

Practical Python Milestone Project

PLANNING DOCUMENT

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“Practical Python Milestone Project”

This is the milestone project that I have created for the “[Practical Python](#)” module, which is part of “[Full Stack Web Development Course](#)” offered by Code Institute via Learning People.

Practical Python Milestone Project Brief

I have listed below what I **think** the main points are for the criteria of this milestone project.

- Build a **web application** that asks the player to guess the **answer** to **picture** or **text-based** riddle or create your **own project** based on a similar to project brief.
- The player is presented with **image** or **text-based** riddle and answers into a **text-area** using a **Form**.
- If player guesses correctly then is forwarded the next riddle.
- If player guesses incorrectly their guess is **stored** and **printed below** the riddle and the **text-area** is **cleared** so they can **guess again**.
- **Multiple** players can play an instance of the game at the **same time**, each has their **own browser**.
- Players are identified by a **unique username**.
- Create a **leader board** that **ranks** top scores for **all / recent** players.

Practical Python Milestone Project Guidelines

I have listed below what I think the main points are for the guidelines of the milestone project.

- Project logic **must be created** using the following
 - (Css3,Html5,Python3).
 - (Flask) to structure the projects back-end.
 - (Git & GitHub) for version control (new functionality should have separate commit).
 - (Heroku) to deploy final version of code.
- Project logic **may use** the following
 - (Bootstrap) to enrich the look and feel of the project.
 - (JavaScript) to enrich the look and feel of the project.
- **Strive** to use **semantic Html5 elements** to structure your Html code better.
- Taking a **Test-Driven Development (TDD)** approach to developing the game.
- Develop & Run **Automated** tests to ensure websites functionality works correctly
- Make sure web application is '**Responsive Design**' and automatically adjusts based on device size.
- Create a '**Credits**' section in the **Readme.md** file to include the following,
 - **Content** i.e. text copied from xxx
 - **Media** Where they were obtained from.
 - **Acknowledgements**
- Create a '**Deployment**' section in the **Readme.md** file to include the following,
 - How to **deploy project** to hosting platform (Heroku).
 - Detail of differences between Deployed & Development Versions of code.
 - Different values for environment variables.
 - Different configuration files.
 - Separate Git Branch.
- Create a '**Testing**' section in **Readme.md** File to include the following,
 - **Summarizing** your approach to testing
 - Provide **pseudocode** written to develop your TDD tests
 - If **manual tests** are run to ensure websites functionality works correctly.
 - If tests are **not working** as expected document
 - Your expected output should have been.
 - Reasons why the test(s) could have been failing.
- Create a '**UX**' section in Readme.md File to include the following,
 - **Who** this web application is for.
 - **What** it is that want to achieve.
 - How Web application is the **best solution** to achieve what's required.
 - **Functionality** of the project.
 - **Features** of the project.
 - **Technologies** used in project.
 - If code was based on other code (Explain what was kept and how it was adapted to fit project needs).

Practical Python Milestone Project Checklist

I have listed below the main sections from the Checklist of the milestone project which should be incorporated into the project and checked before final submission using the Checklist.

- **Code Quality**
 - Appropriate use of Python
 - Appropriate use of the template language
 - Appropriate use of JavaScript
 - Appropriate use of JavaScript APIs (if used)
 - Appropriate use of HTML5
 - Appropriate use of CSS3
 - Appropriate use of Code
- **Software Development Practices**
 - Deployment Implementation
 - Deployment Write-up
 - Appropriate use of JavaScript
 - Directory Structure and File Naming
 - Version Control
 - Testing Implementation
 - Testing write-up
 - Readme file
 - Comments
 - Deployment Implementation
 - Deployment write-up
- **Usability and Real-world application**
 - Project Purpose
 - UX Design
 - Suitability for purpose
 - Navigation
 - Ease of Use
 - Information Architecture
 - Defensive Design
- **Layout and Visual Impact**
 - Responsive Design
 - Image Presentation
 - Colour Scheme and Typography

What I would like to accomplish

The first decision was the project brief ,I decided to create my own project a [Geography quiz game](#) based on a similar project brief to the riddle game, I did some google research and collected a series of 6 categories to choose from each containing a series of text based multiple choice questions which I have listed the categories below

“[Geography 1](#)” (18 Questions)

“[Geography 2](#)” (18 Questions)

“[Least Populous Of The Three?](#)” (27 Questions)

“[Odd One Out Capitals?](#)” (18 questions)

“[Who Owns These Islands?](#)” (20 Questions)

“[Which City has the highest elevation above sea level?](#)” (20 Questions)

Not sure how many questions should be in each section as yet ?

