**PROJECT architecture document**

# Overview

## Project Background and Description

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| Tip icon | *Our clients are the students, teachers, and exercise checkers of Bar Ilan university. This system allows the management, submission, and grading of coding exercises.*  *Our goal is to replace the existing system with a new one, providing a better UI and greater ease of maintenance.* |

## Project Scope

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| Tip icon | *This is a system for submitting coding exercises.*  *Students can submit exercises, view their grades for previously submitted exercises, request deadline extensions, and submit appeals.*  *Teachers create and manage the exercises.*  *Exercise checkers grade the exercises with automatic and manual checking.*  *Managers can create courses and assign teachers to them.*  *The system will be independent and separate from the “Inbar” server.* |

## High-Level Requirements (Design)

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| Tip icon | * *Ability to set exercise configurations (deadlines, compilers used, input files, etc.)* * *Run automatic test on the exercises without “black window”.* * *Manage appeals and extension requests in one place.* * *Save and operate file in cloud server- not local.* * *Reuse exercises from previous years.* |

## Who are the users?

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| Tip icon | *Teachers – Each course has its teachers.*  *Exercise checkers – The exercises have checkers assigned to them.*  *Students – Each course has students enrolled in it.* |

## Project entities (Architecture)

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| Tip icon | *Web application- MVC architecture.*  *Server- C# in university cloud.*  *Angular- JS, CSS*  *DB- MySQL* |

## Typical user flows

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| Tip icon | *XD files are added.* |

## Epics and user stories and test plans scenarios

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| Tip icon | *At least 3 epics, each epic should include at least 5 user stories each US should have at least 1 test plan*  *Epics:*   * *Managing exercises.* * *Testing exercises.* * *Submitting exercises.*   *Managing exercises:*  *US:*   * *As a Teacher, I want to log in to the system, review all the appeal requests and decline or accept them.* * *As a Teacher, I want to log in to the system, review all the time extension requests and decline or accept them.* * *As a Teacher, I want to log in to the system, select specific course and create new exercises for the course. In the creation process I will give basic information about the settings of the exercises.* * *As a Teacher, I want to log in to the system, select specific exercise and change its submission date.* * *As a Teacher, I want to log in to the system, select specific exercise and checker to the exercise.*   *AC:*   * *When the teacher logs in and reaches the home page, a list of appeals for exercises from courses they teach are shown.* * *When the teacher logs in and reaches the home page, a list of time extension requests for exercises from courses they teach are shown.* * *When the teacher logs in and reaches the home page, a list of courses they teach is shown. When the teacher selects course from the list, they get page of the course that contains option to add exercises to the course with its basic settings information.* * *When the teacher logs in and reaches the home page, a list of exercises is shown. In the exercise page there is option to edit the settings of the exercise that has option to change the submission date.* * *When the teacher logs in and reaches the home page, a list of exercises is shown. In the exercise page there is option to edit the settings of the exercise that has option to add checker to the exercise.*   *Checking exercises:*  *US:*   * *As a Teacher, I want to enter a specific course page and automatically check all submitted homework with one click.* * *As a Teacher, I want to be able to automatically check the coding style of an exercise.* * *As an exercise checker, I want to be able to easily view all the exercises I am assigned to check.* * *As an Exercises checker, I want to select an exercise and then select a student submission and manually check it.* * *As an Exercise checker, I want to be able to view the result of the automatic checks so that I can make sure the grade is warranted.*   *AC:*   * *When the teacher clicks on the course button, he then chooses an exercise and will be given the option to do an automatic test via a button click.* * *When the teacher clicks on the course button, he then chooses an exercise and will be given the option to do an automatic coding style check via a button click.* * *When I enter the home page as exercise checker, I will see a list of exercises that I was assigned to check.* * *When I enter the exercise page, I can choose a specific exercise submission and will then be given the ability to preview or download the files so I can check them.* * *When seeing an exercise submission, I can see the results of the check at the bottom of the page and edit the penalty on any mistake as I see fit.*   *Submitting exercises:*  *US:*   * *As a Student, I want to enter a specific curse and exercise, so that I can submit the files.* * *As a Student, I want to log in to the system and see a list of my grades.* * *As a Student, I want to login in and send an extension for an exercise.* * *As a Student, I want to login in and send an appeal request on an exercise witch already tested.* * *As a Student, I want to login in and see my files that I submitted to one of the exercises.*   *AC:*   * *Given the student log in he will see the that list in the home page in a table* * *Given the student enter to the right course from list and chooses the right exercise he can click button and add files and submit.* * *Given the student enter to an exercise I can click on the exercise in the list in the home page and click in the right button for send the extension request.* * *Given the student enter to an exercise I can click on the exercise in the list in the home page and click in the right button for send the appeal request.* * *Given the student enter to an exercise I can click on the exercise in the list in the home page and click in the right button for download my files.* |
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