CS210 - DBMS   **Virtual Group Hackathon Exercise**   **Date : 15/02/2021**

Time : 9.00 AM to 11.00 AM.   **Duration : 2 Hours**

Guidelines :

- **Each Team (as stated in the excel sheet) is instructed to submit one copy of their completed ER diagram on Git Hub account.**
- **A Scanned copy of the Final ER diagrams drawn on Plain paper or a tool need to be uploaded to Git Hub account. Any Submission after the time duration will not be considered for an evaluation.**
- **Share the Git hub account details in the attached google EXCEL sheet.**

Note: Any practice followed against the IIIT DWD examination norms and conditions, if found will be reported to the Examination Cell for their action.

Problem Statement :

XYZ is a fully subsidised Agriculture based Farmers market support system which supports buying and selling of various crops varieties to farmers thru online booking system. Their pricing strategy and payments are done based on terms and conditions which each farmer has to ensure before the payment is complete. Farmers who are in need of financial support may also approach an Authorised Financial Institutions for financial support where they have registered their insurance policies and mortgaged their assets.

Farmers products Bill processing and Payments have to follow the following guidelines.

Problem Output to be documented and shared on GitHub account :
- **Identify and write the Schema for all the Entities in the following Format**
  - *<Team Number>_EntityName(<Team_number>_Attribute1, .. <Team_number>_Attribute N)*
- **Identify and write all the Type of Relationships between entities.**
- **Replace all the Many to Many (M:M) relationships using other type of Relationships.**
- **Use the above specifications and construct an appropriate ER diagram satisfying the following conditions.**
- **Share the final copy of the ER diagram and other details on one Git Hub Account and copy the Git hub details on the Google Sheet against the Team Names.**

Business Requirements and Specifications:

- *At any point of time, one farmer can buy many Crop varieties from the govt. subsidised Farmers market, but he may not buy any at all. Farmers have to book the timings with the Vendors in advance.*

- *In each booking time slot, Farmer can buy Crop varieties from only one Vendor possible.*
- *Farmers can buy Crop varieties from more than one Vendor. One Booking slot is allowed to exactly to one Farmer.*
- *Each booking slot will have only one Bill and one bill is generated for one Vendor*
- *One payment is allowed to exactly one Bill, and the same Bill payment can be done over time by several payments.*
- *A Bill may considered to be outstanding, having nothing yet paid on it at all.*
- *One Farmer can make many payments, but a single payment is made by only one Farmer.*
- *Some Farmers have their insurance policy numbers registered by an Authorised Financial institution. They can register their policy with only one Authorised Financial institution.*
- *If farmer has a registered insurance policy number, they can submit one registered policy number to vendor for payments clearance.*
- *The Authorised Financial institution can process many policy requests for registration and approve many policies for payments.*
- *Farmers can make payments using their registered policy numbers. But farmers each single payment has to be done by only one Financial Institution.*
- *Financial Institution can support payments subjected to farmers have their policies registered with them.*