The all the questions where taken for the following website <https://www.sporcle.com/type/multiplechoice/geography>

Images Used

The images used under the <https://creativecommons.org/licenses/by-sa/2.0/> license.

Background for Top of website https://cdn.pixabay.com/photo/2015/01/15/16/17/hands-600497_960_720.jpg

Six Images used for ‘Quiz Selection Section’ of website by rawpixel.com

All Images in categories by https://commons.wikimedia.org/wiki/Main_Page

Bootstrap Theme

I think I will build a one-page website and use the following <https://startbootstrap.com/template-categories/one-page/> free theme

My Question Categories

Listed below are the 6 categories showing (questions, multiple choice answers and the correct answer to the question).

Geography 1 ?

Can you choose the correct answer to these questions from each Geography subcategory?

#	Question	Option 1	Option 2	Option 3	Option 4	Answer
01	Which country is known as the Emerald Isle	United Kingdom	New Zealand	Ireland	Denmark	3
02	Which of these American cities has the largest population (2015 estimate)	Phoenix	San Francisco	Denver	Dallas	1
03	Which of these countries has provinces instead of states	Mexico	Nepal	India	Austria	2
04	Which country has the highest population density of any country in the world	Bangladesh	Singapore	Vatican City	Monaco	4
05	What is the most commonly spoken language in the world	Arabic	Spanish	English	Mandarin	4
06	Which South Africa city is recognised as the legislative capital	Pretoria	Bloemfontein	Johannesburg	Cape Town	4
07	Which continent has the most countries with 54	Asia	North America	Africa	Europe	3
08	Which colour is not present on the Brazilian Flag	Blue	White	Black	Green	3
09	Which is the longest river in Europe at 2,300 Miles	Volga	Rhine	Ural	Danube	1
10	Which Country gained independence from France in 1962	Sudan	Algeria	Kenya	Morocco	2
11	Which Asian Country has Bishkek as its capital	Kazakhstan	North Korea	Kyrgyzstan	Myanmar	3
12	Which of these countries does not contain part of the Andes Mountains	Bolivia	Columbia	Paraguay	Ecuador	3
13	What is the only central American country that officially speaks English	Guatemala	Panama	Belize	Honduras	2
14	What is the smallest country of Oceania in size	Vanuatu	Marshall Islands	Kiribati	Nauru	4
15	Which of these countries does not border Germany	Czechia	Switzerland	Hungary	Belgium	3
16	Which constituent country in the UK is not included in Great Britain	Northern Ireland	Scotland	Wales	England	1
17	What is the largest Canadian island	Newfoundland	Baffin Island	Victoria Island	Ellesmere Island	2
18	Which of these is a name of a desert	Mekong	Baikal	Sonoran	Makalu	2

Geography 2 ?

Can you choose the correct answer to these questions from each Geography subcategory?

#	Question	Option 1	Option 2	Option 3	Option 4	Answer
01	What is the largest country in the world (by area)?	United States	Russia	Canada	China	2
02	Which city's famous nickname is the 'Pearl of the Orient'?	Singapore	Taipei	Kyoto	Hong Kong	4
03	Which of the following is NOT one of the 'four corners' states?	Arizona	Utah	New Mexico	Nevada	4
04	Which of the following countries does NOT have a population exceeding 200 million?	Pakistan	Brazil	Nigeria	Indonesia	3
05	To the nearest thousand miles, what is the circumference of the world at the equator?	25,000 mi	150,000 mi	10,000 mi	100,000 mi	1
06	Muscat is the capital of which country?	Bahrain	Yemen	Jordan	Oman	4
07	Which is the world's smallest continent (by area)?	South America	Europe	Antarctica	Oceania	4
08	The flag of which country is the only non-rectangular national flag?	Bhutan	Vatican City	Nepal	Switzerland	3
09	Which of the following countries is NOT a member state of the European Union?	Norway	Sweden	Finland	Denmark	1
10	Which is NOT a capital of South Africa?	Cape Town	Bloemfontein	Johannesburg	Pretoria	3
11	How many islands is Japan made up of?	12,852	6,852	852	3,852	2
12	The Galápagos Islands form part of which South American country?	Brazil	Ecuador	Peru	Chile	2
13	Which island is the easternmost member of the Antilles?	St. Vincent	Barbados	Grenada	Trinidad	2
14	Which country of Oceania is the smallest independent republic in the world (by area)?	Nauru	Kiribati	Palau	Micronesia	1
15	Which of these countries does NOT border Russia?	Kazakhstan	North Korea	Poland	Armenia	4
16	Which Scottish lake contains more water than all of the lakes and rivers of England and Wales combined?	Loch Morar	Loch Ness	Loch Tay	Loch Lomond	2
17	What percentage of Canadians are estimated to live within 100 miles of the US border?	10%	90%	50%	75%	4
18	What is the longest mountain range in the world?	Himalayas	Rockies	Transantarctics	Andes	4

Least Populous Of The Three ?

