Advanced Programming

Project Proposal

(Project Name)

"Crop Right"

(Group Members)

Faran Shahid	*5233*	*BESE-4A*
Ahad Mahmood	*4650*	*BESE-4A*
Rana Awais	*6840*	*BESE-4A*

(Problem)

In our economy, agriculture sector plays a very dominant role by contributing to the GDP of country. In Pakistan, the contribution of agriculture to GDP is about 24%. It means that despite all the structural changes in economy, the share of agriculture is still at the top. So, the main motivation was to improve agricultural system in the country and help our country to prosper and overcome economic dilemmas that it is suffering from.

Solution

To solve above mentioned problem we come up with an idea of a system that will make user aware of the upcoming weather conditions and will also compare temperature, vapor and air pressure required for proper growth of selected plant or crop with the temperature and other conditions of the coming days. It will provide the user with necessary steps to prevent the damage to crops and for their efficient growth.

We have chosen “Crop Right” as a name for our product.

(Brief Technical Details)

The system shows the crop info about the crop selected by the user. This information is extracted from a text file in which it has already been stored. This data is read from the text file using scanner class. Data is also retrieved from the database using SQL queries.
The system also shows the weather forecast for 10 days. Data is retrieved from the websites by web scraping. The program connects to the website, **www.intellicast.com**, which provides the weather forecast for the next 10 days. The system downloads the html code of this website including all the forecast corresponding to each date. The data is extracted from the html code using HTML parser. The parser removes all of the tags in html code and extracts the text in them. Then, the required data is stored in a separate class for dates that contains attributes for each date. Analysis, which shows optimal dates for plantation of seeds and application of pesticides is then done on the basis precipitation probability and wind speed, which are achieved after forecast of a region has been obtained.

(Technologies Used)

- JAVA as a main language(backend , frontend)
- MySQL for database development
- Eclipse as an IDE for java
- SQL server
- SQL workbench

(Functional Requirements)

- Program should take input for crop
- Program should show the crop properties
- Program should scarpe the web for data about weather
- Program should get results based on conditions

(Non-Functional Requirements)

- Portability
- Reliability
- Performance
- Flexibility

(Task Division)

–> Rana Awais

- Data Gathering
- UI Designing
- Application Flow Control

–> Ahad Mahmood

- Web Scraping
- Extracting Required data
- Comparing results to analyze conditions

–> Faran Shahid

- Database Development
- Database Connection
- Extracting info from database