The task was interesting and challenging.Given the time I could not proceed much with the actual SLAM algorithm.However I read through the Probablistic Robotics book and other resource shared.I had previous worked on particle filter in one my assignments ,so it was good to refresh some of the concepts and learn new things.On an average I spend more time on the task than I estimated at the start of the assignment.

I tried to work with python ,so loading the data in python was a bit tricky initially. Also understanding the data structure,what it means and how it relates to the algorithm took a lot of time.

I wished to try the pyKalman python library but it would take a lot more reading to understand the usage.In the end I tried to work on the Kalman Filter algorithm from scratch to get the basics right but unfortunately its not in a working state as of now.However with more understanding of the data measurements and time I can eventually make it better.

Below are my answers to the questions mentioned in task:

 What can happen if 1 measurement is delayed ?

If a one measurement is deplayed then it is possible to ignore the measurement,for example in pykalman library we can mask the measurement.In pricinple we can increase the covariance of the measurement very high which could would mean that measurement will have very little impact.

 Now your IMU gets damaged. How does your implementation deals with it?

We can use different sensor readings like speedometer or wheel encoders to get odometry data.

 How will you deal with the case when the car is in a place where it has been before, but there is an error and localization is showing a different place?

If the car moved around and does a loop closure on the map then its probable that the localization of the wrong place is corrected and then the car localizes correctly.

**Quiz Answers:**

1. Content
2. Egress is considered complete when the driver stands next to the car both feet on the ground
3. Yes
4. None of the above
5. Teams must implement the standardized data logger software provided by the officials in their hardware.

Teams must install the standardized data logger piece of hardware provided by the officials on their vehicle.

1. Only one-way-telemetry for information retrieval is allowed