Can you choose the **least populous neighbour** of countries with exactly three land bordering countries?

#	Question	Option 1	Option 2	Option 3	Answer
01	Togo neighbours 11.04M - 20.11M - 27.50M	Ghana	Benin	Burkina Faso	2
02	Ghana neighbours 7.97M - 20.11M - 24.18M	Togo	Burkina Faso	Cote d'Ivoire	1
03	Eritrea neighbours 0.87M - 37.35M - 105.35M	Ethiopia	Sudan	Djibouti	3
04	Burundi neighbours 11.90M - 53.95M - 83.30M	Rwanda	Dem. Rep. of the Congo	Tanzania	1
05	Palestine neighbours 8.30M - 10.25M - 97.04M	Egypt	Israel	Jordan	2
06	Liberia neighbours 6.16M - 12.41M - 24.18M	Cote d'Ivoire	Guinea	Sierra Leone	3
07	Paraguay neighbours 11.14M - 44.29M - 207.35M	Bolivia	Brazil	Argentina	1
08	Malaysia neighbours 0.44M - 68.41M - 260.58M	Brunei	Thailand	Indonesia	1
09	Vietnam neighbours 7.13M - 16.20M - 1,379.30M	Cambodia	Laos	China	2
10	Venezuela neighbours 0.74M - 47.70M - 207.35M	Brazil	Colombia	Guyana	3
11	Norway neighbours 5.52M - 9.96M - 142.26M	Russia	Sweden	Finland	3
12	Oman neighbours 6.07M - 28.04M - 28.57M	Yemen	Saudi Arabia	United Arab Emirates	3
13	Finland neighbours 5.32M - 9.96M - 142.26M	Sweden	Norway	Russia	2
14	Somalia neighbours 0.87M - 47.62M - 105.35M	Ethiopia	Kenya	Djibouti	3
15	Gabon neighbours 0.78M - 4.95M - 24.99M	Republic of Congo	Equatorial Guinea	Cameroon	2
16	Mexico neighbours 0.36M - 15.46M - 326.63M	Belize	Guatemala	United States	1
17	Chile neighbours 11.14M - 31.04M - 44.29M	Argentina	Bolivia	Peru	2
18	Luxembourg neighbours 11.49M - 67.11M - 80.59M	France	Belgium	Germany	2
19	Malawi neighbours 15.97M - 26.57M - 53.95M	Zambia	Mozambique	Tanzania	1
20	Cambodia neighbours 7.13M - 68.41M - 96.16M	Vietnam	Laos	Thailand	2
21	Guyana neighbours 0.59M - 31.30M - 207.35M	Venezuela	Suriname	Brazil	2
22	North Korea neighbours 51.18M - 142.26M - 1,379.30M	South Korea	China	Russia	1
23	Djibouti neighbours 5.92M - 11.03M - 105.35M	Ethiopia	Eritrea	Somalia	2
24	Suriname neighbours 0.74M - 67.11M - 207.35M	Guyana	Brazil	France	1
25	Indonesia neighbours 1.29M - 6.91M - 31.38M	Malaysia	Timor-Leste	Papua New Guinea	2
26	Honduras neighbours 6.03M - 6.17M - 15.46M	Nicaragua	El Salvador	Guatemala	1
27	Bosnia & Herzegovina neighbours 0.64M - 4.29M - 7.11M	Montenegro	Serbia	Croatia	1

Who Owns These Islands ?

Can you choose which **country lays claim** to each of these islands?

