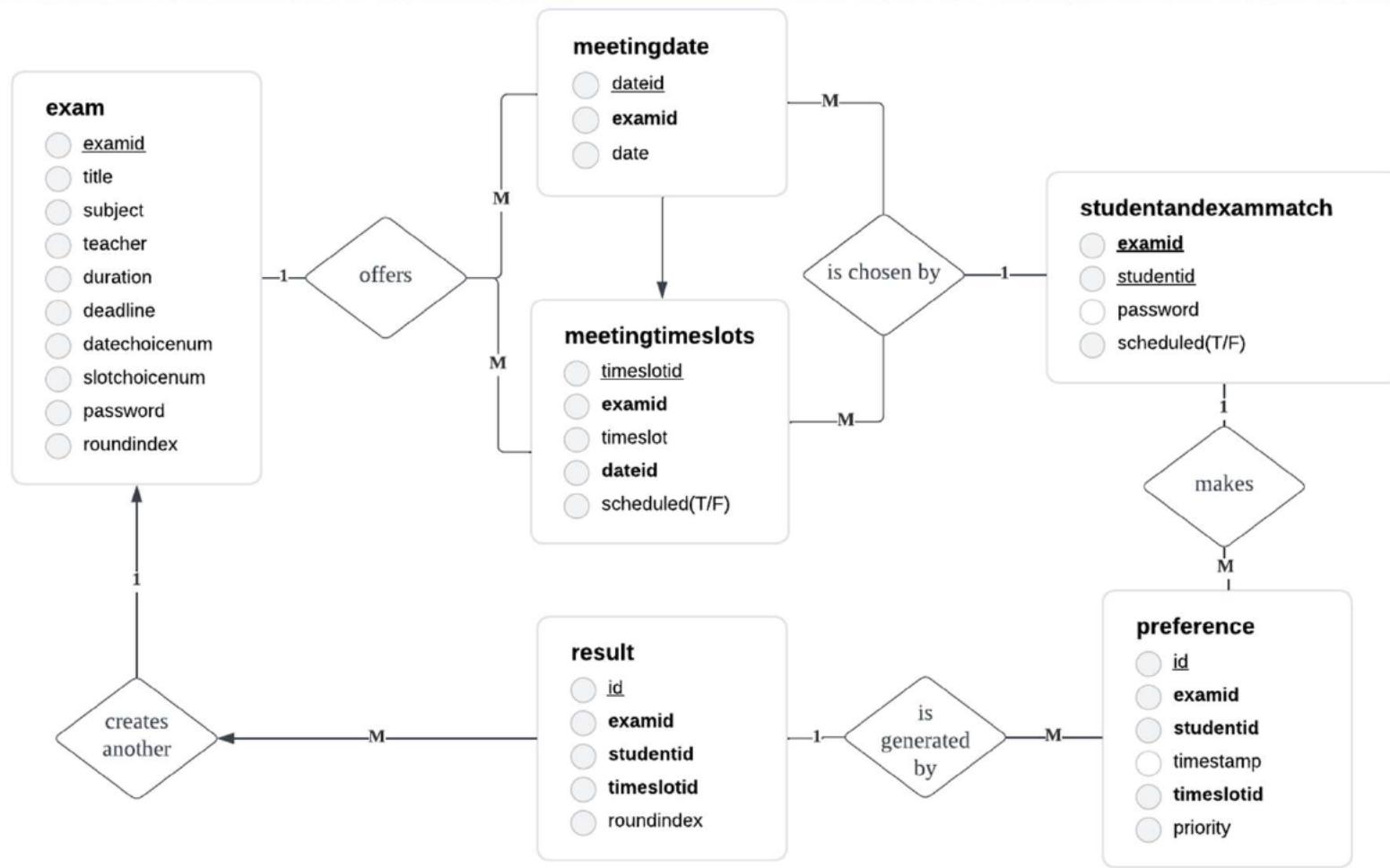
id	uuid	result
1	58c0dbe2-fac0-49c8-8444-90428719180	{"2023-04-09_11:02-11:12": "12345678d", "2023-04-09_11:12-11:22": "12345679d", "2023-04-09_11:22-11:32": 0, "2023-04-09_11:32-11:42": 0, "2023-04-09_11:42-11:52": 0, "2023-04-09_11:52-12:02": 0}

- Used for storing students' mapping results

Points to stress on:

- Data visualization
- Memory wastage

New Database Design



Preferred Date & Preferred Time slots per date



Students' perception

May choose the **last date with latest timeslot**

- Create multiple conflicts among students' timeslots



Preferences Input

Choose Preferred Date -> Timeslot for that day

- Guarantee the selection would **not be biased only on one date**

Demo

Database Design, User Flow Design and
Additional Features Added

Deployed Website:

[http://www2.comp.polyu.edu.hk/~1\[REDACTED\]
\[REDACTED\]web/index.html](http://www2.comp.polyu.edu.hk/~1[REDACTED]web/index.html)

Git Diff

Code changes from the legacy work

Thank You!