Assessed Coursework

Course Name	Web Application Development 2			
Coursework Number	1 (of 5) – Rango application			
Deadline	Time:	6.30pm	Date:	11 February 2022
% Contribution to final course mark	10		This should take at most this many hours:	15
Solo or Group ✓	Solo	✓	Group	
Submission Instructions	See under "How to submit" on Page 4			
Who Will Mark This? ✓	Lecturer ✓		Tutor	Other
Feedback Type? ✓	Written ✓		Oral	Both
Individual or Generic? ✓	Generic		Individual ✓	Both
Other Feedback Notes				
Please Note: This Coursework cannot be Re-Done				

Code of Assessment Rules for Coursework Submission

Deadlines for the submission of coursework which is to be formally assessed will be published in course documentation, and work which is submitted later than the deadline will be subject to penalty as set out below. The primary grade and secondary band awarded for coursework which is submitted after the published deadline will be calculated as follows:

    (i)   in respect of work submitted not more than five working days after the deadline
          a.   the work will be assessed in the usual way;
          b.   the primary grade and secondary band so determined will then be reduced by two secondary bands for each working day (or part of a working day) the work was submitted late.
    (ii)   work submitted more than five working days after the deadline will be awarded Grade H.

Penalties for late submission of coursework will not be imposed if good cause is established for the late submission. You should submit documents supporting good cause via MyCampus.

Penalty for non-adherence to Submission Instructions is 2 bands

Marking Criteria
See Page 4

Web Application Development 2

Rango Application (10%)

Introduction

The course is based on the e-book "Tango with Django 2: A Beginner's Guide to Web Development", by Leif Azzopardi and David Maxwell, published by Lean Publishing (henceforth "TWD") – specifically the version that says "**2020-01a**" on the cover. The latest version has been updated for Django 2.2. You will be using this book primarily during the lab sessions, especially in the first half of the course.

TWD contains a step-by-step tutorial that guides the reader through the development of a web application called Rango, to be built using Python 3.9 and Django 2.2. Rango lets users browse through user-defined categories to access various web pages. During the first five lab sessions in particular you will be working through the chapters of TWD to develop your own version of Rango.

We recommend that you work through all 20 chapters in TWD, however only your work on the first 10 chapters will be assessed. The development of your Rango application will account for 10% of your overall mark for the course. Moreover, successful completion of Rango will give you the skills that you need in order to work on the WAD2 team project later, which accounts for 40% of your overall mark.

A recommended development schedule is given below, together with some important guidance in relation to working on Rango.

Working on Rango – Important Guidance

The following guidelines are very important: be sure to read them carefully as they relate to the assessment of your Rango application.

1. **You MUST make regular commits to your Git repository: AT LEAST once per chapter**. **We will be looking for evidence of regular commits when it comes to marking your Rango application**.

2. If you are developing Rango on your laptop or home PC, make sure that you use Python 3 not Python 2! Also ensure that you are using version 2.2 of Django, as earlier versions of Django might not be compatible.

3. You should ensure that any messages are conveyed exactly as described in TWD. For example, if your web page is supposed to include the message "Rango says hello world" then you must include exactly that message, and not "Rango says hey there" or "Rango says Hello World". Similarly, files must be named exactly as stated – if you are required to include an image named rango.jpg, this MUST be the filename and not Rango.JPG, for example. Automated testing will be carried out when it comes to marking your Rango application (see Chapter 18 of TWD) and you may lose marks if tests fail due to inconsistencies of the types described here.

4. We expect you to do the exercises at the ends of the chapters in TWD (up to Chapter 10) – some of the automated tests are based on successful completion of these exercises.

5. The automated tests are specifically designed so that they check out the step-by-step development of your application. As the app changes over time, some tests from earlier chapters will fail. This is why it is so important to commit regularly (and at least once per

chapter) because we will run our tests against all versions of your code in your commit history. To explain this further, suppose you have two commits of your code: one at time point A, and one at the later time point B, and suppose that automated test T is to be run against your code. As long as test T passes on at least one of versions A and B, you will be given the mark for this test.

6. You may find completed versions of Rango in various places on the web. If you download such a version and submit it as your own developed application, you will find that will not score highly for this exercise. This is because the automated tests are specifically designed so that they check out the step-by-step development of your application. Tests have been updated so are not the same as all previous years. **You must complete and submit YOUR OWN work, and not anything copied from anywhere else.**

Automated testing

Automated testing of your Rango application (taking code from your Github repository) will be carried out shortly after the final deadline. The automated tests for Chapters 3-10 will be run on your Github repository. You will receive feedback (via an automated email) on which tests you passed and which tests you failed. The test script will look at all your commits up to 6.30pm on 11 February 2022.

Rango development schedule

By the end of week 5 you should have completed the development of your Rango application up to the end of Chapter 10. As a guideline to help you plan your work, our expectation is that you will have completed the chapters shown in each row of the following table by the end of the week in question. Your lab tutors will be expecting you to follow this schedule, although assessment only takes place at the deadline.

