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DEPT: PETROLEUM ENGINEERING

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ASSIGNMENT

A. SOFTWARE DEVELOPMENT PROCESS

CONCEPTUALIZATION

The technologies most widely adopted by farmers for use in precision farming soil sampling, GPS guidance system, yield maps, and computers with access to high-speed internet. ABUAD farm needs a GPS guidance system, yield maps, soil thermometer and computers with access to high-speed internet. The content mentioned are the essential needed for the development and operation of a automated system for the irrigation process.

SPECIFICATION

GPS and location

It's hard to imagine an irrigation system for farmers without a map. Mapping allows farmers to use a lot of location- based features, including tracking drone investigation and seeing local weather forecasts. A location based service can also help to divide a field into polygons to investigate each one separately and to pin locations that need extra attention.

Integration with drones

Drones are becoming one of the most important and popular agricultural technologies. With drones, a farmer can see where crops are healthy and weak. (Thermal cameras on drones can help to detect water leakage and find out how much water crops get)

Calendar

A calendar is important for a irrigation system. A calendar helps farmers schedule all their activities such as irrigation. A calendar is input with the software so as to keep the process neat and organized.

Push notifications

Push notifications are a must for this software. They help farmers keep track of different activities they need to pay attention to, warn about any changes, emergencies, and new data.

Weather forecasts

Though technology has made farmers less dependent on the environment, weather is still an important factor when it comes to growing crops. Weather forecast integration is a useful feature for this software. The key here is precise information that's constantly refreshed; every hour at least.

Yield mapping

This technique is used in agriculture of using GPS data to analyze variables such as crop yield and moisture content in a given field.

Security

And finally to ensure the safety of the software, a security system is developed in which the founder and the person who is in charge have the authorization to start and shutdown the system to increase the standard of the security.

DESIGN

FLOWCHART

