	# Abu Dhabi Polytechnic

Students' Graduation Project Abstract			
Department:	EMET	**Semester:**	Spring-2022
Project Title:	Hybrid Plantifier Application		
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Abstract:

For irrigation purpose the traditional methods become very old and outdated which gives very less output over the high input resources. To avoid this poor efficiency, we have to switch over new and latest technologies that is known as smart irrigation. Smart irrigation gives us optimum output over the traditional methods. The project presents the use of correct soil moisture, humidity & temperature sensors which helps to ease out the pain to monitor and keep records about the changes in soil moisture, humidity & temperature with the help of plant communicator device based on Arduino. These parameters are very important for high efficiency or large output. Hence using the Arduino UNO Mega microcontroller with Light-Depended Resistor sensor & moisture sensor (Hygrometer) and temperature sensor, temperature, soil moisture (Hygrometer) & humidity are measured and analyzed by the farmers. In smart irrigation method the soil for a certain duration provides information related to the moisture status of the soil. The Arduino UNO Mega will collect and process the data received from the Sensors. When a threshold moisture level of the soil is reached, the water will supply accordingly.

DHT 11 (Temperature & Humidity Sensor) indicates the Humidity and Temperature of the soil. This is essential because water must be provided to the plant at a particular time for a good yield with the help of a pump. PH (Potential Hydrogen) meter (PH Sensor) is a device used to measure acidity and alkalinity levels in the water, soil, and photo chemicals. PH meter consists of voltmeter attached to a pH-responsive electrode it varies between the ranges of 0 to 14. Where 0 shows the higher level of acidity means the soil is not useful and productive. Whereas 14 number shows the higher base soil. This project is highly used for farmers, Nursery professionals by eradicating traditional or manual methods of irrigation systems as well as traditional methods. This project shows the advantages the drip irrigation methods, sprinkler irrigation methods and hybrid methods over all traditional methods. The Arduino UNO having lot of sensitive components and sensors to

provide accurate result. With the help of APP, we detect all the activity on App to escalate the user productivity. In finally to obtain the standard results we done critical tests to evaluate the system.