IST 303
Group 2 - The Python Pilots
09/27/2018

Project requirements

In this project you are required to:

- *Implement a GUI application in Python 3*
    - *The GUI app interfaces the user to an underlying data store.*
- *The project should be completed using the agile principles articulated in Pilone & Miles.*

Make sure to meet with your instructor as regularly as you require to ensure that the project is scoped appropriately – neither too narrowly nor too widely.

Beyond those requirements, you and your team are free to choose your own domains to create a solution project for.

There are four parts to the project, A, B, C, and D.

Part A

1. *Meet with other members of your assigned team. I will have created the teams with the goal to optimize the mix among coding, GUI, and database skills.*
2. *Come up with a concept for your application.*
3. *Create an initial set of project requirements expressed as user stories. Make sure to identify all the relevant project stakeholders.*
4. *The user stories must have estimates of completion times.*
5. *Meet with the instructor to discuss the concept and initial set of user stories.*

Due: GitHub repository URL for your project. There should be a README in the repo with relevant documentation i.e. team members, stakeholders, requirements etc.

Concept

Control the Tello drone with a GUI to take off, fly, and land.

Requirements - User stories

1. Title: Take off
    a. Description: As a user, I should be able to launch the drone from the ground into the air, so that I can begin a flight route.
    b. Completion time: One week

    c. Priority: 10
2. Title: Fly in a circle
    a. Description: As a user, I should be able to fly the drone in a circle.
    b. Completion time: Two weeks
    c. Priority: 30
3. Title: Land drone
    a. Description: As a user, I should be able to land the drone safely on the ground.
    b. Completion time: One week
    c. Priority: 10
4. Title: Display the remaining charge of the battery.
    a. Description: As a user, I should be able to see the remaining battery charge in the GUI.
    b. Completion time: One week
    c. Priority: 30
5. Title: Display the drone's status
    a. Description: As a user, I should be able to see the status of the drone. For example, if the drone is either connected or disconnected from the computer.
    b. Completion time: One week
    c. Priority: 20
6. Title: Define flight plan
    a. Description: As a user, I should be able to design a flight plan in the GUI and have the drone execute the flight plan. For example, the drone will fly 15ft, rotate, fly 15ft back before landing
    b. Completion time: 3 weeks
    c. Priority: 20
7. Title: Register user
    a. Description: As a user, I should be able to create an account to be recognized in the system as a unique user.
    b. Completion time: 2 weeks
    c. Priority: 10
8. Title: Login/out
    a. Description: As a user, I should be able to log in to be able to access the system.
    b. Completion time: 2 weeks
    c. Priority: 10
9. Title: Forgot password:
    a. Description: As a user, I should be able to reset my password in case I forget it, in order to access the system.
    b. Completion time: 2 weeks
    c. Priority: 20
10. Title: Take Photo
    a. Description: As a user, I should be able to take a photo, in order to see what the drone saw during flight.
    b. Completion time: 3 weeks

    c. Priority: 30
11. Title: Measure Temperature
    a. Description: As a user, I should be able to measure temperature, in order to understand the drone's environment during flight.
    b. Completion time: 4 weeks
    c. Priority: 40

Stakeholders

- Farmers - check crops
    - As a farmer, I want plan a flight route, to check my crops.
- Landscape architects - help design
    - As a landscape, I want to take photos of the site, to help design the landscape.
- Mining planner - check progress of mining
    - As a mining planner, what I want is the geographical characteristics of particular areas like longitude and latitude.
- People in the travel industry or real estate - plan aerial shots of a location
    - As a travel blogger, I want to post aerial photographs of my travel locations to my website and social media platforms
- Toy store - let users use a simple UI to control the drone
    - As a player, I want fly drone in a circle because I think it's cool.
- Sell software to people that don't have a suitable phone to control it

Data elements (flight log)

- Flight ID
- Flight time
- Pilot ID
- Date
- Distance
- Source location
- Destination location
- Photo taken during flight
- Complete flight? [True/False]
- Reason for the failure, if applicable
- Temperature(?)
- # of charges
- Location of charge

GitHub

GitHub repository: https://github.com/thkim91/IST_303-GroupProject--Group2.git

Team members

- Taehoon Kim
    - Phone #: 909 543 8810
    - Email address: th.kim9112@gmail.com
- Charidy Paige
    - Phone #: 205.332-4191
    - Email address:mecpaige@gmail.com
- Bill Pepper
    - Phone #: 818 793 3384
    - Email address: williamepepper@gmail.com
- Siyu Xiang
    - Phone #:
    - Email address:siyu7866@gmail.com

Team meetings

1. 9/26/201
    a. Attendees: Taehoon, Charidy, Bill, & Siyu
    b. Notes:
        i. Discussed project concept and user stories
        ii. Collaboratively created new user stores (e.g. flight plan)
        iii. Scheduling time to meet with Prof. Chipidza on project scope
2. 09/27/2018
    a. Attendees: Taehoon, Charidy, Bill, Siyu, & Prof. Chipidza
    b. Notes:
        i. Identify stakeholders
        ii. Identify different kinds of users
        iii. New user stories:
            1. Change the password, should be able to access.
        iv. Determine reports
        v. Consider the feasibility of the project
        vi. You can change it to normal airline company if drone does not work

References

- https://www.ryzerobotics.com/tello
- https://dl-cdn.ryzerobotics.com/downloads/tello/0228/Tello+SDK+Readme.pdf