

Assessment One: Web Development Assessment

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This is an **OPEN BOOK** assessment. There are ten (10) questions. Answer all of the questions. There are 40 marks available.

You must work alone on this assessment. You must not communicate with anyone other than your Lecturer or Unit Coordinator regarding any aspect of this Assessment.

All submissions may be subjected to plagiarism testing, collusion and other forms of academic misconduct testing. You must cite any and all code from any source, other than code adapted from the workshop slides.

The Problem

You have been approached by a company looking to create a web application to manage the scoring of sports events within a tournament. The web application will store information on the two things – Teams and Matches. Each Team should have a team name, a team location and a contact email address. Each Match should contain information on the two teams competing, the score of each team and the date and time of the match occurrence. A Match consists of no more or less than two Teams competing.

The winner of a Match is considered to be the Team with a higher score of the two. Your task is to develop a simple web application using Django to allow the viewing of a list of Teams, a list of Matches and a detailed view of a single Match.

The Assignment (Your Work)

(40 marks)

1. Create a Django Project and App with appropriate names for the purpose of this assignment. Ensure that the App is part of the project.
Total 2 marks: 1 mark for creation of Project and App, 1 mark for linking.
2. Develop the models required to store the information required in this system.
Total 8 marks: For each of two models, 1 mark for correct identification and naming of model, 1 mark for correct identification and naming of attributes, 1 mark for correct identification and use of data types. Considering both, 2 marks for relationship between models.
3. In a Word document, describe why you chose the attributes and data types that you chose and why you implemented the relationship(s) between the two models in the way that you did. You may wish to contrast your choices with alternatives and consider the functionality enabled by your choices.
Total 3 marks; 1 mark for attribute explanation, 1 mark for data type explanation and 1 mark for relationship explanation.
4. Create and apply the migrations for your model into the SQLite database.
Total 2 marks: 1 mark for creating the migrations and 1 mark for applying them.
5. Using both a Project URL file and App URL file, create the URL patterns for the list of Teams, list of Matches and a single Match.
Total 3 marks: 1 mark for grouped URLs and 2 marks for individual Match.

6. Create the View functions for the list of Teams and list of Matches. This will also require the creation of templates to display the lists. Ensure that you create valid HTML pages (containing and utilising HTML, Header and Body tags, as well as a Header tag for the heading of each page).
Total 8 marks: For each of two pages, 1 mark for retrieving data, 1 mark for successfully rendering the template with data, 1 mark for template structure and 1 mark for template logic.
7. Create the View function for the single Match. This view should list the competitors of the Event, when it is held, the team's scores and indicate the team that is the winner.
Total 6 marks: 2 marks for retrieving data, 1 mark for successfully rendering the template with data, 1 mark for template data and 2 marks for template logic.
8. Modify your templates such that they inherit from a common base template. Provide links for the List of Teams and List of Matches. Modify the List of Matches such that each event links to the single event page for it.
Total 4 marks: 1 mark for navigation links, 1 mark for links from events, 1 mark for creating base template, 1 mark for utilising base template.
9. In the Word document used for question three, detail which CRUD operations you would restrict to team managers, scorekeepers and website visitors respectively and justify your decisions.
Total 3 marks: 1 mark for each group and its operations justified.
10. Finally, in the same document, discuss two of the benefits of implementing this App within Django, with respect to either security, performance or ease of development. You may provide two benefits from the same category.
Total 1 mark: 0.5 marks for each benefit.

Please do note that partial marks may be awarded, commensurate with the effort and correctness of the answer to the component of the question.

Submission

An assignment submission point is provided on Blackboard LMS for submission of this assignment by 14:50PM Perth time on Friday, 1st of April, 2022. Please `.zip` (or `.tar`) together your project (ensuring you submit the entire folder containing `manage.py` and all of its subfolders), alongside the Word document and a Declaration of Originality and submit as a single attachment.

Please direct any queries to Tristan Reed (tristan.reed@curtin.edu.au), as clarifications will be made available on the Assignments section of Blackboard for all to see.