SOFTWARE ENGINEERING

Farmer Subsidy System

Data Dictionary

GROUP 3.8

TEAM DETAILS

NAME	ID
Unnathi Machiraju	201501140
Riya Talwar	201501154

1. **Farmer =** f_id + f-name + mobile_no + gender + area + category + income + (soil) + (climate) + state + district + village + password + f_sid + f_did

    - f_id = *A unique id to extract the details of the farmer*
    - f-name = *Name of the farmer*
    - mobile_no = *Mobile Number is used as username for login*
    - gender = *Gender of the farmer*
    - area = *Land area based on which eligibility for subsidy can be decided.*
    - category = ["marginal"| "medium"| "large"]
    - income = *Income of the farmer based on which eligibility for subsidy can be decided.*
    - soil = *Soil condition of the land*
    - climate = *Climatic condition of that area in which farm is located*
    - state = *State in which farm is located*
    - district = *District in which farm is located*
    - village = *Village in which farm is located*
    - password = *Password of the farmer for login*
    - f_sid = *List of subsidy application ids *
    - f_did = *List of document ids *
    - application_form() : Farmer fills the application form with his details before registering
    - notify() : Farmer gets notified whenever there is a new subsidy that has been added or if his document has been approved or if his subsidy has been sanctioned
    - request_for_subsidy() : to apply for a subsidy.
    - get_subsidy_status() : To track the status of subsidy request, it calls send_subsidyStatus() of subsidy class
    - request_doc_upload() : To upload a document
    - get_doc_status() : To get the status of document verification
    - update_profile() : To update the profile
    - request_subsidyInfo() : To get the subsidy information

2. **Government =** g_id + username + password + g_did + g_sid

    - g_id = *A unique id for government employee*
    - username = *Username for government employee*
    - password = *Password for government employee*
    - g_did = *List of all document ids that need verification *
    - g_sid = *List of all subsidy ids whose status needs to be updated*
    - verify_Doc() : The employee uses this function to verify Document and updating status .

- update_subsidyStatus() : The employee uses this function to call update_subsidyStatus() of subsidy class and therefore update the status of subsidy application. If the status now changes to subsidy delivered, then this method calls generate_receipt() of documents class.
- update_subsidyScheme() : The employee uses this function to update Subsidy Scheme information.
- notify() : The government is notified whenever there is a new document that has been uploaded which is yet to be verified or if there is a subsidy request

3. **Documents =** status + type + d_id
    - status = [“yes” | “no“] *Shows whether the document has been verified or not*
    - type = [“land” | “aadhaar” | “income” | “loan” | “receipt”]
    - d_id = *For unique Document id*
    - doc_upload() : The farmer uploads the documents using this function and also calls notify() of Notifications class so as to notify the government about a new document that has been added for verification
    - update_status() : Updates status of document and also calls notify() of Notifications class so as to notify the farmer about updated status of document
    - send_docStatus() : Sends the document verification status of the desired document id to the farmer
    - generate_receipt() : Generates receipt for the subsidy sanctioned and it gets stored in documents
    - display_doc() : Displays the document

4. **Website =** auth_fid + auth_gid

    - auth_fid = *List of authorised farmer mobile nos with corresponding passwords*
    - auth_gid = *List of authorised government ids*
    - login() : It asks the user to enter the username and password. And then it calls the authenticate() for validating the credentials.
    - signUp() : It calls the application_form() method of Farmer class for signing up the farmer into the system.
    - authenticate() : To authenticate whether the credentials entered by farmer or government are genuine

5. **Notifications =** message + f_id + g_id

    - message = [“subsidy update” | “ document update” | “subsidy request” | “document request” | “new scheme”]
    - f_id = *List of all farmer ids*
    - g_id = *Government id*
    - notify() : Notifies the farmer if his subsidy has been approved or if there are any new schemes and it notifies the government employee if there are any pending

subsidy requests or documents for verification

6. **Subsidy =** seeds_schid + fertiliser_schid + machine_schid + irrigationEquip_schid + s_Appl + type

    - seeds_schid = *Scheme ids of schemes related to seed subsidy. *
    - fertiliser_schi = *Scheme ids of schemes related to fertilizer subsidy.*
    - machine_schid = *Scheme ids of schemes related to machinery subsidy.*
    - irrigationEquip_schid = *Scheme ids of schemes related to irrigation subsidy.*
    - s_Appl = *List of subsidy application ids and corresponding status for a particular farmer*
    - type = [“seed”| “fertiliser”| “irrigation”| “machinery”]
    - suggestion() : Based on the type of subsidy chosen, climate ,soil , category of farmer the suitable scheme is suggested.
    - add_scheme() : Adds a new subsidy scheme by calling constructor of scheme class
    - apply_for_subsidy() : The farmer can apply for subsidy using this method and will get a subsidy application id, status after applying. After applying, this method calls notify() of notifications class to notify government about the new subsidy request.
    - display_subsidyInfo() : Asks for the type of subsidy the farmer is interested in and then displays all schemes related to that subsidy using display_schemeInfo() of scheme class
    - send_subsidyStatus() : Sends the subsidy status of the desired subsidy application to the farmer
    - update_subsidyStatus() : Government updates the status of a subsidy application and then after the status has been updated, the method calls notify() of notifications class to notify the farmer about the update.

7. **Scheme =** type + name + (soil) + (climate) + rate + category + s_id

    - type = *Type of subsidy this scheme is for*
    - name = *Name of the scheme*
    - soil = *Soil type required for the scheme*
    - climate = *Climate condition required for the scheme*
    - rate = *Rate at which subsidy is given*
    - category = [“marginal”| “medium”| “large”]
    - s_id = *Unique subsidy scheme id*
    - display_schemeInfo() : It accepts the subsidy scheme id as parameter whose information has to be displayed.
    - withdrawal() : If a subsidy scheme is no more required its withdrawn by deleting all the details related to that scheme.

- update_scheme() : A scheme can be updated using this method. The attribute corresponding to that scheme id is changed.
- scheme() : This is used to add a new scheme. It is a constructor of this class. After the scheme is added, it calls notify() function which will notify all farmers about this new scheme.

8. **Account =** aadhaar_no + account_no

- aadhaar_no = *Stores aadhaar no. of the farmer*
- account_no = *Specifies the account number*
- transaction() : The government employee calls this method to send subsidy amount to the farmer's account by accessing the account_no of that farmer
- verifyAccount() : To verify that the account no. and corresponding Aadhaar number entered are genuine by looking at the database for this combination.