Online graded lab assignment "Agents"

Due date: End of week #3

General Instructions:

Be sure to read the following general instructions carefully:

1. This assignment must be completed individually by all the students.
2. Only provide the requested screenshots and make sure to have a complete screenshot, partial screenshots will not earn any marks.
3. You will accompany your solution submission with an analysis report that contains your findings and the required screenshots.
4. You will have to provide a demonstration video for your solution and upload the video together with the solution on eCentennial through the assignment link. See the video recording instructions at the end of this document.

Pre-requisite to carrying out the assignment:

5. download from the course shell the following Python script, examine and test:
    a. blinddog_simple_reflex.py
6. Go through and watch all "Agent" lab tutorials related to module #2 to understand how the code works.

Assignment - exercise: Simple reflex agent

Open the code blinddog_simple_reflex.py and carry out the following requirements:

Requirements:

1- Add a new food item at location 9 in the park. (10 mark)

2- Add a new thing to the environment name it "Person" (20 mark)

3- Create two instances (objects) of the "Person" class and name the first instance your first name and set the location of this instance to be 3 in the park environment. Name the second instance your last name and set the location of this instance to be 12 in the park environment. (20 mark)

Add a new action to the percepts for the blinddog agent as follows:

4-If the agent encounters a person at the park to bark. *(hint: Check how action "drink" operates, there are many classes that need to be changed in the code)* (50 mark)

5-Run the park environment for 18 steps check the results and take a screenshot of the results, it has to be a full screen showing the console output.

In your analysis report draw a class diagram for the code mentioning the attributes methods used in the assignment, i.e. you need to only focus on the classes related to the specific requirements mentioned in the assignment. Use Microsoft Visio to generate your class diagram and save the output as an image to

be inserted into your analysis report. Add the screenshots to the analysis report. Also add any descriptions you see suitable in your analysis report.

Drop the code, analysis report and demonstration video in the assignment folder named Assignment-Agents by the due date.

Naming and Submission Rules:

1. You must name your submission according to the following rule: YourFullname_COMP237assignmentnumber. Example: AdamPerjouski_COMP237assignment1
2. Please add the python solution file .py to your submission after naming it firstname_agent.py.
3. Please accompany your submission with an analysis report, word document or pdf document showing all the analysis, make sure you add the required screen shots in the word document.
4. Upload the submission file on eCentennial using the Assignment link.

Rubric

Evaluation criteria	**Not acceptable**	**Below Average**	**Average**	**Competent**	**Excellent**
	0% - 24%	**25%-49%**	**50-69%**	**70%-83%**	**84%-100%**
Functionality	Missing all functionalities required	Some requirements are implemented.	Majority of requirements are implemented but some are malfunctioning.	Majority of requirements implemented.	All requirements are implemented Correctly.
Classes	Classes have been created incorrectly or completely missing.	Classes have been defined but have errors. Instances are incorrectly used.	Classes have been defined correctly but instances are used incorrectly or not created at all.	Classes have been defined correctly but some instances are used incorrectly.	Classes are correctly defined and makes use of its own functions which are called somewhere else in the code. Instances have been created and used correctly.
Documentation	No comments explaining code changes.	Minor comments are implemented.	Some code changes are correctly commented.	Majority of code changes are correctly commented.	All code changes are correctly commented.
Design	No adherence to object design principles.	Minor adherence to object design principles.	Some object oriented and modulus design	Majority of Object oriented and modulus	Object oriented and modulus design

			principles are adhered to.	design principles are adhered to.	principles are adhered to.
Testing & Evaluation	No evidence of testing and evaluation of the requirements.	Minor evaluation and testing efforts.	Some of the requirements have been tested & evaluated.	Majority of requirements are tested & evaluated.	Realistic evaluation and testing, comparing the solution to the requirements.
Demonstration Video	Very weak no mention of the code changes. Execution of code not demonstrated.	Some parts of the code changes presented. Execution of code partially demonstrated.	All code changes presented but without explanation why. Code demonstrated.	All code changes presented with explanation, exceeding time limit. Code demonstrated.	A comprehensive view of all code changes presented with explanation, within time limit. Code demonstrated.

Demonstration Video Recording

Please record a short video (max 4-5 minutes) to explain/demonstrate your assignment solution. You may use the Windows 10 Game bar to do the recording:

1. Press the Windows key + G at the same time to open the Game Bar dialog.

2. Check the "Yes, this is a game" checkbox to load the Game Bar.

3. Click on the Start Recording button (or Win + Alt + R) to begin capturing the video.

4. Stop the recording by clicking on the red recording bar that will be on the top right of the program window.

(If it disappears on you, press Win + G again to bring the Game Bar back.)

You'll find your recorded video (MP4 file), under the Videos folder in a subfolder called Captures.

Submit the video together with your solution and written response.