#	Question	Option 1	Option 2	Option 3	Option 4	Answer
01	Guam	Fiji	Australia	United States	Japan	3
02	Easter Island	Panama	Peru	Chile	Brazil	3
03	Tahiti	New Zealand	France	Canada	United States	2
04	Christmas Island	Australia	Indonesia	New Zealand	Malaysia	1
05	Crete	Turkey	Ukraine	Croatia	Greece	4
06	Aruba	Netherlands	Venezuela	Spain	Mexico	1
07	Galápagos Islands	Argentina	Peru	Ecuador	Chile	3
08	Zanzibar	Kenya	Egypt	Sudan	Tanzania	4
09	Nicobar Islands	Sri Lanka	India	Thailand	Malaysia	2
10	Socotra	Somalia	Eritrea	Oman	Yemen	4
11	Cape Breton Island	Russia	Denmark	United States	Canada	4
12	Bioko	Nigeria	Equatorial Guinea	South Africa	Angola	2
13	Faroe Islands	United Kingdom	Denmark	Netherlands	Norway	2
14	Qeshm	Iran	Iraq	Pakistan	India	1
15	Hainan	China	Japan	Indonesia	Philippines	1
16	Niue	France	Germany	New Zealand	Australia	3
17	Java	Thailand	Malaysia	Brunei	Indonesia	4
18	Azores	Italy	Spain	Portugal	France	3
19	Canary Islands	Mexico	Spain	Morocco	France	2
20	Sicily	France	Greece	Italy	Spain	3

Odd One Out Capitals ?

Can you choose the capital **city** that is **NOT** on the given continent?

#	Question	Option 1	Option 2	Option 3	Option 4	Answer	Continent
01	North America	Santo Domingo	Santiago	Roseau	San Jose	2	South America
02	Oceania	Port Vila	Honiara	Funafuti	Manila	4	Asia
03	Asia	Astana	Asmara	Bangkok	Bishkek	2	African
04	Oceania	Port Moresby	Maputo	Majuro	Canberra	2	African
05	South America	Luanda	Paramaribo	Asuncion	Montevideo	1	African
06	Europe	Vientiane	Valletta	Vilnius	Vaduz	1	Asia
07	Oceania	Suva	Palikir	Wellington	Pristina	4	Europe
08	Africa	Ouagadougou	Yerevan	Windhoek	Juba	2	Asia
09	Africa	Abuja	Praia	Accra	Abu Dhabi	4	Asia
10	South America	Caracas	Buenos Aires	Tegucigalpa	Bogota	3	North America
11	North America	Managua	Bissau	Nassau	Kingstown	2	Africa
12	Europe	Tripoli	Ljubljana	Bratislava	Minsk	1	Africa
13	Africa	Conakry	Khartoum	Dhaka	Dakar	3	Asia
14	North America	Kingston	Port of Spain	Kabul	Belmopan	3	Asia
15	Asia	Pyongyang	Tashkent	Mogadishu	Beirut	3	Africa
16	South America	Lomé	Georgetown	Brasilia	Quito	1	Africa
17	Asia	Suva	Sri Jayawardenepura Kotte	Dili	Bandar Seri Begawan	1	Oceania
18	Europe	Dublin	Lisbon	London	Dodoma	4	Africa

Which City has the highest elevation above sea level ?

Can you choose which **city** has the **highest elevation** above sea level?

#	Question	Option 1	Option 2	Option 3	Answer
01	140 m (460 ft)	Manchester	Birmingham	London	2
02	520 m (1,710 ft)	Oslo	Munich	Amsterdam	2
03	652 m (2,139 ft)	Pristina	Chisinau	Vilnius	1
04	667 m (2,188 ft)	Madrid	Seville	Lisbon	1
05	770 m (2,530 ft)	Beirut	Tbilisi	Baku	2
06	920 m (3,020 ft)	Vientiane	Bengaluru	Sri Jayawardenepura Kotte	2
07	990 m (3,250 ft)	Panama City	Tegucigalpa	Paramaribo	2
08	990 m (3,250 ft)	Jakarta	Baghdad	Yerevan	3
09	1,079 m (3,540 ft)	Brasilia	Rio de Janeiro	São Paulo	2
10	1,100 m (3,600 ft)	Amman	Kuwait City	Doha	1
11	1,350 m (4,429 ft)	Pyongyang	Moscow	Ulaanbaatar	3
12	1,400 m (4,600 ft)	Dhaka	Tirana	Kathmandu	3
13	1,731 m (5,690 ft)	Chicago	Seattle	Denver	3
14	1,791 m (5,876 ft)	Phnom Penh	Bern	Kabul	3
15	1,830 m (6,003 ft)	Tehran	Tel Aviv	Seoul	1
16	2,250 m (7,380 ft)	Lima	Mexico City	Asuncion	2
17	2,250 m (7,380 ft)	Cairo	Riyadh	Sana'a	3
18	2,640 m (8,660 ft)	Caracas	Bogotá	Santiago de Chile	2
19	3,640 m (11,942 ft)	Quito	Calgary	La Paz	3
20	3,656 m (11,995 ft)	Ankara	Lhasa	Taipei	2