Week no.	Week ending	TWD chapters
1	14/01/2022	1, appendix on Git
2	21/01/2022	3, 4
3	28/01/2022	5, 6
4	04/02/2022	7, 8
5	11/02/2022	9, 10

You are of course free to develop Rango ahead of this recommended schedule, but you should make sure that you do not fall behind.

Carrying out your own testing

The automated tests we will carry out on your code closely follows those provided in the book. We strongly recommend you carry out your own testing to ensure a good mark! This will allow you to gain feedback on how many tests you are passing and failing in advance of the formal assessment after the deadline.

The automated tests that will be executed after the deadline will include those in the Github repository https://github.com/maxwelld90/tango_with_django_2_code/. There will additionally be checks such as the number of commits you did, the time intervals between commits, etc.

Note: Do not use any tests from elsewhere! There are various out of date Rango tests in other repositories online, which will not work with current versions of the textbook or your code, and do not correspond to the automated tests that will be run against your submission.

How to submit

You should provide details of the location of your Github repository by the deadline on Friday 11 February 2022 at 6.30pm

This information should be supplied via a custom-built web app that may be accessed via http://www.dcs.gla.ac.uk/wad2. You will need to login using with the same username as your GUID (i.e., your student number plus the first initial of your surname) and using the password that will be sent to you by email some time in week 2 or 3. Then supply your Github repository URL, which should be along the following lines:
https://github.com/<username>/tango_with_django_project.git.

Marking scheme

When the automated tests are run after the deadline, you will gain 1 mark for each test passed and 0 marks for each test failed (or terminated early due to an error). The total marks you gained will then be expressed as a percentage of the total number of tests N (currently N=117 though the final number of tests may vary slightly from this).

Your percentage P will then be adjusted to take account of the number of commits C that you made. Since you are supposed to commit at least once per chapter, you should have at least 8 commits from Chapters 3-10. Your overall percentage R will then be P multiplied by $min\{C,8\}/8$. So, for example, if you made only 4 commits, R will be P divided by 2.

We will also be checking commit times. Commit times will not be part of your final grade, but allow us to detect plagiarism. For instance, a GitHub repository where all commits were made on the same day, will be flagged, and we will closely inspect source code, commit messages and history to determine course of action.

Your final percentage R will then be converted to a band which will be your mark for this component of the assessment. You will receive an automated email with details of how many (and which) tests you passed and failed, together with more detailed feedback on any test errors or failures.

Common pitfalls

Based on prior experience, there are some scenarios that cause the tests not to run properly. We want to avoid a situation where you have done a lot of work developing Rango, but then find that you are passing none of the tests! You will be able to determine yourself if this is likely to happen by running the tests for yourself (see under "Carrying out your own testing", above). There are some common reasons as to why the tests might not run properly, so if you are in this position it would be worth checking the following list to see if any of these reasons apply to you:

- You gave an incorrect Github URL.
- Your Github repository is private – it must be public!
- You developed Rango using Python 2.x rather than Python 3.x – this will cause most of the tests to fail due to syntax errors.
- Your code is not in the main (or master) branch of your Github repository.
- The module manage.py is missing from one of the commits – this could cause all of the tests to fail
- The module urls.py is missing from one of the commits – this could cause all of the tests to fail.
- You are running the tests from within a Dropbox folder (or similar cloud service provider) – it is more reliable to run the tests from a local drive or networked drive.

- You receive the following error: "fatal: destination path 'temporal' already exists and is not an empty directory" – delete the folder "temporal".
- You committed your virtual environment – you must not do this.
- You developed Rango on PythonAnywhere – it is fine to use PythonAnywhere for the development but you should ensure that Rango can be deployed successfully on localhost before you make your Git commits.
- You have omitted to include __init.py__ in the relevant project folders (thus git add has not picked up all the files that should be committed).
- You included the Django beginners' tutorial or similar in your repo, so that you have two manage.py files in your repo. In general the automated test script looks for manage.py in your repo – if you include more than one, it might start executing the python manage.py commands against the wrong project (e.g., running the Rango tests against the Django beginners' tutorial, which will cause most if not all of the tests to fail).
- You have hard-coded your templates folder in settings.py. Take care to ensure that the path to your templates folder is relative and not absolute. This error might not be obvious to you because it might not show up if you run the tests on your local machine.
- Your repository setup is unexpected. Refer back to the first lab sheet for an explanation as to how your repository should be structured on Github.
- The process timed out – this can happen if you made far too many commits (typically over 50). It is recommended to commit early and commit often (at least once per chapter), but you must not take this to excess! Try to aim for between 8-20 commits.

Plagiarism

Due to the nature of this exercise, you will find that you are taking chunks of code exactly as instructed from the textbook. This is obviously OK and an expected part of the work. However, many parts of the work you have to complete yourself and these parts should NOT be copied from anywhere, including other students past or present.
We have various plagiarism tests in place for this exercise, and work that is found to have been copied from other sources **will score a mark of 0** and will be investigated and appropriately dealt with by the University.