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CS 306 – World of Galdor – Use Cases

Use case 1: A new baby was born!

- When implemented in the PHP file, the users will be able to add a new Person to the database whose house and item are selected from the existing rows of those tables.

Use case 2: A traveler has discovered a new land!

- When implemented in the PHP file, the users will be able to add a new Land to the database for which the name and resources are given as input.

Use case 3: A new house has been founded!

- When implemented in the PHP file, the users will be able to add a new House to the database for which the name and the ID of the land owned is given as input.

Use case 4: A new war has begun!

- When implemented in the PHP file, the users will be able to add a new war between two valid houses by providing the temporal information and reward value.

Use case 5: List all the houses currently in a war.

- This query will provide the users with the pairs of houses (declarer vs. defensor) which are actively fighting.

Use case 6: List the total money earned by each house.

- The houses are financed by their members and each member earns money by trading. The sum of these earnings is the total money belonging to the house.

Use case 7: List the notable resources in descending order of popularity.

- The workers work on the lands to mine, to farm, or to collect the valuable resources. This query returns the list of resources on the lands that has some workers on it, with the number of houses that are processing these resources.

Use case 8: Display the most crowded house(s).

- The houses have some members and this query returns the lists of houses that has the maximum number of members among all the houses.

Use case 9: Display the rarest tradable item(s).

- The people own some items while some of them are not accessible yet – if not dropped by a boss, possibly. This query counts the occurrences of each item and displays the ones that are most uncommonly owned by some people.

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USE CASES

/*1: A new baby was born!*/

INSERT INTO person (pNmame, is_member_of, iID)

VALUES ('$pName', '$is_member_of', '$iID');

/*2: A traveler has discovered a new land!*/

INSERT INTO land (lName, notableResources)

VALUES ('$lName', '$notableResources');

/*3: A new house has been founded!*/

INSERT INTO house (hName, lID)

VALUES ('$hName', '$lID');

/*4: A new war has begun!*/

INSERT INTO in_war_with (declarer, defensor, since, reward)

VALUES ('$declarer', '$defensor', '$since', 'still', '$reward')

/*5: List all the houses currently in a war*/

SELECT H1.hName AS Declarer, H2.hName AS Defensor

FROM in_war_with I, house H1, house H2

WHERE I.until = 'still' AND I.declarer = H1.hID AND I.defensor = H2.hID

/*6: List the total money earned by each house*/

SELECT h.hName, SUM(T.price)

FROM trades_with T, person P, house H

WHERE T.from = P.pID and H.hID = P.is_member_of

GROUP BY P.is_member_of

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/*7: List the notable resources in descending order of popularity */

SELECT L.notableResources, COUNT(L.notableResources) as FARM

FROM worker W, land L

WHERE W.farms = L.lID

GROUP BY L.notableResources

ORDER BY FARM DESC

/*8: Display the most crowded house(s)*/

SELECT T.hID, T.hName

FROM (SELECT P.pID, H.hID, H.hName

       FROM house H, person P

       WHERE P.is_member_of = H.hID) AS T

GROUP BY T.hID

HAVING COUNT(*) >= ALL (SELECT COUNT(*)

         FROM person P

         GROUP BY P.is_member_of)

/*9: Display the rarest tradable item(s)*/

SELECT item.iID, item.iName

FROM item JOIN person ON item.iID = person.iID

GROUP BY item.iID

HAVING COUNT (*) <= ALL (SELECT COUNT(*)

        FROM person

        GROUP BY person.iID)