ABSTRACT

Smart garden technology functions and has benefits for plant owners as well as a solution for communicating with plants. This means communicating with plants is that the plant owner knows the conditions of the plants such as nutrition and their needs. Especially in watering plants. Talking about the problem of watering these plants, of course there are a number of things that need attention, such as when is the right time for us to water the plants, and when is the wrong time to water the plants. What needs to be considered is the level and need for water must match the needs of the plant. This sunflower contains many important vitamins and minerals for the body. Its benefits range from increasing immunity to reducing the risk of heart disease. Sunflowers are able to live in subtropical and tropical regions even at altitudes up to 1,500 n asl. This plant will grow optimally at pH 6.5-7.5, optimal growth temperature ranges from 22-30 and full sunlight. In this study the authors used the SDLC *(Software Development Life Cycle) method when translated into Indonesian, namely the system development life cycle.* SDLC *can make it easier to communicate between development teams.* SDLC *can also function to build a system so that it can provide a clear picture using* SDLC *stages and as expected. The stages and steps of* SDLC *are requirements analysis, design, implementation, testing, and evaluation.* SDLC *is a method that is built systematically which can increase the percentage of completing projects on time and keeping projects according to standardization.* SDLC *is also a system development stage with the aim of quality project results and in accordance with the expected wishes. In analyzing the design of this smart plant system, testing is carried out for each part of the series. It aims to get maximum results. The results achieved in this study are in accordance with what has been designed. The soil moisture sensor is used as a system controller that can be connected to sprinklers automatically, pumps that have been accommodated by water will continue to flow from dry soil where the humidity starts at 0% - 60%, after the humidity hits ≥ 61% the pump will automatically turn off by itself, if the soil moisture starts to decrease from wet soil to ≤39% the pump will automatically turn on again.*

Keywords: sunflower, soil moisture sensor, smart garden