Aquality Persona

1)

Chris Malone is a 46-year-old, senior lecturer who specialises in Environmental studies. Chris is a researcher on a project for his local environmental research team. He trains people up to become citizen scientists. Chris dislikes it when citizen scientists gather all the data for the kick sample manually by gathering them back to the lab and make further research. He thinks this is a troublesome process.

Chris will use the app, AQUAlity, to help him train up new citizen scientists. Firstly, he will need to collect all the new citizen scientist’s email address and sign them up as citizen scientists. Once he has completed this then he can get them set up on the AQUAlity app. Once a short introduction to the app is complete, Chris takes the new citizen scientists to the river Glyde. After they arrived, Chris ensured everybody put waders and life jackets on as some parts of the river had a fast current. Chris check that they put on the equipment correctly, they then proceeded to the river and carefully approached it.

Once there, Chris set up the measuring devices(Arduino) onto the river, then start gathering data through Aquality. Chris demonstrated on how to conduct the 3-minute kick sample of the stream without injuring themselves with the help of the measuring devices. Chris was able to show them what each insect was with the assistance of the AQUAlity app as it provided image analysis in case they are not sure with the type of insect they are dealing with.

From this, the new citizen scientists were able to identify the insects and inputted the data into the app. Once they submitted their results, they were able to see graphs and maps of what of their and other citizen scientist’s data was collected at the same river. Once the measuring devices are up and running, they were able to river details and location of the devices. They took the measurements and saved them in the app.

2)

John Smith is a, 58-year-old man whose current occupation is being a fisherman. He currently resides in South Queensferry. John is a registered Citizen Scientist, who regularly analyses small streams using the Small Streams Characterisation System (SSCS). He would love to see an application that would allow him to measure and review data about the stream automatically for him. He would also like to gather data from the open source API. John would also like some help identifying the different insects as he always confuses stoneflies and mayflies.

John is currently at a stream on the Iverness Port Logan. John will put on his welly boots open the app AQUAlity. This is the first time John has used this app for taking the SSCS analysis. Once the app has loaded and John has logged into his account he selects the “Take a new Sample?” button, he will then see the location select page. John insert the stream name onto the next field and hit search. He sees the stream name he is looking for. John worried that the stream is not the one he is looking for although it has the same name. John then hit the current location button to search by current location. John then can sees the general details about the river and confirm that it is the one he is looking for. John sails out to the stream. Once arrived, John install the Arduino device onto the river and connect it through the app. Once installed, he can see the automatically generated data (water temperature, pH value and dissolved oxygen). Finally, John sees different kind of insects at the stream. He is not sure what kind of insects are them, so he captured them and upload them up onto the app to analyse the insects. He filled in the insects section and would able to see the overall score generated by the app and is happy with the results. It helps him by saving his time on collecting general data and hence he is able to spend more time on further research on the river.

3)

Jessica Alba is a 30-year-old woman, who’s occupation is an environmental engineer. She works for the government, under the Department of Environmental and Climate action. She is assigned to observe the clarity of the river near a residential area called Rockfield Manor because there is a factory only two kilometers away. Jessica lives far from Rockfield and it would be troublesome for her observe the river manually by going back and forth. Jessica decided to use Aquality to help her on gathering general information of the river and get an idea of the brief clarity of the river water.

The next morning, Jessica head to the river and open up Aquality. She clicks on “take new sample” and start to set up the river. She doesn’t know the name of the river, so she just click on selecting the current location on search. She sees that there is only one option on the menu, so she know that is one she is looking for. And then, Jessica set up Arduino onto the river and would able to see the live data gathered by the sensors.

Jessica sees bugs roaming around the river. She knows that the bugs are one of the variables that would affect the clarity of the water. However, she doesn’t know the type of the bugs. She captured some images of the insects and upload them in the Aquality app. She uses the analyze feature comes from the app. She identified that they are stoneflies. Jessica returned to Dublin and has to write a report about the clarity of the river water every week. She is able to make estimations by looking at the data generated by Aquality and hence reduce the time she has to travel to Rockfield Manor.