Technologies

Must be web-based.
To develop and test the application you could use Nectar, this is a free VM service for research you can get and setup quite quickly;
https://superuoa.custhelp.com/app/answers/detail/a_id/11073/kw/nectar
You can basically install anything because it is hosted outside of the University.

Once development and testing is done we could look at moving it to a proper production VM. The University is currently moving from in-house hosting to AWS. But this is a considerably longer process and should only be done with applications that have been fully developed, i.e. is outside the scope of your CS399 project.

For user authentication ideally we want to use the University SSO (Single Sign On) system, but this can be quite complex to setup. Hence it is best to use our own login system for development and testing.

Requirements

Marker coordinator should have full access and be able to specify courses, course enrolments (estimate / final), and course coordinator details for each course (name, email).
Should also be able to specify deadlines, which are clearly visible to the relevant people (see below)
Should be able to specify constraints, e.g. pre-allocate markers for a course, and students unsuitable to do the job (same field as for course coordinator, but marker coordinator can overwrite any requests from course coordinator)

Course coordinators should be able to specify expected enrolments for a course, expected workload (number of assignments, other tasks (specify in text field), expected workload for each task (in % of total work)), after students have applied should be able to specify preferences (in order) and unsuitable

Students should be able to log on and submit an application for a marker position (courses in order of preference, hours able to work for whole semester, grades for the courses they want to mark, Student ID, email, academic record, CV, GPA, previous experience relevant to courses applied for, enrolment status for the semester, current degree and year (e.g. 3rd year BSc, 2nd year PhD), has student visa (yes/no/not applicable), location (Auckland yes/no))

Deadlines

Course information deadline (not visible to students): date by which course coordinators must submit information about their course.

Application deadline (visible to everyone): date by which students need to apply for a marker position.

Marker preference deadline (not visible to students): date by which course coordinators must submit their preferences for markers (note that this means that course coordinators need to be able to see all markers who applied for their course, but not other applicants).

Marker assignment deadline (visible to everyone): date by which markers for all courses have been allocated.

Feedback functionalities

System should send email to students acknowledging their application for a marker position

After marker allocator confirms that marker assignment is complete (or as complete as possible) system should send:
   a) Email to all students about the courses they have been assigned to and estimated hours.
   b) Email to all students not receiving a marker positions (e.g. "We had many high quality applicants and hence regrettable we were unable to offer you a marker position").
   c) Email to all course coordinators with the names and email addresses of all markers.