[AI-PACKAGE]

Milestone 1

Milestone: 1
Due date: **16 March 2019 Midnight**
Course: Artificial Intelligence
Instructor: Dr. Marco Alfonse

Ain Shams University
Faculty of Computer and Information Sciences
Third Grade

General instructions:

Regarding your AI-Package:

1. Initially, create a new project named 'AI-Package'.
2. With each milestone, you will add a folder with the Task name.
3. After you finish writing your code:
   - Open the folder shared with your team on GoogleDrive (the one with your team number)
   - Upload all the project files with the same hierarchy.
   - Submit **only running** code that you have tested before.
4. Compressed files (.zip/.rar) are **not allowed.**
5. The Submission of package is only through **your shared folder on google drive.**
6. **Don't delete any previous milestones.**

Regarding the expert system submission [Milestone 1]:

* For documentation of PyKnow check this link.

1. Add a new folder named 'ExpertSystems' in the 'AI-Package' project.
2. Don't split the rules in your expert system (One Rule for each sentence).
3. Your code should be written in **ONE** ".py" file under 'ExpertSystems' folder. The file should include:
   a. Two expert systems (as mentioned below)
   b. A main function that tests them by asking the user for input and giving the facts to the expert system, finally displaying the output to the user.

**This package is intended for team work contribution. Sharing ideas or part of the answers is considered plagiarism and will not be tolerated.
All submissions will be checked for plagiarism automatically.**

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Write two expert systems in one '.py' file:

1. Medical Expert Systems:

- If the patient is a child (less than or equal 5 years old) and have more than two symptoms of following list (shakiness, hunger, sweating, headache or pale) then he/she has signs of low sugar.
- If the patient is a child and has more than two symptoms of the following list (thirst, blurred vision, headache, dry mouth, smelling breath, shortness of breath), then the patient has signs of high sugar.
- If the patient has signs of low sugar and has diabetic parents, then the patient could be diabetic.
- If the patient has runny nose and harsh cough, then the patient has signs of cold.
- If the patient is a child and has signs of cold, brownish-pink rash, high and fast temperature, bloodshot eyes, white spots inside cheek then he/she has a measles.
- If the patient is a child and has moderate temperature, saliva is not normal, swollen lymph nodes in neck, mouth dry then he/she has mumps.
- If the patient is a child or an adult and has signs of cold, conjunctives, strong body aches, weakness, vomiting, sore throat and sneezing then he/she has a child-flu if the patient is a child or adult-flu if the patient is an adult.

2. Plant Diagnoses Expert System:
- If the plant has high temperature, normal humidity, tuber color is reddish-brown and tuber has spots then the plant has black heart.
- If the plant has low temperature, high humidity, normal tuber and tuber has spots then the plant has late blight.
- If the plant has high temperature, normal humidity, tuber is dry and tuber has circles then the plant has dry rot.
- If the plant has normal temperature, normal humidity, tuber color is brown and tuber has wrinkles then the plant has early blight.