**Evaluation on our application**

The development of our application was the final choice of many ideas we had in mind. At the beginning of the project we knew that collaboration of all participants was needed so we set up a group project file on Git hub to put our ideas into and make a time table to manage our time well. From the start we wanted to create an application that would benefit all of its users. Our goal was to build a calculator application that both general public and students in the higher education could benefit from. From many ideas we had, we found out that many were present on the internet so we wanted to create something different, therefore we chose to do an energy calculator that converts energy created by the solar panel to heat energy that is used to heat up the water in the tank and how much energy will be needed to boil a certain litres of water that is at the room temperature. For increment 1, we had developed few personas and scenarios that would show how people can benefit from our application. For increment 2, the idea of creating calculator was extended to make a working version of our idea. By the end of increment 2 we had developed a code that could turn the area of the solar panel into how much water will be boiled by the energy it produced and a code that determines how much energy is needed to boil a given amount of water that is room temperature. To calculate how much heat energy the solar panel would produce, we took values from the internet to find out what is the efficiency of a solar panel and actually how much energy can it produce. Since our idea depends on the position of Sun and the weather conditions we made an assumption that the weather was always clear and the Sun is always at the top. We made this decision because it would be very hard for the user to find what angle the Sun is hitting the solar panel and how cloudy is the weather. For the other part of our code we added another section that calculates the energy needed to boil a certain amount of water from room temperature and this gives the user an estimate of how big solar panel they need. In increment 3, GUIs were created to enhance the code and make good visual representation of our idea, as well as GUIs we created message boxes that the user can look at to understand the math theory behind our calculations. From the feedback that we got from increment 3 we changed the program to make it look nicer visually while keeping it simple. We have added a home page where the user can choose which part of the code they want to use. We also separated the codes from each other and added them to the home page individually. The message boxes were removed from the calculator section so the user wouldn’t have to deal with message boxes during calculations and an extra section is created just for the theory part where the user can understand the theory behind.