SQL Island Solution

By - Vinayak Goyal (goyalvinayak)

1. It seems there are a few people living in these villages. How can I see a list of all inhabitants?

SELECT * FROM INHABITANT;

2. Okay, let's see who is friendly on this island...

SELECT * FROM INHABITANT
  WHERE state = "friendly";

3. There is no way around getting a sword for myself. I will now try to find a friendly weaponsmith to forge me one. (Hint: You can combine predicates in the WHERE clause with AND)

SELECT * FROM INHABITANT
  WHERE state = "friendly"
  AND job = "weaponsmith";

4. Oh, that does not look good. Maybe other friendly smiths can help you out, e.g. a blacksmith. Try out: job LIKE '%smith' to find all inhabitants whose job ends with 'smith' (% is a wildcard for any number of characters).

SELECT * FROM INHABITANT
  WHERE state = "friendly"
  AND job like "%smith";

5. No need to call me stranger! What's my personid? (Hint: In former queries, the * stands for: all columns. Instead of the star, you can also address one or more columns (separated by a comma) and you will only get the columns you need.)

SELECT personid FROM INHABITANT
  WHERE name = "Stranger";

6. I can offer to make you a sword for 150 gold. That's the cheapest you will find! How much gold do you have?

SELECT gold FROM INHABITANT
  WHERE name = "Stranger";

7. Damn! No mon, no fun. There has to be another option to earn gold other than going to work. Maybe I could collect ownerless items and sell them! Can I make a list of all items that don't belong to anyone? (Hint: You can recognize ownerless items by: WHERE owner IS NULL)

SELECT * FROM ITEM
  WHERE owner IS NULL;

8. Do you know a trick how to collect all the ownerless items?

UPDATE ITEM SET owner = 20
  WHERE owner IS NULL;

9. Now list all of the items I have!

SELECT * FROM ITEM
  WHERE owner = 20;

10. Find a friendly inhabitant who is either a dealer or a merchant. Maybe they want to buy some of my items. (Hint: When you use both AND and OR, don't forget to put brackets correctly!)

SELECT * FROM INHABITANT
  WHERE (job = "dealer" OR job = "merchant")
  AND state = "friendly";

11. I'd like to get the ring and the teapot. The rest is nothing but scrap. Please give me the two items. My personid is 15.

UPDATE ITEM SET owner = 15
  WHERE item = "ring" OR item = "teapot";

12. Unfortunately, that's not enough gold to buy a sword. Seems like I do have to work after all. Maybe it's not a bad idea to change my name from Stranger to my real name before I will apply for a job.

UPDATE INHABITANT SET name = "Vinayak"
  WHERE personid = 20;

13. Since baking is one of my hobbies, why not find a baker who I can work for? (Hint: List all bakers and use 'ORDER BY gold' to sort the results. 'ORDER BY gold DESC' is even better because then the richest baker is on top.)

SELECT * FROM INHABITANT
  WHERE job = "baker"
  ORDER BY gold DESC;

14. Is there a pilot on this island by any chance? He could fly me home.

SELECT * FROM INHABITANT
  WHERE job = "pilot";

15. Thanks for the hint! I can use the join to find out the chief's name of the village Onionville. (Hint: In the column 'chief' in the village table, the personid of the chief is stored)

SELECT inhabitant.name
  FROM INHABITANT JOIN VILLAGE
  ON inhabitant.personid = village.chief
  WHERE village.name = "Onionville";

16. Hello Vinayak, the pilot is held captive by Dirty Dieter in his sister's house. Shall I tell you how many women there are in Onionville? Nah, you can figure it out by yourself! (Hint: Women show up as gender = 'f')

  FROM INHABITANT JOIN VILLAGE
  ON inhabitant.villageid = village.villageid
  WHERE village.name = "Onionville"

```
  AND inhabitant.gender = "f";
```

17. Oh, only one woman. What's her name?

```
SELECT inhabitant.name
  FROM INHABITANT JOIN VILLAGE
  ON inhabitant.villageid = village.villageid
  WHERE village.name = "Onionville"
  AND inhabitant.gender = "f";
```

18. Oh no, baking bread alone can't solve my problems. If I continue working and selling items though, I could earn more gold than the worth of gold inventories of all bakers, dealers and merchants together. How much gold is that?

```
SELECT SUM(inhabitant.gold)
  FROM INHABITANT JOIN VILLAGE
  ON inhabitant.villageid = village.villageid
  WHERE inhabitant.job = "baker"
  OR inhabitant.job = "banker"
  OR inhabitant.job = "dealer"
  OR inhabitant.job = "merchant";
```

19. Very interesting: For some reason, butchers own the most gold. How much gold do different inhabitants have on average, depending on their state (friendly, ...)?

```
SELECT state, AVG(gold)
  FROM INHABITANT
  GROUP BY state
  ORDER BY AVG(gold);
```

20. Heeeey! Now I'm very angry! What will you do next, Vinayak?

```
DELETE FROM INHABITANT
  WHERE name = "Dirty Diane";
```

21. Yeah! Now I release the pilot!

UPDATE INHABITANT SET state = "friendly"
  WHERE state = "kidnapped";

22. The game is over. Get your certificate of completion now! If you want to change the name on the certificate, use an UPDATE command on the inhabitants table.

UPDATE INHABITANT SET name = "Vinayak Goyal"
  WHERE personid = 20;

Certificate of Completion-

SQL Island

Certificate of Completion

This is to certify that

Vinayak Goyal

has successfully completed the
learning game SQL Island.

ID: 28802ae013

URL: http://sql-island.cs.uni-kl.de/cert.php?id=28802ae013

sql-island.de